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A Clinical Lecture

ON

DECEPTIVE SIGNS OF IMPROVEMENT FOLLOWING UPON SEPTIC INTOXICATION IN ACUTE APPENDICITIS, ESPECIALLY IN YOUNG PEOPLE.

Delivered at St. George's Hospital Medical School on Nov. 3rd, 1903,

By Sir WILLIAM H. BENNETT, K.C.V.O., F.R.C.S. Eng,

SENIOR SURGEON TO THE HOSPITAL

Gentlemen,—It will be found that the clinical aspect of many of the surgical diseases with which we have to deal is often very different in young and growing subjects from that which is seen in those whose development has been completed. In appendicitis this is especially the case and it so happens that lately we have had several instances which illustrate a certain type of the disease in *young subjects which is a very dangerous* one and therefore well worthy of a little consideration I have already spoken recently about the matter in the wards in the course of the ordinary clinical classes, but there are two or three special points which I am anxious to discuss more fully and the present lecture gives me an opportunity for doing this.

The first case to which I must call your attention is that of a boy, aged 15 years, who is in the FitzWilliam Ward, having been admitted on Oct. 19th. Four days previously he had been seized with the ordinary signs of appendicitis, that is to say, acute pain in the abdomen, vomiting, some tenderness, especially over the right iliac region, some distension, together with constipation which after a dose of castor oil was followed by some diarrhœa. I saw him in the ward directly after he was brought to the hospital and he was obviously suffering from appendicitis. He had a flushed face with dark lines underneath his eyes, his temperature was 101° F., there was a certain amount of tenderness over the right side of the abdomen low down, but no distension worth mentioning and no swelling or thickening of any kind was perceptible. He was admitted in the afternoon and as he had just been shaken up in the course of his progress to the hospital I thought it wise, according to my usual custom, to wait a little while until the effects of the journey had passed off before attacking the case from an operative point of view, as seemed likely to have to be done I therefore left him with precise instructions that unless some distinct improvement took place in the course of the evening I should be sent for with a view to immediate operation. The boy's condition improved and there appeared to be no necessity for sending for me. On the following morning he seemed to my house surgeon to be still better and when I came to the hospital in the middle of the day I found him in this condition: the pain from which he had been suffering on the previous day had gone, the tenderness over the right side of the abdomen was less, there was no distension, the rigidity was very slight, and still no swelling of any sort could be found. His pulse was slower and there had been a very rapid drop in his temperature The temperature, instead of being 101° or something of that kind, had dropped to 97° since the time of my seeing him the day before, an interval of about 30 hours. He expressed himself as being altogether more comfortable and I was told, in point of fact, that the boy was clearly better and *in all respects more contented* than he had been on the previous day. But in spite of these apparent signs of improvement in the symptoms I came to the conclusion that the boy was suffering from an abscess of the appendix, probably gangrenous, and that an operation was immediately necessary. The first point I wish to impress upon you in connexion with this case is the fact that the boy was apparently improving so far as the ordinary observer could see although in reality he was steadily growing worse. I wish you more particularly to bear in mind the extraordinary decrease in the pain, the fall in the temperature, and the increase in the general comfort of the patient which had occurred in the course of the few hours since I had previously seen him. The apparent improvement was in my opinion entirely deceptive and I determined to operate, expecting, as I said at the time, to find a gangrenous appendix. My anticipation proved to be true; there was a perforation in the appendix which was sloughing at the point of its junction with the cæcum Around it was a stinking abscess and altogether the case was as bad a one of appendicitis as one could well meet with in a boy of the age I have mentioned. I removed the appendix and sewed up the resulting opening into the cæcum (the sloughing involved the cæcum itself), turning up a flap of peritoneum over it. The boy is doing very well.

In contrast with this case let us take that of another boy who came *into the Belgrave Ward on Oct 20th* with symptoms of appendicitis, which in his case had commenced on the 18th at midday with sudden onset of pain about the navel, gradually localising itself in the right iliac region, followed by sickness, diarrhœa, and so forth. When he arrived he had all the characteristic signs you would expect in such a case, a high temperature, and a flushed *face*. He had not the black marks under his eyes presented by the other boy, but that might have been accidental; there was some distension, with some slight tenderness and rigidity over the right iliac region, but no tumour or thickening could be felt; as a matter of fact, the condition was very much like that of the other boy. In those circumstances I left the same instructions as in the other case—viz, that unless a distinct improvement took place in this boy's condition aid was to be sought with a view to early operation. This patient, like the other, appeared to improve and no call was made for an immediate operation. He became more comfortable; his temperature, which when he came in was 101°, fell on the following morning to 99°. His pain was less, the distension had diminished, the tenderness on the right side was not very great, although it still existed; the rigidity was less and still there was no tumour.

These two cases at first sight appeared to be practically on all fours with one another. But in the second case, instead of at once proceeding to operation as in the first, because I felt that an abscess was present, I deferred the question of immediate operation, as I very much doubted the existence of any urgent disease in the appendix, my feeling being that whilst, as I have already said, the condition of things in the first case led me to anticipate grave trouble, in the second there was no need for hurry and that an early operation was altogether unnecessary.

Now comes the question, taking the fact that the cases seemed at first sight so very much alike, Why did I in the one case come to the conclusion, correctly, that there was grave disease with gangrene of the appendix, and why did I in the other case, which was so much like it, come to the conclusion that no disease sufficiently grave to call for early operation was present? This is a most important clinical question Had I been wrong in my determination in the second case it might have been a serious thing for the boy, and in the same way, if in the first case I had omitted to realise that the boy instead of getting better was getting worse, he would almost certainly have died, because if I had not operated when I did he would probably have been too bad for any operation to be of use. The whole position in those two cases depended upon two points—first, the condition of the temperature, and, secondly, the aspect and mental mood of the patient. I ought really to place the aspect of the patient first, because the state of the temperature is, although more obvious, a much less serious matter. The first boy when he came into the hospital, as I told you, had a flushed face, inclined to duskiness, black lines under his eyes, a furred tongue, and he looked distressed. He had not the "abdominal face" Do not be misled in these cases of appendicitis—we are not talking of other abdominal conditions—by the absence of what is called the abdominal face; it has little or no value in the early stages of appendicitis in young people But this aspect which I have mentioned—namely, the flushed and dusky cheek, the black lines under the eyes, combined with a very furred tongue, carry a very definite meaning. In the case of the first boy, you will remember that when I saw him on the second day, although he was altogether more comfortable, the pain, tenderness, and rigidity being less and there being still no sign of tumour or induration, the boy was dull, inert, contented, lying quite placidly in bed and saying he was better; all he wanted was to be left alone. In the case of the other boy, on the contrary, when seen on the second occasion the flushing of the face, although still present, was much less, his tongue had cleaned a little, and instead of lying in bed, dull and inert, he was sharper than he was the day before and answered questions much more quickly, smiling at something which was said to him. Later he soon lost the abnormal aspect of face altogether and became very sharp indeed, in point of fact he began to have some fear of operation and became nervous in consequence. Now, the difference in the changes in the condition of these two boys was what settled me in my diagnosis and so determined my line of treatment. The comfort of the first boy was simply due to inertia and dulled sensations resulting from increasing septic intoxication. He did not feel pain because he was indifferent; his blood was getting more and more poisoned from the absorption of septic material and he was growing more and more indifferent as the hours passed by. The worse that boy became the more contented he would be in consequence of increasing indifference resulting from septic intoxication which ensues very rapidly in cases of gangrenous appendicitis especially in young people. On the other hand, in a case like that of the second boy, as the inflammatory changes about the appendix begin to clear up the tendency to blood poisoning present at the time of admission gradually disappears and so instead of being abnormally content he becomes more alert, more active in mind, noticing things more generally, and by degrees returns to the condition of the normal individual. The lessons to be learned from these cases are of great value. Do not allow yourselves to be led to think that decrease of pain in a patient who is the subject of septic trouble necessarily means real improvement unless there is at the same time a general constitutional betterment, because, as I have tried to show, the decrease of pain may be the outcome of increasing septic intoxication, the disease being progressive all the time. On the other hand, if a general improvement in the condition of the patient is coincident with, or immediately succeeds, the loss of pain you may be sure that your way is clear.

Another point in these cases which must be carefully considered is the temperature. One is not infrequently told in cases of this sort upon going to see the patient perhaps for the second time that there is great improvement, because the temperature has fallen a couple of degrees in the course of the previous few hours. Now, whenever you have a patient suffering from this condition who has, let us say, when first seen a temperature of 102° F., which falls very rapidly to 99° or it may be to below the normal, bear in mind that this sudden fall may be a danger signal and not a sign that the patient is getting better. One of the commonest precursors of gangrene in this type of case is a sudden or very rapid drop in the temperature. A gradual fall in the temperature is always good, for it almost invariably indicates improvement. From what I have said you will see how easy it may be for inexperienced people to be deceived in cases of the kind which we are discussing; indeed, the symptoms are at times confusing enough to mislead those whose experience is considerable. A striking instance occurred in my practice not long since. A grave case of appendicitis was seen in a patient, 14 years old, late at night and an operation was arranged for the following morning. On arriving in due course for the purpose of operating I was met with the apparently gratifying report that there was great improvement, the patient, it was stated, being altogether better; the pain had almost gone, the temperature had fallen to normal, the child was dozing comfortably, a thing she had not done since the commencement of her illness, and it was hoped that the operation might be postponed. Upon examining the patient, however, I found that the falling to sleep was due to the septic intoxication, the comfort was the indifference resulting from the same cause, and the sudden drop of temperature was, I felt sure, due to gangrene of the appendix. My expectations about the case were fully realised, for I found at the operation, which was, of course, proceeded with at once, a gangrenous appendix in a stinking abscess. The patient fortunately survives, but the case was one of the worst I have seen to be followed by recovery.

To-day I have operated upon another case which teaches the same lesson. The patient is older than those already mentioned; he is 20 years of age and so is within the developmental period of life, which is an important point. A week ago he was seized with symptoms of appendicitis of the ordinary type—pain in the usual region, vomiting, and all the signs which attach to the complaint. He came into the hospital 48 hours ago. I was not sent for at once but saw him the day after his admission—that is to say, yesterday. He was then lying pretty comfortably in bed, his pain was less than when he came in, and I was told that his general condition had somewhat improved since his admission. Locally there were slight rigidity and a suspicion only of deep swelling. An operation was clearly indicated but as permission to operate had not been obtained it was postponed. This morning when I came to the hospital I learned that he seemed much better, was free from pain and comfortable, and the temperature had fallen. On seeing the man I did not like his aspect; there was the dusky flush on the face which I have mentioned, a black line under the eyes was very manifest, the tongue was thickly coated, and the breath was foul, still he was perfectly comfortable and happy. Here, again, operation revealed a gangrenous appendix, or rather the remains of it, in a stinking abscess. The same sequence of events had happened as in the other cases—diminution of pain, increasing comfort, and falling temperature, the apparent improvement, although the patient was rapidly becoming worse, being due to the deceptive indications of septic intoxication. Here also there was a rather sudden drop in temperature, which, let me once more impress upon you should be regarded critically in these cases as it may be a danger signal.

Now comes the question, Why in cases of this type—cases occurring in young growing subjects—are the symptoms so acute and yet so deceptive, because this particular type of appendicitis, so far as I know, occurs with comparative rarity in any but young growing subjects. In all young subjects, and the younger the patient the more accurately does the observation apply, the infective processes are very acute and the results of them are, as a rule, very destructive. A very slight septic irritation, for example, of a lymphatic gland in an infant will cause immediate suppuration of such violence that the whole gland may be completely destroyed in a very short time, a sort of thing which does not occur in an adult. In any part, therefore where the lymphoid tissue is very abundant, as it is about the appendix, the end of which is extraordinarily well provided with adenoid tissue, you may be sure that in young and growing subjects any destructive process will often be extraordinarily acute, a fact which partly explains the peculiarity of these cases in the young. The initial changes coming on acutely in the first stage are followed so rapidly by necrosis and decomposition that the commencement of septic intoxication begins almost, as it were, before the constitution of the patient realises the onset of the condition—in fact, at a point before the actual acute symptoms develop in an adult the patient if a young subject is becoming dull and listless from the effects of the rapid absorption of septic material by the superabundant lymphoid tissue. The peculiarity of the symptoms then in young growing subjects depends first upon the tendency to great activity in these destructive processes, and, secondly, to the rapid absorption of septic matter in a region supplied only too lavishly (for conditions of disease) with ready means of taking up septic material.

A very important question with regard to appendicitis in young people frequently arises in connexion with which it is sometimes extremely difficult to know how to act. All boys under a certain age, I need hardly say, are liable to attacks of what is commonly called "stomach ache." That is a common discomfort of early youth and as a rule the explanation is simple enough. These frequently occurring stomach-aches in large communities of boys—such, for an example, as may be found in an ordinary public school—often afford very difficult problems for the medical officers of institutions of that kind. Schoolboys are naturally prone (as are also, it must be admitted, many of their seniors) to suffer from "stomach-ache" the result of ill advised consumption of indigestible material. Such stomach-aches are either merely the result of acute indigestion or they may be abdominal pains resulting from appendix trouble. I was talking only a few days ago to a medical officer at one of the public schools in which a boy had recently become very rapidly ill from appendicitis and died, and he pointed out how nearly impossible it was to prevent a misfortune like this sometimes occurring, seeing that the amount of stomach ache always prevalent at the school was so great. If every case of stomach-ache that occurred were to be regarded seriously half the school would be generally in bed. On the other hand, if these abdominal pains are regarded too lightly from time to time there must occur one of these terrible cases of appendicitis which end so disastrously. And the difficulty is a real one, especially as the masters are, speaking generally, very averse to minor ailments being regarded too seriously In these circumstances it is worth asking the question whether it is possible to form any idea at all as to which of these attacks of abdominal pain are simple "indigestion" stomach aches and which are connected with some defect or disease about the appendix It is a very important point—much more important than it appears at first sight And I think *after having seen a very large number of these cases* in all sorts of conditions and in varying circumstances that it is at first possible to determine roughly between the ordinary colicky stomach ache in young subjects and similar pains which arise from disease in the appendix. Speaking generally you will find that the common stomach-ache—which is, of course, acute as a rule and subsides very rapidly, perhaps with an attack of diarrhœa or vomiting or perhaps without—is rarely associated with anything like a material rise of temperature and in passing off it does so at once and is done with. *There* is no sort of after thought with the ordinary stomach ache of which we are speaking now. Moreover, and this is an important point, in the ordinary stomach-ache the pain is general and *rather* tends as the attack is passing off to lean to the left side of the abdomen as the colon becomes concerned Now, the ordinary abdominal discomfort, call it stomach ache if you like, which is associated with appendical trouble is almost always, in the first instance, accompanied by a marked rise of temperature, it very rarely passes off at once to be completely done with, there is generally an after-thought of pain about these cases where the appendix is at the bottom of the trouble, and then the intensity of the pain in them, instead of tending finally to the left side of the abdomen, invariably inclines to concentrate itself somewhere about the right side, not necessarily over the right iliac fossa but on the right side of the abdomen It may expend itself over the region of the gall-bladder and I have seen it end in what at first sight looked like an acute attack of pleurisy After the passing away of the acute abdominal pain or discomfort in cases of "stomach ache" there is one sign which is as certainly pathognomonic of appendix trouble as *any one sign can be of a lesion, and that is* a feeling of discomfort or "stiffness" about the right iliac region upon attempts at extreme extension ("stretching") of the lower limbs, a condition which never follows mere "stomach ache", but in this connexion let me remind you of what I am constantly endeavouring to emphasise in these lectures—viz, that no one sign must be regarded as a sure indication of any given disease unless it is corroborated by *some of the other ordinary signs* of the complaint

A Clinical Lecture

ON

HALLUCINATION.

Delivered at the Richmond Asylum on Jan 6th, 1903,

BY CONOLLY NORMAN, F.R.C.P. IREL,

RESIDENT MEDICAL SUPERINTENDENT, RICHMOND DISTRICT ASYLUM,
DUBLIN

LADIES AND GENTLEMEN,—In a case of what it is convenient to call mental disease the whole mind is affected and divisions according to the various functions which appear to be engaged are merely divisions for convenience of study. One of the most striking symptoms of alienation is the existence of hallucinations The hallucinatory state is interesting on account of its frequency *and also because* sensory phenomena are, comparatively speaking, more easy to study than certain other mental conditions Furthermore, certain sensory disturbances which seem identical with, or closely akin to, hallucination occasionally occur, perhaps physiologically and certainly in conditions which are not commonly classed as mental diseases Finally, in the present state of our knowledge hallucination *appears* to be a relatively simple if not an elementary mental disturbance; therefore the hope is suggested that its study may furnish a key with which to open the more intimate chambers of the mind, for the progress of knowledge in other departments has usually been from the more simple to the more complex Thus while we must *recognise that* the occurrence of hallucination is not to be regarded as an isolated phenomenon in any case of insanity it is instructive to devote some special consideration to its clinical study.

It is in cases of paranoia that we find hallucination in its most remarkable form. Paranoia, as I have told you, is a condition characterised by fixed systematised delusion and, as is commonly said, an indifferent emotional state—that is to say, an *emotional state not constantly or fundamentally* exalted or depressed I am disposed to think that it would be more true to say that suspicion is the emotional element in paranoia Hallucinations are specially frequent in this affection and are commonly very constant in their mode of appearance In dealing recently with the question of incoherence I have pointed out to you that incoherence (perhaps sometimes true but often merely apparent) occurs in association with delusion It is, nevertheless, a less prominent feature of paranoia than of almost any other form of mental disease and its relative slightness facilitates the observation of sense disturbances

The case which I bring before you to day is one which exhibits hallucinations of almost every division of every sense When we speak to him we are reminded of Ball's striking remark to the effect that such cases recall to our mind the fundamental principle of the religion of Buddha—namely, that our senses are absolutely deceptive, that we are surrounded by void space, and that the whole universe is only a gigantic hallucination

The patient, a male, was admitted to the Richmond District Asylum, Dublin, in July, 1898 He was then aged 54 years He is married and is the father of several grown up children and was formerly employed as a butler His friends stated that he had been at least two years insane He was admitted from a workhouse, where he had been living for some time, having been thrown out of employment by his mental state. His family history is not very full. A maternal aunt suffered from senile dementia His mother was liable to asthma from middle age and "would not take any medicine for fear that there might be mercury" therein *The patient himself* was a steady hard drinker for many years. He is, as you will see, a calm, grave mannered man who expresses himself in measured and generally accurate language He rarely contradicts himself and seldom exhibits verbal incoherence His memory is excellent for everything connected with his own case and if he sometimes shows an indifference to current events this seems explicable through his absorption in his own troubles He is industrious *and a most intelligent worker* Since he has been in the asylum he has learned to weave extremely well; latterly he has given up that occupation which he thought did not suit him, and employs himself about the kitchen, where he is most useful He is never violent in action and his complaints, if one accepts his premisses, are not unreasonable, they are not rudely made or unduly pressed While at his work he often swears loudly and with apparent anger *at his imaginary persecutors* We do not find him a dangerous person though he belongs to a class in which are included some of the most dangerous of patients He sleeps badly He is apt to be noisy at night, loudly scolding his enemies, and sometimes getting up to search for them or their machines He tells a very definite story On July 22nd or 23rd, 1896, he was working in his pantry when a man whom he did not know came into the room *There is a slight discrepancy between the account* which he gave of this interview on admission and his account to day He then told us that he interchanged a few words with this man, now he says that they did not speak The stranger went out again and the patient, who took him to be a friend of one of his fellow servants, thought no more of the matter then That night, he tells us, he was attacked with pains in various parts of his body and at the same time heard a voice which *he knew was the stranger's using injurious* and abusive language From that time till now he has been constantly subjected to a variety of torments which he designates under the general name of "practice"[1]

It is not generally desirable to examine a patient with open reference to a systematic scheme, but this case is so full that much time would be lost in going over individually the various statements which he has made at different dates and as it happens one can examine his senses one by one without producing resentment or reticence on his part. Allow him from time to time to digress into theoretical explanations of his sufferings and denunciations of the practice to which he is subjected, and he readily tells everything. We find, then, hallucinations in the following sensory fields.

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[1] The term I think, is not a
patients before who used it in
survival in this district of an c

1. *Dolorific.*—General surface sensibility is painfully affected. The pain has the character common in such cases. He describes it as "darts," "prods," "electric darts," "electric fire," "numbness darting along the limbs," "like a prod with a sharp instrument," and "as if one were struck with a lance." Sometimes the pain takes the form of "pressure," sometimes again, especially "when it comes on the breech it is like the stinging of a bunch of nettles." On one occasion he described a darting pain in the position of the ulnar nerve at the elbow which shot down the inside of the forearm and made the ring and little finger numb, but his pains rarely follow the course of a nerve. He sometimes has darts in his feet but mostly a burning pain in the soles. He so repeatedly talks of being "struck" with pain that I think this word does not merely express a theory but signifies also the sharp sudden way in which the pain comes. The pains were at one time described as being equally distributed everywhere. More recently they affect chiefly the left side.

2 *Kinetic or muscular.*—He experiences sensations of weight and heaviness in the limbs so that he feels that to walk or to raise his hand to his head requires an immense effort. He complains further of feelings of pressure, but it does not seem possible to disentangle these from sensations of pain

3. *Thermal.*—Besides sensations of pain which he compares to fire he experiences feelings of warmth "shot over" him as he says. These are followed by feelings of icy cold or the latter occur alone. These alterations in the temperature sense are a frequent cause of spontaneous and bitter complaints.

4. *Hygric.*—Baillarger, I think, was the first who described as a sense disturbance the subjective sensation of moisture Remadier in 1888 claimed that the sense of moisture constituted a special division of sense. Tambroni about ten years ago and more recently (September, 1902) Ravenna and Montagnini describe hallucinations of what they term the hygric sense Our patient tells you that he experiences feelings as if he was drenched with water. "I am drenched all over with water, or one side or the other is drenched with water. My clothes are not wet but I feel the water." At other times, however, he says he feels his bedding damp. There is also a sensation, not so frequent as the drenching, as if someone was dropping water upon him.

5. *Tactile.*—True tactile hallucinations are indicated by "a wet sticky feeling that they put into the ends of my fingers, though my fingers are not wet at the same time"; perhaps also by the occasional feeling of a sticky liquid covering the body all over.

6. *Genital.*—His "private parts are tampered with." Not merely pain is produced but specific sexual sensations occur, often ending in complete sexual orgasm. One of his strongest complaints is of this method of persecution which he describes as cowardly and vile.

7. *Visceral.*—There is a group of sensations connected with the abdominal viscera which in health rarely ascend above the threshold of consciousness but which often form portion of the hallucinatory field in insanity. It is convenient to call them visceral for want of a better name. The present patient is from time to time "struck" in the abdomen (interiorly) with rending pains. He has pains in the lower bowel as if the rectum was being torn out: "The rectum is being continually attacked with electricity"; pain in the upper part of the abdomen which "drives the stomach up into the chest"; an odd sensation, "as if I were hollow and saliva were dropping down from the throat into the stomach," perhaps belongs to the same order.

8. *Respiratory.*—I believe that there are specific sensations connected with the function of respiration, though the fact has not been generally recognised. This patient's breathing is "tampered with": "It strikes me on the chest when I am taking a breath so that I cannot breathe."

9. *Olfactory.*—Besides direct interference with the breathing there is an interference by noxious gases which at once suffocate and stink (the association, as might be expected, is very common). Sometimes the smell is mild, sometimes it resembles ordinary coal gas; at other times, without suffocation, there come horrible smells (fæces and the like). Of late olfactory disturbances are less complained of and the smells are only spoken of to-day as a reminiscence.

10. *Gustatory.*—In searching for these you must not confound taste and smell, as your patient generally does. In the case before us true gustatory disturbance occurs: the patient experiences strong tastes, always disagreeable, sometimes bitter, sometimes acid, sometimes salt "like brine."

11. *Visual.*—Séglas has divided visual hallucinations into three classes, elementary, common, and verbal. Our patient suffers mainly from the first. "Visions are cast before me; I am made to see a sort of green cloud, also landscapes and avenues of trees." The green cloud has been an early symptom. "Lights are flashed across the face when the eyes are closed; it is as if the eyelids were transparent." In reading "something flashes across the letters." Sometimes, he has told us, he sees the figure or the shadow of his tormentor, but when he strives to look at it intently it is gone. It is to be observed that the visual impressions have the air of being less distinct than the other hallucinations and this is what we most frequently find in such cases. On the other hand, the man who visited our patient in his pantry, whom he associates with the origin of all his troubles, was seen distinctly enough and is not at all regarded as being a "vision." However, we have no means of being sure of the objective unreality of this visitor.

12 *Auditory.*—Again adopting Séglas's division, which has a much more useful application to auditory than to visual hallucinations, we find that in the patient before us there are two classes, elementary and verbal. The former are represented by vague buzzing noises, also by a sound resembling a drum-beat, which he exemplified by tapping with his finger on the antitragus and saying, "It is like the sound thus produced." The verbal hallucinations, however—"the voices"—are the chief thing. When one asks whose the voices are he often replies that there is only one voice and that he recognises that as the voice of the visitor so often referred to, but he often talks of the "voices" much as other patients of his class do and speaks of the originators of the voice as "they." The voice can be briefly described in his own words: it is "personal, threatening, indecent, and blasphemous." You will find in most cases of auditory hallucination that the voices have these characteristics. Remarks are made to him about trivial events of his daily life; threats are uttered of murder, torture, &c.; horrid obscenity is dinned into him mixed with monstrous blasphemy. Sometimes he speaks of it as the "torturing voice" but more commonly as the "thwarting voice," because everything that it speaks is intended to vex, to annoy, and to thwart him. His belief in the reality of the voice is most intense. He often answers it in angry tones He laughs scornfully at any suggestion that it comes from his own mind. "The voice," he says, "whatever it may be, is a distinct voice. It comes to me as your voice comes now from you to me. It is equally loud, it is equally clear, it is equally real; I know it is not I that do it."

13 *Psycho motor* —Though the leading feature of this case is the occurrence of auditory hallucinations—i.e., hallucinations which appear in consciousness as manifestations of activity in the auditory speech centre—yet there are indications of the engagement of the motor speech centre. Thus he tells us: "By day I hear the voices through my ears the way I hear you speak; by night they are mostly working on the breath going in and out of the mouth." You will remember many cases in which I have recently demonstrated this condition to you in a much more marked degree and you will recognise the identity of the state he describes with the more extreme forms in which the "voice" is spoken of as originating in the patient's own vocal organs solely and being indeed not so much a voice as a sensation of movement

There is but one important hallucinatory group which seems to me to be absent in this case. The patient sometimes complains that he feels tired and stupid from annoyance but he never complains, as many paranoiacs do, that his mental operations are interfered with His thoughts are not compelled; he is not made to say or to do things against his will I believe that there is among our sensations a sense of mental action. Rarely in health does it appear above the level of consciousness, but in conditions of mental disease it is often very prominent, presenting what appear to be identical with, or at least closely analogous to, hallucinations. I am therefore in the habit of talking of hallucinations of the sense of mental action and I have demonstrated to you in several other cases what I mean by this phrase. The present case, so complete otherwise, does not exhibit any sign of this condition.

Association of hallucinations.—The commonest form in which association of hallucination of various senses occurs is that in which the patient sees a man or angel or demon who speaks to him. Here there is another association. He tells us: "When I am attacked with pain the voices come—never the one without the other." This is nearly identical with what he said to me more than four years ago: "The practice does not come without the torturing voices nor the voice without the torture." This fact confirms him in his intense belief in the reality and external nature of all his troubles. "It would be," he has said, "a queer mind and body that would torture anyone in this manner of its own accord." As I have said, it is not generally a good plan to examine a patient from notes as we have examined this man, but everything that he has now said he has spontaneously stated before in almost the same words either to me or to some of my colleagues.[2] His examination now has been based upon notes made from his own statements.

Time does not permit me to dwell to-day on the theoretical aspects of hallucination but two things may be remarked. Such a case as this shows clearly that whatever may be the remoter origin of hallucinations the sensory centres in which in health we receive impressions from without must be engaged in disease. No force of imagination would enable our patient to conceive so complete a series of sensations involving almost every variety of every sense and distinguishing from one another with physiological accuracy various sensory fields of the existence of which he must have been intellectually perfectly ignorant.

The true essential condition of mental disease in this man appears to me to be found not in his hallucinations, picturesque and remarkable as they are, but in the fact that the judgment is so far impaired that it accepts the hallucinations. It is not merely the case that the patient is deceived by a wrongly acting sensory apparatus, but though he talks with considerable acuteness and reasons in a pseudo-logical way, yet he unhesitatingly accepts the absurd notion that all the complicated, protracted, and virtually incessant sufferings that he endures are due to the machinations of a man whom he never saw but once and for whose action he can suggest no motive. Therefore, either the sensory centres must directly take part in the function of reasoning or else the higher psychical centres are affected with the same disease which disturbs the former. In either case the solidarity of cerebral function is complete.

ON HOUR-GLASS STOMACH FROM A PERSONAL EXPERIENCE OF 28 OPERATIONS.

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THOUGH hour-glass stomach may arise from three separate causes—chronic gastric ulcer, perigastritis due to adhesions, and cancer—the deformity in itself almost constitutes a distinct disease which is associated with a peculiar train of symptoms. The name "hour-glass stomach" was adopted long ago when the disease was always thought to be congenital and before it was recognised that the stomach might be divided into more than two cavities, and the name is sufficiently distinctive to hold its own in medical literature.

The cases given below so distinctly prove that hour-glass stomach owes its origin to definite organic disease that I need not spend time over combating the question as to whether it is always acquired, for doubtless very rarely it may occur as a congenital condition, just as congenital narrowing may be found at the pylorus, in the intestine, or in the rectum. As yet, however, in an experience of over 1000 operations on the upper abdomen, in which the stomach could be seen and examined and about 400 of which have been on the stomach itself, I have not met with a single case of congenital hour-glass constriction.

Perigastric adhesions may cause a narrowing of the stomach in two ways as exemplified by Cases 1, 2, 16, and 19 related hereafter. In Case 1 perforation had led to firm adhesions to the anterior abdominal wall, and ulceration had led to cicatricial contraction. In Case 2 the stomach was divided into three portions, the proximal narrowing being dependent on a band of adhesions extending from the liver to the transverse colon, and the distal constriction being caused by cicatrisation of a chronic ulcer. The first cavity was divided into two by the firm band, leaving the middle loculus of the stomach the smallest of the three cavities and the cardiac pouch the largest. In Case 16 the perigastritis had led to adhesions of the anterior wall of the stomach to the anterior abdominal wall, thus leading to a sagging of the lower wall of the stomach on each side of the adhesion, so that when the patient was erect the food had to be forced upwards from the first cavity into the second and then from it through the pyloric orifice. In this case the patient was quite comfortable so long as she was lying down and taking her meals in that way, but feeding in the erect posture produced great distress. Case 19 is another example of perigastritis fixing the stomach to the anterior abdominal wall, but as in Case 1 the ulceration had also produced a cicatricial stenosis of the centre of the stomach so that two causes were at work in producing the hour-glass deformity. With the exception of the four operations for cancerous hour glass contraction, in all the others the deformity was due to chronic ulceration.

The symptoms for a time entirely depend on the cause, whether that be ulcer, cancer, or perigastritis, but ultimately when the deformity has developed the signs are more or less distinct. While in nearly all cases the cause has been capable of diagnosis, the effect has also been diagnosed in some and may be in nearly all cases if care and time be given to the diagnosis.

It is unnecessary here to enter into the ordinary symptoms of ulcer or of cancer. In the latter the history will have been an acute one and associated with a well-marked tumour of the stomach, the symptoms being referable rather to the disease than to the deformity, but in the former (ulcer) in all the patients that I have seen there has been a long history, in some cases extending over 20 years and in no case under two or three years The symptoms are for the most part pain after food, vomiting, sometimes of blood, and great wasting. In a number of cases tumour develops owing to the enormous thickening which occurs around a chronic ulcer, and so marked has this tumour occasionally been that some of my patients have been sent with the idea that they had cancer and even when the abdomen has been opened it is not always easy to say that the case is simple and not malignant. The well-known fact that cancer not infrequently supervenes on chronic ulcer adds to the difficulty, but when the abdomen is opened it will be found as a rule that the glands in ulcer are discrete and rounded and the tumour is not nodular or craggy, nor are any secondary nodules seen on the surface of the stomach or in the liver; moreover, ascites is absent. As a rule, dilatation of the proximal pouch, when the cause is ulcer, leads to symptoms simulating dilatation from pyloric stenosis. In several of my cases the patients have been conscious of fluid passing from one cavity to the other with an audible gurgle or murmur, and in one case, with the stethoscope over the epigastrium, I was able to hear the passage of the stomach contents through the strictured part, on alternately compressing each side of the abdomen. In several cases, on distending the stomach with carbon dioxide, the proximal cavity first became distended and afterwards both cavities became outlined with a sulcus between. Another distinctive sign is the following. On washing out the stomach until the fluid returns clear, suddenly, without any warning, the next lavage immediately afterwards may return foul owing to the second cavity having regurgitated its contents into the proximal clean one; or as in Case 6, the second cavity discharges foul material by the side of the tube which has the moment before been evacuating clear fluid. A sign pointed out by Wolfler is that on washing out the stomach the fluid may entirely disappear and cannot be made to return through the tube, the reason being that it has passed straight through into the second pouch.

The distinctive symptoms will depend on the position of the constriction. In Case 15 the narrowing was close to the cardiac orifice and the first cavity consisted mainly of the dome of the stomach. Here, the fluid, directly it entered the stomach, passed over the ulcerated surface and produced pain almost immediately after swallowing. It will be easily seen that the constriction in this position may simulate stricture of the œsophagus; the differential diagnosis may, however, sometimes be made by the passage of an œsophageal bougie. In the greater number of my cases the constriction has been about four inches from the pylorus and in nearly all the proximal cavity has been larger, giving rise to the well-known symptom of dilatation of the stomach due to pyloric stenosis. In nearly all cases of hour-glass stomach spasm of the pylorus is present, since the ulcer is usually associated with hyperchlorhydria and with considerable irritation, in which cases the second cavity may be dilated so as to equal the first in size, or there may be also cicatricial stenosis of the pylorus, as in Case 6, where at the same time pyloroplasty and gastroplasty were performed. Very frequently, however, the second cavity is of minor importance and in such cases hour-glass stomach is usually not diagnosed, the operation being simply undertaken for chronic gastric ulcer with dilated stomach.

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[2] I am indebted for many valuable notes on this case to my former colleagues Dr. D. F. Rambaut, Dr. W. J. McKeown, and Lieutenant G. F. Sheehan, R.A.M.C., and to my present colleague, Mr. J. M. Redington.

The treatment of this condition is purely surgical and, in fact, operation ought to be undertaken long before the ulceration has led to such extreme deformity, for during the whole of the intervening period life has been in jeopardy, either from perforation or hæmorrhage, and during the whole of the time the patient has led a miserable existence on the verge of starvation because of the inability to take proper or sufficient food. After surgical treatment has been decided on the nature of the operation will have to be settled when the abdomen is opened and the stomach is exposed Where the narrowing is in the centre of the stomach, gastroplasty is a most efficient procedure and in all the cases in which I have performed that operation alone the patients have recovered and have remained healthy. In Case 6, where at the same time I had to perform a double operation, gastroplasty and pyloroplasty, I had to apply the sutures under tension owing to the length of the stricture. Had I been operating now I should have performed a gastro-gastrostomy together with a gastro-enterostomy which would probably have given a good result.

The operation of gastroplasty may be performed either by means of simple sutures or by suturing over the largest size bone bobbin, the latter being the method that I myself have adopted, the first principle to be borne in mind being to make the opening sufficiently large to secure union of the edges without tension. If the ulceration has not produced extreme contraction and the second pouch is not very prominent, a posterior gastro-enterostomy may be the operation of choice and it has answered quite well on the six occasions in which I have employed it, but my experience would lead me not to advise the anterior operation in these cases. Where the two cavities are equally dilated or connected by a very long stricture as in Case 6, an anastomosis may be made between the two cavities so as to short-circuit the stricture by the operation known as gastro-gastrostomy, but if there is active ulceration going on or the pylorus is stenosed, I would at the same time recommend a posterior gastro-enterostomy. Dr. Joseph A. Blake has recently suggested a modification of gastro gastrostomy after the method employed by Finney in pyloroplasty; the idea seems a useful one and has answered well in one case.

It is most important to make a very careful examination of the whole of the stomach in order to see that the proximal cavity is drained either into the distal one or into the jejunum, for it has happened on several occasions in reported cases that a gastro-enterostomy has been performed by joining the second cavity to the bowel, which can, of course, be of no benefit. In two reported cases the strictured passage has been digitally dilated on account of the difficulty in gaining access either because of extensive adhesions or from its position near the cardiac orifice, but in such cases it is desirable at the same time to perform a gastro-enterostomy.

In cases of cancer causing hour-glass contraction two procedures are open to the surgeon—either the performance of gastrectomy or gastro-enterostomy. In two of my cases the latter operation was done, the one being performed by the anterior method, where the patient died on the tenth day, and the other by the posterior method, the patient being extremely ill and unable to bear the major operation of gastrectomy which was done five weeks later with an excellent result. In the two cases where excision of the constriction was performed, the two ends of the stomach being united to a large decalcified bone bobbin as in enterectomy, the patients made smooth recoveries, one living for 16 months and the other being well at the present time, nearly three years later.

The following is a brief description of the cases to which I have referred.

SIMPLE HOUR-GLASS STOMACH.

CASE 1.—The patient, a married woman, aged 45 years, was admitted to the Leeds General Infirmary on May 10th, 1899, with a nine years' history of stomach trouble. The first attack was accompanied by severe pain after food and by vomiting so that she was unable for three weeks to retain anything on the stomach. After a period of almost complete starvation she recovered and was comparatively well for six years when a second period of illness occurred. On both occasions a swelling in the epigastrium with great tenderness was noticed. In September, 1898, a third attack occurred, since which time she had never been free from pain and the swelling and tenderness in the epigastrium had persisted. The patient was very much reduced in strength and weight.

An operation was performed on May 18th, 1899. Very firm adhesions were discovered between the anterior stomach wall and the parietes, on separating which a perforation was found in the centre of a cicatricial mass placed in the middle of the stomach which had divided the organ into two cavities, the proximal one being the larger. The stricture was divided longitudinally by a very free incision and the edges were brought together transversely over a decalcified bone bobbin. The patient was able to leave for home on June 6th when she weighed 6 stones 7 pounds, this being a gain in weight. On July 29th a report was received saying that she weighed 7 stones 2 pounds and that she was well.

CASE 2.—In May, 1899, I was asked by Dr. W. Duncan of Clay Cross to see a female patient, aged 26 years, who had been ill for 15 years with stomach symptoms, characterised by pain after food and vomiting. For some years the vomit was coffee-ground in character and streaked with bright blood. It varied from a small quantity to several pints, but for the past eight years no blood had been vomited, the vomit being sour, watery fluid in large quantities. Flesh had been steadily lost until the patient was reduced almost to the state of a living skeleton.

On June 6th on opening the abdomen the stomach was found to be trifid owing to a double constriction, the proximal one being formed by an adhesion passing from the liver across the greater curvature of the stomach, constricting it; the distal cavity was caused by a stricture about three and a half inches from the pylorus, it being dependent on a cicatricial contraction due to chronic ulcer. The proximal cavity was the most dilated and this gave rise to the stomach splash and to the well-marked signs of stomach dilatation. On dividing the firm band of adhesions forming the first constriction a sulcus was left in the stomach. On opening the second stricture a chronic ulcer was exposed and the channel was so narrow that it would only allow the passage of a No. 12 catheter. Gastroplasty was performed, one of the largest size decalcified bone bobbins being used. The patient made a good recovery and returned home within the month. A report received on August 6th stated that she had gained two stones in weight and was quite well.

CASE 3.—A married woman, aged 23 years, was admitted to the Leeds General Infirmary with a history of two years' pain after food and vomiting with great tenderness in the epigastrium and loss of three stones in weight during the past two years. A well-marked stomach splash could be made out but no tumour was manifest and the patient could with difficulty bear palpation on account of great tenderness.

On July 20th, 1899, the abdomen was opened and the stomach was found to be hour-glass in shape A constriction was found two inches from the pylorus, just admitting the tip of the little finger. Gastroplasty was performed, the suturing being carried out over the largest-sized bone bobbin. The patient made a good recovery from the operation and returned home on Sept. 16th.

CASE 4.—The patient, an unmarried woman, aged 46 years, was seen by me with Mr. F. T. Hindle of Askern. There had been indigestion and flatulency for 20 years and free hæmatemesis two years previously. There was great loss of flesh, dilatation of the stomach was well marked, and epigastric tenderness was present.

On July 28th, 1899, gastroplasty was performed. Extreme contraction one third of the stomach length from the pylorus was discovered. The stricture would just admit the tip of the little finger. The patient made a good recovery from the operation and there was an increase of weight on Nov. 1st. The patient was quite well a year later, but soon after she began to complain of pain dependent on perigastritis, for which an operation was subsequently performed (see Case 16).

CASE 5.—In August, 1899, I saw a female patient, aged 52 years, with Dr. E. Walker of Huddersfield. The patient gave a history of stomach trouble lasting for 26 years. At first the pain had occurred about two hours after food and vomiting was only occasional. During the first 20 years there had been periods of comparatively good health between the severe seizures. In 1894 she was told by an eminent physician that she would never be cured but might be relieved by dieting. For a year she had been sick every third day, vomiting in large quantities, and during that time she had lost two stones in weight, her weight being reduced to 5 stones 10 pounds in her clothes. Dilatation of the stomach was well marked; peristalsis could be seen and what was taken to be the pylorus could be felt to harden under the palpating hand.

On Sept. 9th the abdomen was explored and an hour-glass contraction of the centre of the stomach was discovered, the stricture only just admitting a No. 7 catheter. The proximal cavity of the stomach was enormously dilated and there were great thickening and induration around the stricture. Gastroplasty was performed by means of a bone bobbin and the patient made a good recovery. On Nov. 1st she had gained 26 pounds in weight, at Christmas she had gained four stones, and in December, 1903, I had a note to say that her digestion was perfect.

CASE 6.—The patient, a married woman, aged 36 years, was admitted to the Leeds General Infirmary on Sept. 28th, 1899, with a history that for ten years she had had stomach trouble, during which time she had lost three stones in weight. The symptoms had been intermittent but never completely absent during the whole of the time and for many months she had only been able to get relief after vomiting which occurred every day. The physical signs were very distinct and peristalsis was well marked and much increased by the use of the stomach-tube. When the stomach was washed out, after the first cavity had been thoroughly cleansed, the patient would suddenly retch and vomit a large quantity of foul material by the side of the tube, and as this contained no bile it clearly came from the second cavity. The second sign elicited was by filling the stomach with water, when the outline of the first cavity could be easily percussed. A third sign was found by filling the stomach with air, when the lower limit of the first cavity could be readily felt in the left hypochondrium; it became lost in the middle line and the stomach resonance could again be discovered to the right of the umbilicus. The stomach splash could always be elicited. Free hydrochloric acid was found in the stomach contents.

Operation was proceeded with on Oct. 5th. Numerous adhesions were found and detached between the stomach and abdominal wall, when two cavities were discovered separated by a long narrow isthmus two and a half inches in length, this being surrounded by dense cicatricial tissue. The pylorus was also much narrowed and thickened, it being also cicatricial. Gastroplasty was performed with some considerable difficulty on account of the great length of the stricture, and after this had been completed pyloroplasty was also carried out, but in neither case did I feel satisfied with the sutures, which were applied under tension. The patient was fairly comfortable after the operation and beyond a little regurgitation which was relieved by lavage on the third day no untoward symptoms followed, and a week later a note was made to say that the patient was doing well and altogether comfortable. At ten o'clock on the eighth day after operation she was suddenly seized with violent pain and the pulse rose to 120. In my absence Mr. R. Lawford Knaggs was summoned and after consultation with Mr. H. Littlewood it was decided to reopen the abdomen. The wound was found to be firmly healed, but on opening the peritoneal cavity air and bile-stained fluid escaped, due to perforation of the pylorus, some of the tense stitches having ulcerated through. Gastrorrhaphy was performed and the abdomen was washed out. Unfortunately, however, the shock was too great and the patient succumbed within a few hours.

CASE 7.—The patient, an unmarried woman, aged 27 years, whom I saw with Mr. E. Ellis of Halifax, gave a history of stomach symptoms lasting for eight years. There had been pain two hours after food and vomiting. A stone in weight had been lost in two years.

On March 21st, 1900, on opening the abdomen and exposing the stomach the latter was found to be hour glass in shape, owing to cicatricial stricture three inches from the pylorus just admitting the tip of the little finger. Gastroplasty was performed by means of a bone bobbin. The patient made a good recovery and later I had a report to say that she was well and was several pounds heavier than before the operation. On Dec. 19th, 1903, Mr. Ellis wrote to say that she was in good health, looked well, weighed nine stones, and was able to digest her food quite satisfactorily.

CASE 8.—The patient, an unmarried woman, aged 29 years, had suffered from chlorosis due to overwork for years before the beginning of her stomach troubles four years previously, since which time she had had pain after food and occasional vomiting with hæmatemesis and melæna. Very thorough medical treatment had been followed out on several occasions in the way of rest and rectal feeding but without any benefit. There had been great loss of flesh.

On opening the abdomen on March 22nd, 1900, omental adhesions were discovered, these covering a puckered ulcer on the front wall of the stomach three inches from the pylorus where there was an hour glass contraction which would just admit the tip of the little finger. Pyloroplasty was performed, a bone bobbin being used. The patient made a good recovery and returned home on April 30th. On May 9th she had gained several pounds in weight.

CASE 9.—The patient, a youth, aged 18 years, was seen on Feb. 24th, 1900, and gave the history that he had never been strong since an attack of pneumonia four years before and that he had had pain after food for two years, the pain usually coming on from one to one and a half hours after meals. Although close on six feet in height his weight was only 9 stones 8 pounds. He was not absolutely an invalid but he was unable to carry out any of his ordinary duties and was getting worse rather than better. The stomach was dilated, the lower border reaching midway between the umbilicus and the pubes. A stomach splash was very evident and there was well-marked tenderness over the pylorus. After two months' careful general treatment he had lost five pounds in weight and felt weaker.

Operation was performed on April 24th. Hour-glass contraction of the stomach was found four inches from the pylorus, there being a scar on the surface of the stomach at that point, showing that the cause was chronic ulcer. The stricture would only admit the tip of the little finger. Gastroplasty was therefore performed, the largest-sized bone bobbin being used. The patient made a good recovery from the operation but in November the stomach splash could easily be elicited as if the muscular power had not been regained. Lavage of the stomach and the administration of strychnine were advised. In December, 1903, I had a report to say that he was able to attend to his business every day, though he had still to take care in his diet and not to get over fatigued.

CASE 10.—The patient, a single woman, was seen with Dr L. A. Mackenzie of Bradford. She was in a state of great exhaustion with extreme emaciation, the history being that she had had symptoms of gastric ulcer for 15 years and that for six years she had lived on liquid food in small quantity. She had been for a long time completely bedridden.

At the operation (which was performed on April 30th, 1900) the stomach was found to be extensively ulcerated and scarred there being hour glass contraction four inches from the pylorus just admitting the tip of the little finger. At this point there were signs of an old perforation that had been covered by omentum which was extensively adherent. The stomach was so bound down by adhesions that anterior gastro-enterostomy only was possible. The patient rallied well from the operation and progressed satisfactorily up to the twelfth day, when after a good night she expressed herself as feeling very well. About midday she complained of abdominal pain, suddenly became collapsed, and died a few hours later apparently from perforation, though a necropsy could not be obtained to verify this.

CASE 11.—A man, aged 44 years, was admitted to the Leeds General Infirmary on May 31st, 1900. He gave a history of stomach trouble for 23 years with occasional periods of good health, though recently the healthy intervals had been very short. Coffee-ground vomiting was a marked symptom. There was considerable loss of weight.

Operation was performed on June 7th. A large cicatricial surface two inches in diameter was discovered on the front wall of the stomach, forming an hour-glass contraction from two and a half to three inches from the pylorus. On incising this longitudinally the mucous membrane was found to be ragged and ulcerated for two inches on either side of the incision. Gastroplasty was performed over a bone bobbin. In this case no free hydrochloric acid could be discovered in the stomach contents. The proximal cavity was the larger, the distal being comparatively small. The patient made a good recovery and returned home on July 25th.

Case 12.—Early in October, 1900, I was asked by Dr. T. B. Hearder of Ilkley to see a man, aged 52 years. There was a three years' history of pain and vomiting with epigastric tenderness and loss of flesh. On examination the stomach was found to be markedly dilated.

At the operation on Oct. 12th an hour-glass contraction was discovered near the centre of the stomach but the stricture was not extreme. Posterior gastro-enterostomy was performed and the patient made a good recovery. On March 4th, 1901, he wrote to say that he was quite well and that he had gained 1 stone 5 pounds in weight.

Case 13.—An unmarried woman, aged 25 years, was admitted into the Leeds General Infirmary on Nov. 5th, 1900, with a history of stomach symptoms and pain and vomiting for three years. During part of the time she had been in hospital and under thorough medical treatment but without material benefit except of a temporary character.

Operation was performed on Nov. 15th. A large constriction was found in the centre of the stomach forming a characteristic example of hour-glass contraction, both cavities being dilated and the proximal being larger than the distal cavity. Numerous adhesions had to be separated, especially around the pylorus, and others between the stomach and colon. A posterior gastro-enterostomy was performed from which the patient made an uninterrupted recovery. She returned home on Dec. 11th. On April 9th, 1901, she returned to the infirmary on account of having had some recurrence of pain and vomiting, but under rest and careful dieting the symptoms completely passed off in three weeks and she was sent home, weighing seven pounds more than she did when in the hospital on the former occasion. During the three weeks when under observation she had no sickness and during the latter part of the time she was able to take ordinary food without discomfort.

Case 14.—A man, aged 53 years, was admitted into the Leeds General Infirmary on Nov. 29th, 1900, with a two years' history of pain from an hour to one and a half hours after food. Vomiting was not a marked symptom until a few weeks before admission. His ordinary weight was 14 stones but on admission it was 10 stones 10 pounds. There were no signs of dilatation of the stomach and free hydrochloric acid was present.

At the operation on Dec. 6th an hour-glass contraction of the stomach was found three inches from the pylorus, there being considerable thickening of the stomach wall at that point; the proximal cavity was the larger. Posterior gastro-enterostomy was performed. He made a good recovery from the operation and returned home on Jan. 7th, 1901.

Case 15.—On Feb. 13th, 1901, an unmarried woman was sent to me by Dr. J. Mackenzie of Burnley with a history of stomach trouble extending over several years. The attacks had come on about four times a year, lasting from six to eight weeks, when after starvation with rectal feeding she was relieved for a time. The stomach reached to the level of the umbilicus but after distension with carbon dioxide the greater curvature was two and a half inches below. The stomach splash was still well marked four hours after a meal. On distension the outline of the stomach appeared to be bilocular, there being some irregularity in the centre. The patient was very thin and feeble.

Operation was performed on April 2nd. A cicatricial contraction of the body of the stomach was found within an inch of the cardiac orifice, the stricture extending obliquely across the stomach. In this case the cardiac complement formed the smaller sac, the distal pouch forming the bulk of the dilatation felt before operation. There was spasm but no stricture of the pylorus. Gastroplasty was performed and the patient made a good recovery from the operation.

Case 16.—The patient, a single woman, aged 49 years, who was seen with Mr. F. T. Hindle of Askern, had suffered from gastric symptoms for 20 years. Gastroplasty had been performed on July 28th, 1899, for hour-glass contraction, the constriction being at a point one-third of the stomach length from the pylorus. She had made a good recovery and had increased in weight so that at the end of the year she was quite well. Soon afterwards she began to complain of pain on movement and on straightening herself, as well as of discomfort and pain after meals, with flatulency, though she had not vomited. When she rested in bed she completely lost her symptoms and could take food well though directly she resumed the erect posture the pain recurred. There were tenderness and an indefinite swelling to the left of the middle line with a well-marked stomach splash on succussion. A diagnosis was made of perigastritis with adhesions to the anterior abdominal wall. After general treatment had been carried out for some time without any benefit operation was decided on.

On opening the abdomen on Jan. 24th, 1901, an old scar with a firm adhesion was found between the anterior stomach wall and the parietal peritoneum just above the umbilicus to the left. This firm adhesion produced little discomfort when the patient was recumbent, but when the body was erect it re-created the old hour-glass deformity with a difficulty in emptying the proximal pouch which was markedly dilated. The adhesion was separated and on invaginating the stomach wall so as to pass the fingers through the part that had been formerly stenosed the channel was found to have a wide calibre, so that the gastroplasty had been quite effective. It was found, however, that there was some narrowing of the pylorus though no absolute stenosis. A posterior gastro-enterostomy was therefore performed. The patient made an excellent recovery and left the surgical home at the end of three weeks. She was then five pounds heavier than at the time of operation and I had a report from Mr. Hindle on May 14th, 1903, to say that she was quite well in every respect.

Case 17.—The patient, a single woman, aged 29 years, was seen with Mr. M. Bryson of York. She had been ill with epigastric pain for ten years. The pain had been constant with exacerbations and had been increased after food, though this was not a marked symptom. She had never vomited blood but had passed blood freely from the bowel on several occasions. She said that all her trouble dated from an attack of typhoid fever ten years before. She was extremely weak and very thin, only weighing 6 stones 11 pounds with her clothes on. On examination just above the umbilicus there was a well-marked tender swelling that seemed to be bound down by adhesions. It was feared that the tumour might prove to be malignant.

The abdomen was opened on Oct. 24th, 1901, by an incision one inch to the right of the middle line above the umbilicus, when a large tumour was discovered in the centre of the stomach, there being a dilated portion of the stomach on each side of this. The communication between the two cavities was a small channel surrounded by an indurated chronic ulcer. The induration extended along the lesser curvature of the stomach, where enlarged glands were felt. There were many adhesions between the stomach, the liver, the gall-bladder, and the colon. Posterior gastro-enterostomy was performed. The patient made a good recovery and returned home. On Dec. 19th, 1903, I received a letter to say that she was quite well and that she had not had a bad symptom since her operation two years before.

Case 18.—The patient, a single woman, was seen with Dr. W. B. Mercer of Ripponden on account of wasting associated with pain after food and vomiting, the patient having had stomach symptoms for over two years. She was very thin, only weighing 5 stones 10 pounds, and was feeble and anæmic. The stomach was markedly dilated and there was a hard swelling in the centre of it. She had tried medical treatment very thoroughly for the greater part of the time since the first attack, but had never been long free from pain.

On March 7th, 1902, the abdomen was opened and an hour-glass stomach was found, with well-marked, hard, cicatricial tissue about the centre. As the narrowing of the channel was not extreme and the pylorus was patent a posterior gastro-enterostomy was done by connecting the first cavity of the stomach to the jejunum. The patient made a good recovery and when she left the surgical home had gained weight. After her return home there was some recurrence of pain, but she was able to resume her duties and when I heard later of her Dr. Mercer said that he had not seen much of her for the last two months. A subsequent report received in December, 1903, was to the effect that the patient had relapsed. From the history the recurrence of trouble is probably due to adhesions but the patient is unwilling to have anything more done.

CASE 19.—The patient, a married woman, aged 41 years, was seen with Dr. T. Robinson of Kensington. The patient gave a seven years' history of stomach trouble in the shape of painful indigestion, though after the first two years the symptoms had clearly pointed to gastric ulcer. She had been relieved by medical treatment up to 11 months ago, when there was a recurrence of pain after food with loss of flesh. At Christmas she had a free hæmatemesis and a second attack occurred a week later. On Jan. 7th, 1903, a swelling of the epigastrium could be felt of about the size of a walnut, it being moveable and tender. On May 18th a third attack of hæmorrhage occurred and from that time onwards she had been steadily losing flesh, so that her weight had diminished from 9 stones 4 pounds to 7 stones. When she was seen there was a well-marked tender tumour in the epigastrium. The patient was complaining of great weakness and she was profoundly anæmic. There was no ascites and the legs were not œdematous.

On Nov. 21st, 1903, the abdomen was explored through an incision to the right of the middle line above the epigastrium, when the stomach was found to be adherent at the front over an area of about the size of a five-shilling piece. On separating this a small aperture was discovered where perforation had occurred. The centre of the stomach was occupied by a hard cicatricial mass dividing the organ into two cavities. The index finger could be passed with difficulty from one cavity to the other. The glands along the lesser curvature were enlarged but discrete and other glands were found at the back of the stomach and in the great omentum. The proximal cavity was connected to the jejunum by posterior gastro-enterostomy, a bone bobbin being employed. On account of the great induration of the tissue surrounding the point of perforation it was impracticable to apply sutures. An omental graft was therefore detached from the great omentum and stitched into position so as to close in the perforation. Recovery was uninterrupted and the wound healed by first intention. She was able to take food from the first day and soon began to put on flesh When she left the nursing home on the twenty-fourth day she was looking well and expressed herself as feeling better than for two years. She had gained several pounds in weight and could eat anything in reason.

CANCEROUS HOUR GLASS STOMACH.

CASE 20—The patient, a married woman, aged 36 years, was sent to me by Dr. W. W. Chamberlain of Rawdon on Sept. 21st, 1900, and was admitted into the Leeds General Infirmary. There was a history of daily vomiting for four months and as the vomiting always occurred within an hour of meals the patient was reduced to the last degree of weakness. A tumour had recently appeared and was readily palpable on the right of the umbilicus. As she was so weak she was put on rectal feeding for a few days but without improvement and operation was decided on as a last resort.

Operation was performed on Sept. 28th. An annular cancer of the stomach was found three inches from the pylorus. It had considerably encroached on the lumen of the stomach, so that the stricture would barely admit the passage of the finger. The proximal cavity was very much dilated but the cavity between the growth and the pylorus was not dilated. An anterior gastro enterostomy was therefore performed as there were some extensive adhesions and it was thought that time might be saved by the anterior method. Regurgitant vomiting followed and persisted until the third day, bringing her almost to the verge of death. Food and stimulants were then given in large quantities and from that time there was no more trouble with vomiting, but on Oct. 7th (the ninth day) she became collapsed and died in the evening.

CASE 21.—The patient, a married woman, was sent to me by Mr. T. F. Forster of Dalton-in-Furness on Jan. 24th, 1901, with a moveable tumour in the epigastrium that had been noticed three weeks previously; there had been no vomiting, although indigestion, pain an hour after food, and loss of flesh and strength had been noticed since August, 1899. She weighed seven stones, having weighed eight stones or more previously to her illness. The tumour appeared to be of the size of a tennis ball, was free from tenderness, and could be made to move across the abdomen from one side of the umbilicus to the other. On distending the stomach with carbon dioxide it reached nearly to the pubes on the left side, but very little distension was noticed on the right beyond the tumour.

The patient was admitted to the Leeds General Infirmary, and on Jan. 31st on exposing the stomach a tumour was found involving the whole circumference a short distance from the pyloric end, so that between the pylorus and the tumour a small second stomach cavity existed, the dilatation being formed entirely by the cardiac complement. The tumour was completely excised and the distal and proximal cavities were united end to end over a bone bobbin. Glands were removed from the lesser and greater omentum. Recovery was uninterrupted and the patient left the hospital before the end of a month, having regained the weight lost during the week after operation with an additional pound. The tumour proved to be cancerous. A report was received in 1903 to say that the patient was in good health and well nourished.

CASE 22—A man, aged 62 years, was sent to me by Dr. James Gardner of Burnley suffering from a moveable tumour, thought to be cancer of the stomach, which had been noticed for a month but which had been preceded by stomach symptoms, chiefly pain after food and slight vomiting, for quite a year. There had latterly been some slight coffee-ground vomit but no large amount of blood had been brought up at any time. The tumour was not tender and could be pushed up under the left and moved over to the right costal margin. A stomach splash was well marked on the left of the tumour and on distending the stomach with carbon dioxide the lump was pushed over to the right. The vomit was acid from the presence of lactic acid, but no free hydrochloric acid could be found. Pylorectomy was advised and the patient was admitted to the Leeds General Infirmary, being then in an extremely weak condition.

Operation was performed on Nov. 15th, 1900. On opening the abdomen a mass of growth was found in the centre of the stomach, forming a ring of cancer and leaving a cavity on its proximal and distal sides, the cardiac cavity forming the dilated stomach where the splash on succussion was felt. Dr. D. Seaton, who was giving the anæsthetic, advised that the patient was too feeble to bear a prolonged operation and a colleague also confirmed the fact that the pulse could be barely felt at the wrist. A posterior gastro enterostomy was therefore only performed, a bone bobbin being employed. The patient soon rallied and made a good recovery, gaining flesh and weight and expressing himself as very well. For his further history see Case 23.

CASE 23.—The patient had gastro-enterostomy performed on Nov. 15th, 1900. He seemed to be so well and had gained strength so rapidly that it was felt desirable to give him the chance of cure by completely removing the growth, and after fully explaining to him his condition he gave consent.

Operation was proceeded with on Dec. 20th, 1900. The radical operation of removing the growth by partial gastrectomy was performed, about half of the stomach being removed in order to leave a wide margin of healthy tissue between the growth and the wound. Union was effected by suturing the cardiac and pyloric portions together over a bone bobbin, catgut being used for the mucous and celluloid thread for the serous sutures, the whole operation being completed within the hour. No glands were felt beyond the resected area. Recovery was uninterrupted and he returned home within the month, eating and enjoying food and having gained considerably in weight. He lived for 16 months and for nearly the whole of the time took his food well and until January, 1902, retained his normal weight.

It will be seen that there are 23 cases of which 19 were simple and four were malignant. Of the simple cases 11 were operated on by gastroplasty alone and all the patients recovered; one by gastroplasty and pyloroplasty combined, the patient dying, as did the one in whom anterior gastro-enterostomy was performed. Of the six patients treated by posterior gastro-enterostomy all recovered. Of the four cases of cancerous hour-glass stomach three patients recovered, two of the cases being treated by partial gastrectomy.

Park-crescent, Portland-place, W.

MR. M. I. FINUCANE, M.R.C.S. Eng., has been nominated by the St. George's, Hanover-square, board of guardians as one of its representatives on the Metropolitan Asylums Board.

OCHRONOSIS:

THE PIGMENTATION OF CARTILAGES, SCLEROTICS, AND SKIN IN ALKAPTONURIA.

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HERETOFORE ochronosis has been a pathological curiosity; the two cases here reported in alkaptonuria show that it may have interesting clinical features.

In 1866 Virchow[1] described a remarkable blackening of the cartilages in the body of a man, aged 67 years, who had died from aneurysm. The colour was coal black (as shown in his figures), not ochre-coloured or yellow; but it was not ordinary melanosis, and recognising the unique character of the condition Virchow called it ochronosis. Years passed before a second case was described by Boström,[2] that of a woman, aged 44 years, who had died from strangulated umbilical hernia. The same ebony-black discolouration of the cartilages was present. Then in 1892 Hansemann[3] described a third case, the patient being a male, aged 41 years, with general œdema and aneurysm of the left ventricle. He had had melanuria for 18 years. In a recently issued number of the *Deutsches Archiv für Klinische Medicin* Langstein and Meyer state that the examination of long-kept urine shows that this was not a case of alkaptonuria. There was no reduction of copper and no homogentisic acid could be found. Heile[4] recorded the fourth and fifth cases, one being that of a woman, aged 36 years, who had died from peritonitis after ruptured tubal pregnancy, and the other that of a woman, aged 52 years, with chronic leg ulcer and mitral valve disease. The sixth case was reported by Hecker and Wolf.[5] The patient was a man, aged 73 years, with long-standing melanuria and chronic endocarditis. In the eyes on each side some three or four millimetres from the corneal border there were black spots on the sclerotics. The urine was sometimes normal in colour when passed and sometimes brownish. It became black on standing for a day or two. The darkening was present for 11 years but was not constant. Blood, bile-pigment, indican, pyrocatechin, and drug pigments were excluded. It is distinctly stated that the urine did not reduce copper. Hecker and Wolf came to the conclusion that the reactions were those of melanuria. Post mortem there was the ordinary ochronotic blackening of the cartilages, arteries, &c. I am indebted to Dr. A. Garrod for this abstract from the *Festschrift* of the Dresden Hospital and he states that it is pretty certain this was not a case of alkaptonuria. The seventh case is recorded by H. Albrecht,[6] to whom is due the credit of suggesting the association of the condition with alkaptonuria. In a man, aged 47 years, who had died from pulmonary tuberculosis, the urine was dark-coloured and reduced the sulphate of copper, but the presence of alkaptonuria was not proved, for no homogentisic acid was obtained from it. After a week in the hospital he died and the necropsy showed a general ochronosis. A point of special interest was the grey-blue colour of the inner part of the ears, as if due to dilated veins.

I am able to report two cases of ochronosis in alkaptonuria in which the condition could be recognised clinically by the deep pigmentation of the cartilages of the ears and of the sclerotics, and in one by a remarkable ebony-black discolouration of the skin of the nose and cheeks.

CASE 1.—A man, aged 57 years, consulted me on Jan. 16th, 1895, for diabetes and rapid action of the heart. He had been an active business man and a successful politician. I did not question the existence of diabetes, as during a prolonged residence in Europe he had been under the care of several eminent colleagues in Berlin, Paris, and London, one of whom had referred him to me. After repeated examinations Dr. Futcher determined that the copper-reducing substance was not glucose and the case formed the basis of his paper on alkaptonuria in the *New York Medical Journal* in 1898. I need not refer in any detail to the condition of the urine in this case other than to state that it is never black when passed but darkens after a few hours. At my first examination I was impressed by a remarkable appearance of the sclerotics which showed small V shaped areas of deep pigmentation near the cornea. I thought it might be the result of old hæmorrhages, but the patient said that the condition had gradually come on and that it had annoyed him at first but that he now thought nothing of it. There was also a slight pigmentation of the nose and on the cheeks which looked like very thickly set comedones. As he left the room my attention was directed to the deep blue colour of the inner surface of the ears. I have seen the patient at intervals during the past eight years and have taken an increased interest in the deepening pigmentation of his face, eyes, and ears. I searched the literature at intervals for an explanation but without avail and I consulted Dr. de Schweinitz and Dr. Harry Friedenwald with reference to the pigmentation of the sclerotics. It did not seem to conform with any of the reported cases of this rare condition. Lately the patient came under my care in the private ward of the Johns Hopkins Hospital for anæmia and a weak, irregular heart. The pigmentation has extended considerably in the past six years and is now as follows.

Sclerotics.—The exposed V shaped portions are of a deep black colour, not in the entire extent, as there are areas of normal colour. The staining is in the sclerotic coat, not in the conjunctiva, and it does not extend to the covered parts of the eyeballs. Of late years it has become much darker; there was a brownish tinge in places which has now almost disappeared. There is nothing special to be noticed about the other parts of the eyes. The tarsal cartilages are not affected.

Ears.—From behind and along the free border of the helix the skin looks normal but when looked at from inside there is a remarkable blue-black discolouration, exactly like that produced by dilated veins, as Albrecht remarked. It is deepest in the concha and extends along the antihelix but not to the helix. I did not recognise at first that the pigmentation was in the cartilage. In certain positions and when the light falls into the ears the colour at once attracts attention. It has extended and deepened in the past five years.

Face.—Over the nose and the cheeks, in very much the butterfly distribution of lupus erythematosus, the skin is of a coal-black colour. At his first visit I thought that it was an unusual distribution of very black comedones. The line over the nose is narrow but widens and passes to the cheeks and extends over the malar bones and along the zygomata. There is no thickening of the skin, which can be picked up easily. The colour is remarkable, quite unlike anything seen in the skin in the ordinary pigmentary changes, but at first glance rather suggesting powder marks. Where present it is uniform, not patchy. It is nowhere else on the skin but Dr. Futcher tells me that small black spots have begun to appear on the back of the hands. One of this patient's sons has alkaptonuria.

CASE 2.—The patient is a brother of the patient in Case 1, his age being 49 years. This was one of the first cases of alkaptonuria described in the United States of America. He had applied for life insurance and had been rejected repeatedly. Dr. Marshall, of the University of Pennsylvania, studied the urine carefully and called the new copper-reducing substance glycosuric acid. The man remained quite well after he had got over his fright about diabetes. When the first patient was in the hospital this brother visited him frequently, and what was my surprise to find that he too had pigmented sclerotics and ears. The patches in the eyes were small, two vertically placed bands about five millimetres from the corneo sclerotic junction. They resembled in size and appearance those in his brother's eyes when I first saw him in 1895. The blue black colour in the ears, not nearly so marked as in Case 1, was confined to the fossæ and could not be seen from behind. The skin was normal, but through it appeared this remarkable leaden colour as though there was a diffuse nævus. The patient had noticed the pigmentation for several years. He was morbidly sensitive about it and it was with the greatest difficulty that I could induce him to come to the clinical laboratory where Dr. Emerson determined the persistence of the alkaptonuria. This patient died in April, 1903, from pneumonia after an illness of a few days. There was no post-mortem examination.

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[1] Virchow's Archiv, 1866, Band xxxvii., p. 212.
[2] Virchow's Festschrift, Band ii., 1891, p. 177.
[3] Berliner Klinische Wochenschrift, 1892, Band xxix., p. 660.
[4] Virchow's Archiv, 1900, Band clx., p. 148.
[5] Festschrift, Dresden Hospital, 1899, p. 325.
[6] Zeitschrift fur Heilkunde, 1902, Band xxiii., p. 366.

These brothers presented a singularity in gait, walking with a slight bend or incline at the hips. At first I thought the elder brother had had spinal disease but the spine was straight and the motion of the hip joints was perfect. He had had rheumatic pains in many joints and there were several Heberden's nodes.

Dr. Ogden of Milwaukee writes with reference to his alkaptonuria patient, whose condition was described in the *Zeitschrift für Physiologische Chemie*, 1895, that "the colour of the inside of each concha is a pearly, light greyish lead-blue, much the colour of the inside of some of our common mussel shells." This is evidently staining of the cartilages similar to that which exists in the two patients here described and in Albrecht's case.

There is no question that these are cases of ochronosis in long standing [illegible] port Albrecht's [illegible] laginous tissues [illegible] of metabolism which we have heretofore only recognised by the changes in the urine. The condition is thus brought within the range of the clinical physician. *Fortunately it is not* of much moment, so far as we know, and in the recorded cases there have been no symptoms directly due to the alkaptonuria. Dr. Garrod informs me that there are only two recorded post-mortem examinations in alkaptonuria cases. In Fürbringer's case[7] the patient, a male, aged 29 years, died from phthisis. There is no mention of the duration of the alkaptonuria. The necropsy was made by Thoma and the description is complete. Blackening with alkalies was looked for in the body fluids, but there is no mention of blackening of the cartilages. In von Moraczewski's case (a woman, *aged 43 years) the alkaptonuria was supposed to be* of late development. There is no mention of the cartilages in the protocol of the post-mortem examination. Some of the cases of ochronosis have not been in alkaptonuria and, as Dr. Garrod writes, it looks as if possibly even the very few cases described may belong to two distinct classes. Of the three cases in which black urine is mentioned two at any rate seem not to have been in alkaptonuria, and in Albrecht's patient Zdarek could not find in the fresh urine either homogentisic or uroleucic acid.

Baltimore, U.S.A.

SOME SIMPLE EXPEDIENTS IN PHYSICAL THERAPEUTICS.[1]

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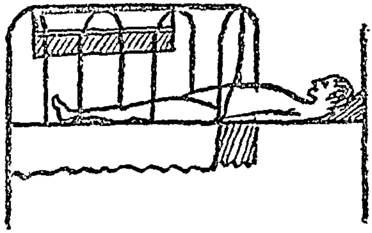
PHYSICIAN TO MIDDLESEX HOSPITAL.

IN the whole range of therapeutics there is no more important subject than the proper and efficient treatment of pyrexia. Without, however, entering upon an exhaustive consideration of so important a theme it will be allowed that while minor and transient degrees of fever can safely be left alone or dealt with by the various antipyretic drugs, and the more serious forms of hyperpyrexia demand rigorous application of cold in the form of bath or ice pack, there remains an intermediate class of continuous fever in which the repeated use of either of these modes of treatment is undesirable. It is only necessary [illegible] ment to say that all [illegible] depressant action on [illegible] tion is apt to induce [illegible] cases in which steady heart action affords the main road to recovery. On the other hand, while the application of cold to the surface, acting as it does as a tonic to the circulation, effects the reduction of temperature without involving this risk, many of the methods employed for the purpose, such as sponging, packing, and bathing, though undeniably efficacious and wholesome, possess undoubted drawbacks in practice. The use of water in any way involves trouble and difficulty on the part of attendants, not always skilful when available, and such proceedings, adapted as they must be to the severity of the case and the endurance of the patient, and liable if mismanaged to serious mishap, necessarily involve the presence of the medical attendant for a longer period and on more frequent occasions than may be convenient or even possible.

Taking these considerations into account, especially in such a state of continued pyrexia as that of typhoid fever, the system known as *cradling* offers undeniable advantages. It consists merely in arranging a sort of tent over the bed in which the patient lies naked or very lightly covered. The two ends may be left partly open to encourage a current of air or the effect may be intensified by suspending a trough inside containing broken ice. In hospital the tent is usually made of metal hoops covered by a sheet or blanket but in an ordinary bedstead a rod or cord extending horizontally about two feet above the patient and attached to the head- and foot-pieces is all that is necessary. In this way the surface of the body can be exposed indefinitely to an atmospheric temperature of about 60° F. which can be easily regulated, the natural cooling effect of radiation and evaporation being thus enhanced. The great advantages of this method are its simplicity; its remarkable efficiency, the continuity of effect being not only of value in continued febrile states but in reducing high temperatures; its comfort to the patient; the avoidance of the repeated shock and disturbance of applying water; and the freedom and security it gives to the medical attendant who is not called upon to cope with periodical alarming temperatures but can leave the nurse to meet the variations of the thermometer within a reduced range by regulating the draught or by applying ice or a blanket within the tent as indications require (see Fig. 1).

FIG. 1.



Cradle with ice trough.

In dealing with children whose consent and collaboration in times of sickness are less easily obtained than those of adults, as also in delirium and in highly nervous subjects, cradling is of special service and may be continued for ten or 14 days if necessary.

While considering the means of reducing temperature generally it may be useful to mention a simple method for keeping the head cool and controlling the circulation in cases of injuries and diseases of that part. In meningitis, skull fractures, and concussion, and sometimes in the delirium of fever, it has been the practice to apply cold to the head by means of an ice cap or simple bag, or perhaps only by evaporating lotion to the forehead. It is scarcely necessary to remind anyone that, with perhaps the exception of the last named, there is little satisfaction to the patient in any of these, and in unconsciousness or delirium it may exceed the powers of the nurse to maintain any contact at all. Moreover, the regions of the head to which these means are applied—the forehead and *vertex—are already the cooler on account of their position, being in the periphery of the* circulation and in addition freely exposed to the effect of radiation and evaporation. The part to which cold can be more profitably applied is the occiput and the nape of the neck and this can be done without difficulty or discomfort by using as a pillow an ordinary rubber water-bottle filled with ice-cold water and crushed ice and having a smooth towel pinned round it as a pillow-case. The substitution of this for the troublesome and inefficient appliances hitherto recommended in head cases has justly earned the gratitude both of patients and nurses and is particularly satisfactory to the medical attendant, as when ordering his patient "cold to the head" he can see that he gets it. In the delirium of fever, besides the local effect, this method has the great [illegible] so reliev- [illegible] For the [illegible] tic water [illegible] pillow is an absolute luxury, and while he is lying flat as in typhoid fever it is more convenient than an ordinary bolster. If filled with water containing shaved or finely crushed ice the bottle does not require refilling more than once in from four to six hours. The tension can be regulated to a nicety by the quantity used and it is as well to exclude air, both to insure the better conduction of heat and to avoid gurgling noises on movement of the head.

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[7] [illegible]

[1] [illegible]

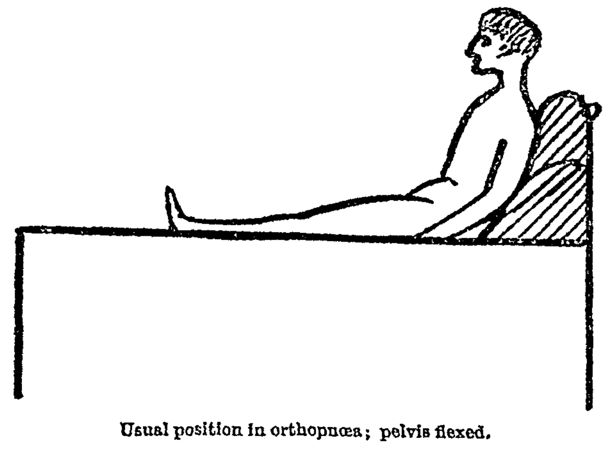
Before bidding good-bye to the rubber water-bottle it may be worth while recalling what many patients have discovered for themselves, that when hot it supplies a convenient and efficient substitute for a poultice or fomentation, more particularly in cases of colic or local pain, though, of course, the heat is dry instead of moist. Owing to its collapsable nature the rubber bottle, suspended, inverted, and fitted with a suitable arrangement of tubing, has been employed as a reservoir in administering douches of various kinds; this might possibly be useful in an emergency.

Having devoted the foregoing to a consideration of the application of cold in the treatment of certain morbid conditions, it seems appropriate to mention here some ready methods of applying heat and the diseases in which it is useful. Radiant heat from a red-hot coal fire, *pace* asseverations to the contrary, is effective in subduing the almost unbearable irritation of chilblains. This irritation is at its worst during about two hours in the 24, and can be controlled for that occasion by holding the affected part for a minute or two as near the fire as can be tolerated with considerable fortitude; steeping in very hot water approximates to this. The trouble recurs the next day but it can be abolished in the same way, and after three or four repetitions a cure is effected. Relief of the itching in psoriasis and eczema has also been found by many patients to follow exposure of the part to strong heat of a fire, a lamp, or water, and it is recorded of the Emperor Napoleon I. that he spent much time sitting in hot baths for the relief of a life-long eczema of the thighs which caused him serious torment. There is probably nothing which produces such unbearable irritation as pruritus ani, rendered more difficult to relieve by the comparative inaccessibility of the part. This, however, may be mitigated by the use of hot douches, the temperature being borne by some as high as 130°. Where this cannot be arranged the application of a hot cone such as an inverted soda-water bottle filled with hot water will serve instead. Though in all these cases relief is only temporary it is greatly valued by the patient, and the rest from friction locally and respite to the nervous system ultimately lead to cure.

Another simple and effective means of applying dry heat particularly to joints and surfaces is afforded by silver sand loosely inclosed in a linen-lined flannel bag, baked in an oven, and closely packed round the part. The heat lasts for half an hour and is both comforting and curative in chronic joint affections and lumbago or muscular rheumatism. On a more extensive scale the subjects of rheumatoid arthritis in Egypt spend hours buried in the hot sand with remarkable benefit.

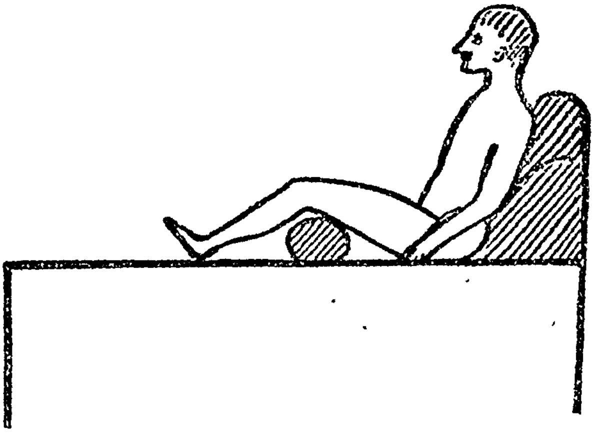
Patients with pulmonary or cardiac disease who are compelled by orthopnœa to sit up in bed suffer much in addition to their other troubles from the discomfort and insecurity of their position. On an ordinary flat mattress, and perhaps more so on a feather one, the pelvis is flexed and the weight is received obliquely on the lower part of the sacrum and coccyx which, owing to its irregularity and the thinness of its covering, soon becomes sore (Fig. 2). Moreover, the body, supported only by what engineers term "skin friction," tends to slide away from support, the clothes become "rucked," and the patient is only maintained in his precarious position by muscular effort and the frequent attentions of the nurse. By placing a firm bolster across the middle of the bed below the mattress a double-inclined plane can be formed like a Singapore chair which with the pillows or bed-rest affords thoroughly comfortable and firm support (Fig. 3). The weight of the body is then received through the ischial tuberosities in a line with the spine without tendency to displacement and its attendant troubles or any necessity for muscular effort. The abolition, too, of the flexure of the lumbar spine does away with the consequent compression of the abdomen and the sense of suffocation and oppressive flatulence which so often afflict patients in this position. The bolster may be put in position while making the bed, otherwise it is best arranged by lifting the lower half of the mattress and pushing it up from below till it meets and supports the buttocks. Those who have not attempted to sit up in bed for hours or perhaps days and nights at a stretch can scarcely realise the effort and discomfort it involves and the amount of ease this form of support affords. Not the least of its benefits is the partial flexion of the knees with support, relieving the tension on the nerves and tendons at the back of the thigh as well as the pressure on the heels, while the security from slipping downwards permits the weight of the trunk to be freely transferred to the pillows at the back.

Fig. 2.



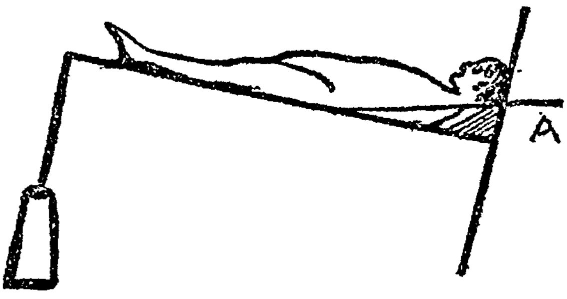
Usual position in orthopnœa; pelvis flexed.

Fig. 3.



Position with bolster under the mattress.

Fig. 4.



Feet raised in pleural effusion. A, Level of fluid.

A very simple method of affording support to a patient sitting up for brief periods after an enfeebling illness is to pass an ordinary roller towel round the back below the armpits and to make it fast to the foot of the bed. This of course does not prevent him slipping down and involves more confinement of the chest than one suffering from respiratory difficulty would tolerate, but as a simple mechanical support in uncomplicated convalescence it is often useful.

While considering the decubitus in pulmonary disease I would allude to the benefit in certain cases of pleurisy with effusion of raising the foot of the bed about 12 inches, so as to make the shoulders the lowest point, the patient lying supine or on the affected side (Fig. 4) The position is perfectly comfortable and quite easy to maintain continuously, the head being raised on an ordinary pillow not too high. The cases in question are those of pleurisy with effusion in which the fluid continues to rise to the top of the chest, recurring after tapping, and which are usually unaccompanied by pain though there is *some fever. In these instances experience shows that the* pleurisy is at the upper part of the chest and is probably always associated with a tuberculous lesion in the upper lobe. These at least are the cases of which I am now speaking. In ordinary circumstances the fluid poured out naturally gravitates to the lowest part of the pleura; towards the diaphragm if the patient is up, or distributes itself over the back if he lies in bed In either case it flows away from the seat of inflammation in the upper lobe and incapacitates the lower and presumably healthy portion of the lung, by its bulk also displacing the heart and mediastinum and so limiting the expansion in some degree on the sound side Certainly, these patients apply for aid on account of dyspnœa rather than for any other symptoms. By the time the fluid has mounted to the dome of the pleura where it might do some good by bathing and separating the inflamed surfaces and collapsing and resting the diseased area of lung. it is usually considered necessary, on account of the dyspnœa combined with the physical signs of a full pleura, to perform paracentesis, and the chance of natural relief for the local inflammation is lost With a full pleura and dyspnœa there would be scarcely two opinions as to the necessity for tapping the chest, but after relief has been so obtained, or in cases where the condition has been recognised in an earlier stage, decided benefit results from this position. The temperature falls and the exudation ceases, so that subsequent tappings are not required and recovery is more rapid. The ultimate effect on the pulmonary lesion is probably favourable; the treatment is, at all events, in accord with the generally received opinion of physicians that functional inactivity and collapse due to the presence of effusion round a tuberculous lung tend to arrest the progress of phthisis and should not be unnecessarily interfered with Whether there is a lessened tendency to the formation of adhesions it is difficult to say, but undoubtedly adhesions are infinitely more common in the upper half of the pleura, usually the dry areas, than in the lower half, the usual site of accumulation of fluid. Of course there are many instances of pleurisy accompanied by *pain and friction at the base followed by* effusion, both tuberculous and otherwise, but of these I am not now speaking.

The greater freedom of movement in the lower as compared with the upper half of the chest probably accounts for the greater frequency and severity of pain where the lower part is affected by pleurisy. On lying down, however, expansion of the upper lobes increases at the expense of the lower and this change is probably answerable for both the occurrence of pleuritic pain and the constant exacerbation of cough so notable in the subjects of pulmonary tuberculosis on assuming the recumbent position. In addition to posture the movements of the arms have a decided influence on expansion and contraction of the chest and after the febrile period rhythmic exercise, as in tolling a bell, definitely accelerates absorption of fluid from the pleural cavity. The influence of violent exertion in inducing dryness of serous cavities is familiarly illustrated by a "stitch in the side."

Enteroptosis.—A condition taken into account in recent years, though formerly overlooked or regarded as hardly beyond the bounds of the normal, is that laxity of attachment of the abdominal viscera which leads to their displacement on assuming the erect position, this being attended by a sensation of dragging and various functional disturbances. When this affects the kidneys only, and particularly when unilateral, a remedy is found in artificial fixation by operation. There are, however, many instances of the kind in which this is not resorted to and where the looseness extends to many or all the viscera operation is practically out of the question. If these patients, who, so far as I know, are all women, are to have any ease apart from the recumbent posture some form of mechanical support to the abdomen is necessary. Various forms of belts and pads are employed, but comparatively recently a sufficient number of cases of this sort have been submitted to one particular form of treatment to prove its general value and applicability. This consists in applying a nearly rigid support to the anterior wall of the abdomen by means of plates of sheet lead, trusting to the elasticity of the contained gases to furnish a resilient padding to the solid organs and to distribute the pressure exerted. To prepare these plates a pattern is first cut in paper by shaping a piece to cover the entire front from loin to loin and ensiform to pubes, taking care to leave a *space of half an inch at the bony points and margins.* By folding along the middle and trimming symmetry is assured and by cutting off the folded part an inch wide sufficient space is allowed for the edges to come together without overlapping. These patterns are then cut out of five-pound sheet lead and sewn into brown holland cases, which are stitched to the inner aspect of the corsets after temporarily adjusting with pins in the proper position. The corsets should be long as the two plates are liable to bend and to crack if they extend below them. The apparatus should be applied carefully before the patient arises from the recumbent posture so as to apply the pressure while the organs retain their normal position; the patient can then rise and get about without displacement occurring By this means it is certainly possible for a woman to get up at once and to go about her ordinary avocations in comparative comfort, free from the disability, pain, and vomiting which without such aid force her to maintain a recumbent position. The steady retention of the viscera in their proper place and the improved nutrition and health that ensue usually enable the patient to dispense with these artificial supports after three or four months, though in the mean time they may require renewing. It is useful therefore to retain the original paper pattern or a copy. As the plates are worn they adapt themselves to the figure, becoming more comfortable and effective, and should not therefore be straightened out when removed at night. Considering the difficulty of making any suggestion for the relief of enteroptosis and the great disability it involves this simple and harmless method will prove a welcome aid.

Reflex inhibition.—Many people are aware that pressure about the bridge of the nose or between the eyebrows will arrest an inconvenient sneeze, but it is not so generally known that gentle massage of the cricoid cartilage will usually arrest hiccough, especially in infants and young children in whom it most frequently occurs. So simple a proceeding could scarcely be expected to stop this distressing symptom in its severe form dependent on serious organic disease of the abdomen, but as a means of relieving the temporary attacks due to gastric disturbance, such as those ensuing on the ingestion of hot condiments, it is very efficacious. I have myself frequently found it of practical service while attending children. Stimulation of Arnold's nerve in the external auditory meatus or behind the ear is also effective.

Some forms of vomiting can be checked by counter irritation of the epigastrium by means of a blister or a mustard leaf or plaster. It may be worth mentioning that the least disagreeable mode of obtaining a rubefacient effect with mustard is to rub the dry flour into cotton wool and to apply this to the skin closely covered with oilsilk, when the natural moisture of the skin gradually brings the sulphocyanate of allyl into action, producing a mild calefacient effect which can be tolerated for several hours if necessary with [illegible] peripheral [illegible] the heart [illegible] articularly when the temperature is above normal, and I can recall several instances of typhoid fever in which this means of simultaneously checking vomiting and reducing temperature has proved of immediate service. Considering how inappropriate many remedies for vomiting are, which involve ingestion and digestion by an organ which can neither retain nor absorb, any indirect method such as this will often afford useful help where the long list of anti emetics are disqualified at once simply because they are internal remedies. Until quite recently we scarcely possessed an alternative to these, saving the subcutaneous injection of morphine, the remote effects of which often forbade its employment; no apology therefore is needed for mentioning another and quite new one though not actually germane to my present text. This is the continuous or repeated inhalation of oxygen. As to the rationale of the treatment I am not aware that physiologists have expressed an opinion, unless it is to suggest a parallel to the state of apnœa. I can, however, testify from its frequent employment in various forms of persistent vomiting—functional, reflex, and organic—that, so far, no means has proved so uniformly effectual. The inhalation of oxygen, and there is little trouble now in obtaining a cylinder, has this great advantage: it is perfectly harmless under all conditions and its administration may be repeated as often and continued as long as may be necessary and by comparatively inexperienced hands. It requires no effort on the part of the patient beyond that of ordinary respiration and involves no suffering or after-effects of a disagreeable character. Being administered by the lungs it not only acts independently of vomiting, which may continue for a time, but is peculiarly serviceable in such cases as those of gastric neurosis, irritability, inflammation or ulcer, in which it is undesirable or useless to introduce anything into the stomach, or after laparotomy where, in addition to this, retching is particularly obnoxious on account of the strain on the abdominal wound. Perhaps the most notable instance of its utility that could be offered was that of a nurse recently under my care for perforated gastric ulcer, involving laparotomy and suture of the stomach, where nothing could be given by the mouth and where the oxygen speedily arrested the vomiting following the anæsthetic and a recurrence some days later.

Other examples of reflex action, such as the contraction of the uterus following manipulation of the breast or distension of the vagina. sometimes contributory in accelerating labour or arresting post-partum hæmorrhage, are too familiar to need mentioning; as is the effect of dilatation of the anus or distension of the rectum in exciting contraction and evacuation of the colon. There is, however, a well-established reflex inhibition of the detrusor urinæ, illustrated in physiology by the arrest of micturition on stimulation of the sciatic nerve and in clinical experience by retention of urine, usually inseparable from operations about the anus and perineum. Apart however, from direct interference with the sciatic nerve, the effect of stimulation of its branches by pressing or pinching the skin below the buttock, in diminishing the desire for micturition, is readily demonstrated and may well be turned to account in dealing with cases of irritability of the bladder of nervous origin, and those more numerous and troublesome instances of enuresis in children for which there are so many remedies and so few cures, where a blister or even a calefacient plaster, made by moistening ordinary strapping with tincture of cantharides, would probably exercise sufficient restraint.

Internal hæmorrhage.—It is fortunately a very rare event for sudden internal hæmorrhage to prove immediately fatal unless due to the rupture of an aortic aneurysm, but it sometimes happens that before it is arrested by the occurrence of fainting and lowered blood pressure either so much blood has been lost as to involve tardy convalescence or the hæmorrhage, of little consequence in itself, causes serious damage to the organ in which it escapes, as occurs in the brain and lungs. It has been urged in such cases that it were better to induce syncope and cessation of hæmorrhage, either continuous or recurrent, by phlebotomy than to permit the continuance of the internal hæmorrhage at the risk of important tissues. But where such loss is already threatening life one naturally hesitates to induce further loss by other means, and the administration of antimony and other depressants has been suggested and carried out with a view to "bleed the patient into his own veins." This procedure, though useful in some instances of recurrent hæmoptysis and others of a slow and continuous nature, is hardly suited to emergencies, but a somewhat similar effect without the prostration and more under control can be obtained by applying elastic bands to the proximal end of the limbs. A moderate constriction is sufficient to retain the blood in the veins without arresting the flow in the arteries, so as to trap the fluid and to prevent its return to the heart. In this way a degree of anæmia in the central part of the circulation is obtained without further bloodshed, favourable to cessation of hæmorrhage and coagulation at the bleeding point, while the surplus remains in the limbs against future needs.

Whilst dealing with hæmorrhage it may be useful to allude to that common form epistaxis, which used to be treated by the barbarous practice of plugging the anterior and posterior nares. Now, happily, we have a remedy in a spray of adrenalin solution, 1 in 1000, which rarely fails in immediately arresting the bleeding and nothing could be cleaner, more inoffensive, or easier of application. But in the very exceptional instances in which it may be necessary to apply pressure this can now be done by means of a suitable rubber bladder introduced and inflated through the nostril and known as a "condom." Before this instrument was invented, and even now in its absence, an effectual plug for the nose could be improvised out of a piece of raw bacon fat from two to three inches long and of sufficient bulk, cut into appropriate shape, so that it can be just squeezed into the nostril, where it should remain several hours. It forms an efficient plug, is always at hand, and is not uncomfortable, neither is it so difficult to apply nor liable to adhere in its place or to lead to soreness and septic changes as are tampons. In minor cases the popular ideas of applying cold to the nape of the neck or raising the arms above the head are physiologically correct, as both tend to diminish the calibre of the vessels and to reduce the local tension and blood flow, but the plan of lying flat on the back, though tending to lower the force and frequency of the heart beat, is chiefly operative in causing the escaping blood to disappear into the pharynx. Perhaps as simple and effective a method of arresting minor forms of epistaxis as any is merely "champing" the jaws, when the blood flow of the internal maxillary artery is diverted to the muscles of mastication and the smaller terminal vessels in the nose are starved and cease to bleed.

Wimpole-street, W.

SPIRAL FORMATIONS IN RELATION TO WALKING, SWIMMING, AND FLYING.

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THE universality of the spiral in nature is a subject alike for surprise and reflection. As regards beauty of outline, the spiral transcends all other forms and is a source of pleasure. The spiral occurs very frequently both in the inorganic and organic kingdoms and, as I hope to show in the present article, has its own special uses. It is seen on a grand scale in the spiral arrangements of nebulæ, in the whirlwind and whirlpool, in the waterspout and the sand-storm, in the cyclone, and other natural phenomena. As concerns living things it is fundamental and manifests itself in the most rudimentary plants and animals, in the cells and seeds of the higher plants, and in the spermatozoids of the more complex animals. It makes its appearance, so to speak, at the very threshold of life and can be traced through the whole vegetable and animal kingdoms up to man himself. It is seen in spiral stems, spiral tendrils, spiral leaves, spiral flowers, spiral fruits, &c., in plants, and in spiral bones and joints, spiral muscles, spiral horns, spiral teeth, spiral shells, &c., in animals. It not only abounds in every department of plant life but it also lends itself freely to the construction of large numbers of external and internal skeletons in animals. All the hard and soft parts of the higher animals are, with few exceptions, dominated by it. It is a thing not of accident but of design.

Apart from the beauty and grace which inhere in every variety of spiral I think I can trace in it a hidden and far-reaching purpose. Indeed, I can show that not only do spirals enter largely into the formation of plants and animals but also that the complicated movements of climbing plants and tendrils and of walking, swimming, and flying are directly traceable to their existence; nay, more, that the circulation of the blood in birds and mammals is in great measure due to the ventricles of the heart being composed of powerful combinations of spiral muscular fibres. As a matter of fact, the blood in birds and mammals is forced by the ventricles into the larger blood-vessels (especially the aorta) by spiral movements which cause it to gyrate within them much in the same way that a rifle bullet is made to gyrate within a rifle when the weapon is discharged. The ancient and grim phrase "wringing the heart's blood" has, curiously enough, its foundation in fact. The spiral ventricles of the heart in birds and mammals are typical of many other structures. In the human species the stomach, bladder, uterus, &c., are all composed of spiral, figure-of 8 muscular fibres and, strange as it may appear, the food, the urine, and even the fœtus, are subjected to spiral pressure when being passed on and extruded. In parturition in the human female the offspring make a distinctly spiral exit, a result produced partly by the movements of the uterus and partly by the configuration of the pelvis. The heart is at once the most spiral and powerful muscle in the body, if the amount of work performed by it and its unceasing activity be taken into account. The ventricles of the heart are also by far the most complicated muscles known. Their arrangement forms a veritable Gordian knot in anatomy, the famous anatomists, Vesalius, Albinus, Haller, and De Blainville all confessing their inability to unravel it. The ventricles of the heart are deserving of very particular attention, both as regards their structure and function, from the fact that they throw a flood of light on muscular arrangements and movements as a whole.

All muscles, voluntary and involuntary, are fundamentally spiral in their nature. Sometimes only a curve or portion of a spiral can be distinguished, at other times entire systems of double reversing spirals can be made out. The involuntary muscular fibres of the ventricles of the heart in the bird and mammal afford beautiful examples of complicated double spirals, and one has only to study the spiral configuration of the bones (especially the long bones) as seen in the extremities of birds and mammals and the spiral configuration of the joints connected therewith to be convinced that the voluntary muscles must not only be spirally arranged but that they must also act spirally. The spiral action of the voluntary muscles is most observable where they act upon spiral joints, but it is also well seen where they act upon *universal or ball-and-socket joints, such as the shoulder-* and hip joints. It is in virtue of the spiral action of the muscular masses connected with ball-and-socket and with spiral hinge and other joints that circumduction and partial rotation of the arms and legs are possible. It is a curious fact that the muscular masses which invest and actuate ball-and-socket joints have their fibres arranged very much as the muscular fibres of the ventricles of the heart in birds and mammals are arranged—that is, they run in vertical, oblique, and transverse spiral directions. The muscles of the pharynx, œsophagus, and tongue follow the same general plan. The voluntary and involuntary muscles, it will be seen, are arranged in spiral cycles, the only difference between the two kinds of muscles being that in certain of the hollow viscera, say the ventricles of the heart of the bird and mammal, the involuntary muscles are arranged round *spiral cavities*, whereas the voluntary muscles, say those occurring in the extremities of the bird and mammal, are arranged round *spiral bones and spiral and other joints.* The involuntary hollow muscles communicate, as stated, a spiral impulse to the substances contained within them; the voluntary solid muscles, on the other hand, cause the extremities and other parts of the body to make spiral movements and describe spiral trajectories.

Muscles, whether voluntary or involuntary, in every instance act harmoniously and to given ends. Their movements are never perfunctory or haphazard. There is no such thing as flexor muscles forcibly and violently dragging out extensors, pronators supinators, abductors adductors, and the converse. This would be a mere waste of power, as it would necessitate one muscle contending with another, while each muscle has the same object in view—namely, the moving of certain bones or parts. When the flexor muscles [illegible]

[illegible] in groups but they require to be trained to prevent antagonistic action. Walking, swimming, and flying have all to be learned and the training consists in teaching the several muscles and groups of muscles to act in concert at stated intervals. Antagonism in muscular action would be fatal to the performance of muscular work. As a matter of fact, all muscles are invested with a double vital power whereby they can shorten and elongate, or what is the same thing close and open, by alternate centripetal and centrifugal movements, the flexor muscles closing and shortening when the extensor muscles open and elongate, and *vice versâ.*

In no part of the body do curves and spirals play a more prominent part than in the spinal column, the pelvis, shoulders, and extremities. In man the spinal column consists of four exquisite curves, the convexities of the cervical and abdominal curves being directed forward and the convexities of the thoracic and pelvic curves being directed backward. This double system of curves diffuses shocks equally from above and below and presents a line of beauty not matched even by that of the famous limner, Hogarth. The pelvis consists of a series of most beautiful arches (some of them skew), and the bones composing the arches are twisted in various directions. Similar remarks apply to the scapulæ, the clavicles, and the ribs. The bones of the extremities, as already pointed out, are spiral in their nature, but they are also in the majority of cases slightly bent in the direction of their length, a circumstance which contributes greatly alike to their elasticity and to their strength. Additional strength and elasticity are obtained, in the case of the arm and thigh bones (humerus and femur), by the bones being provided with short, oblique necks where they articulate with the body, an arrangement calculated to neutralise impacts of all kinds from the hands, feet, and other parts of the extremities.

In virtue of the spiral arrangements which obtain in the muscles and in the bones and joints of the extremities the limbs of bipeds and quadrupeds in walking and running describe alternating, complemental, figure-of 8 curves arranged in different planes and which approximate but never interlock. A locking movement of the extremities would render locomotion impossible. It follows that men and animals can, by the aid of their extremities which move in free spiral curves, perform long journeys without difficulty. As is well known, the bodies of vertebrate animals are bilaterally symmetrical. This is especially true of man who may be regarded as the paragon of living forms. In order to bring about this bilateral symmetry the body is composed of right- and left-handed spiral segments, the one slightly *overlapping and dominating the other. This view is favoured* by the fact that antelopes and other animals which grow spiral horns invariably produce a right-handed spiral on one side of the head and a left-handed spiral on the other or opposite side of the head. The overlapping, stronger, and more active segment or half of the body practically settles the question of right- and left handedness, the individual being right handed when the right segment and left-handed when the left segment is in the ascendancy. The brain, as the controlling agent, is a leading factor in determining whether an individual is to be right- or left handed.

Without entering into the subject too minutely it is safe to assert that the one side of the body is almost invariably stronger than the other, and that this greater strength, however produced, inclines the individual to use that side and the extremities of that side the most This is well seen in the lead taken by one or other extremity in walking. If the eyes be blindfolded it is not possible to walk in a perfectly straight line. It is found, moreover, next to impossible to walk in a perfectly straight line even when the eyes are open and fixed on a given object. *Unconsciously*, the heavier, stronger, and more active half of the body asserts itself and the individual swerves in curves to the right or left in spite of himself. The curved spiral movements of the limbs and the trend to the right or left in particular instances explain why natural footpaths in fields and waste places are almost invariably tortuous and winding. The spiral arrangements to which reference has been made culminate in the movements of walking, swimming, and flying. These important movements, on which the lives of the higher animals largely depend, are, as I showed in 1867 and subsequently,[1] distinctly spiral in their nature. When a man walks he twists his body at the shoulders and hips diagonally, the right arm and left leg advancing together to form one step, the left arm and right leg advancing together to form a second step. The right arm and left leg in walking make opposite spiral curves and these are crossed by similar curves made by the left arm and right leg, the result being a series of double, figure-of-8 curves. The same thing happens when a bird swims by the aid of its feet. In this case the right leg with the right webbed foot fully expanded is during the effective stroke thrust in a backward direction and makes a right-handed curve; the right foot, which during the non-effective stroke is closed and drawn towards the body, making a left handed curve. The left leg and foot perform similar movements and as the right and left legs and feet act alternately, double or figure-of-8 curves are generated. Similar remarks are to be made of the movements of quadrupeds. These, however, are slightly more complicated. Thus, in the walk of the horse the body is alternately supported on diagonals formed by the right fore and left hind legs and the converse; on laterals formed by the right fore and right hind legs and the converse; and on tripods formed by the two fore legs and one hind leg and the converse. In one stride the body is successively supported (1) by the two hind legs and the left fore leg; (2) by the left fore and right hind legs; (3) by the two fore and right hind legs; (4) by the right fore and right hind legs; (5) by the right fore and the two hind legs; (6) by the right fore and left hind legs; (7) by the two fore and left hind legs; and (8) by the left fore and left hind legs.

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[1] On the Various Modes of Flight in Relation to Aeronautics (Proceedings of the Royal Institution of Great Britain, 1867); on the Mechanical Appliances by which Flight is attained in the Animal [illegible] Society, vol xxvi. 1867); on [illegible] the Royal Society of Edin- [illegible] ocomotion (Anglo American

The supports formed by the legs of the horse vary in the several paces, such as the trot, the gallop, the amble, &c. The outstanding feature in all the paces is the twisting movements of the body at the shoulders and hips, and the sinuous, double, figure-of-8 curves made by the legs and feet on leaving and reaching the ground. These double-curved movements are well seen in the swimming of the fish, especially the long-bodied fishes. In swimming the body of the fish is thrown into alternating, complemental, cephalic, and caudal curves. Generally the sinuous double-curve movements can be traced also in the pectoral fins of fishes, these fins being the homologues of the anterior extremities of quadrupeds and bipeds. They invariably occur in the tail, which is lashed from side to side by a sculling movement. The tail of the fish is made to vibrate laterally, and while so engaged it twists upon its root or axis in such a manner as to produce double curve, figure-of 8 movements. The pectoral and caudal fins of fishes are of a generally triangular shape and are beautifully graduated, tapering, elastic structures. They closely resemble wings both in structure and function. They are all propelling organs. If the pectoral fin of the thresher shark (*Carcharias vulpes*) be examined it will be found that it is triangular-shaped, thick, and semi-rigid at the root and along the anterior margin and thin and elastic at the tip and along the posterior margin. This is the type of all wings, as an inspection of the wing of an insect, bird, or bat will show. Wings are slightly twisted upon themselves structurally and are screws functionally. The main difference between the pectoral fins of the shark and the wings of flying creatures consists in the greatly increased size of the latter. In only one case—*namely, that of the flying fish*—do the pectoral fins approach the wings in dimension. The flippers of the dolphin, whale, and sea-bear resemble the pectoral fins of the shark both in *form and function. The fins and tails* of fishes and the flippers of sea mammals simply propel. The wings of insects, birds, and bats propel, elevate, and sustain. Fins, wings, and flippers, however, act on a common principle, which finds its expression in the sinuous, double curve, figure-of-8 movements referred to in the walking of the quadruped and biped and in the swimming of the bird and fish. That wings act as explained can readily be verified by holding a bluebottle fly or a bee against a dark background in a strong light when the wings are vibrating rapidly. The blur or impression produced on the eye of the spectator by the swiftly-moving wing is twisted figure-of 8 fashion, a circumstance due to a change of plane in the wing and to *the fact that the* wing acts spirally in two directions as it hastens to and fro, the double curves forming one-half of the 8 being developed during the forward stroke and the *double curves forming* the other half of the 8 being developed during the back or return stroke. In free flight the figure-of-8 is opened out spirally, the wing in this case making a *waved-trajectory in* space. In the insect the wing acts more horizontally than in the bird and bat. In the bird and bat the spiral figure-of 8 movements made by the wings can *be readily detected* by a practised eye and careful observation. When the wings of the bird and bat are made to vibrate in captive or slow flight the tips of the wings make *more or less* vertical figure-of-8 trajectories In free rapid flight the figures-of-8 made by the wings are opened out and spirally unravelled and form waved trajectories—as in insects. To this there is no exception, as I have very fully convinced myself alike by observation and experiment. In birds and bats the wings are more or less folded and shortened during the up-strokes and expanded and lengthened during the down-strokes. The wings of birds and bats, as I first pointed out in 1867, strike downwards and *forwards* during the down stroke and upwards and *forwards* during the up-stroke. *This view, wholly opposed to prevailing beliefs,* was much debated at the time, but has been strikingly and amply corroborated by instantaneous photographs of flying birds taken by Mr. E. Muybridge and others. In these photographs—those of the pigeon, e.g.—the tips of the wings at the *beginning* of the down-stroke are as far back as the extremity of the tail, whereas at the *end* of the down-stroke they are in advance of the beak of the bird the whole length of the body or more. The old idea was that the wings *pushed* the body of the flying creature forward; in reality, the wings always fly in advance of the body and *pull* it forward. The result is the same, but the *modus operandi* is wholly different.

In all natural wings and in all artificial wings properly constructed the figure-of-8 and waved movements are invariably developed in captive and free flight. The great interest taken in artificial flight of late years invests the subject of the present article with a new zest and this has been heightened by the recent publication (1903) of a small work by Mr. Theodore Andrea Cook, M.A., entitled "Spirals in Nature and Art: a Study of Spiral Formations based on the Manuscripts of Leonardo da Vinci, with special reference to the Architecture of the Open Staircase at Blois, in Touraine." Mr. Cook in the work in question has attributed, rightly or wrongly, to that celebrated artist, architect, and engineer a large number of the most important discoveries of modern times. I say rightly or wrongly as Mr. Cook adduces no proof to show that Leonardo actually made the discoveries which he has assigned to him, proofs, it appears to me, being required in the case of a savant who died several centuries ago and whose writings are very little known. In the matter of flight the claims which Mr. Cook makes for Leonardo are wholly unwarranted—indeed, wholly opposed to facts. Thus at pages 153 and 154 of his book he says: "The downward stroke of a bird's wing which is *supposed to be so new a revelation* of the instantaneous camera was noted independently by Leonardo. He observed, too, that as the tips of a bird's wings in flight go up and down as well as onwards they make a spiral in the air which is adapted to the strength of wind resistance it has to encounter, and he made use of this observation in his theory of flying machines. His brain was able to infer what no human eye could really see, and when he noted that the spiral *formation of a screw was suggested by the movement of* a flying bird it was not till 400 years afterwards that the truth of the inference could be visibly demonstrated." Mr. Cook, in support of the claim which he sets up for Leonardo, appropriates (vide Fig 45 of his book) two of my original figures which he assigns to Leonardo without acknowledgment. In this connexion I have to state that Mr. Cook in a recent issue of *Nature* (July 30th. 1903) has frankly admitted that he inadvertently appropriated my figures. In his apology, however, he avers that my figures are of very little importance to his argument. He gives with the one hand and takes with the other. The statement quoted above is altogether inaccurate and is not justified, even indirectly, by any passage or drawing occurring in the manuscripts of Leonardo da Vinci which I have carefully examined. As a matter of fact, Mr. Cook in his great admiration of Leonardo unwittingly reads into Leonardo's short treatise and notes on natural and artificial flight the discoveries on these subjects of the last 36 years. He gives to the sixteenth century what unquestionably belongs to the nineteenth century. Leonardo's chief work on flight, bearing the title "Codice sul Volo degli Uccelli e Varie Altre Materie," written in 1505, consists of a short manuscript of 27 small quarto pages, with simple sketch illustrations interspersed in the text. In addition he makes occasional references to flight in his other manuscripts, which are also illustrated. In none of Leonardo's manuscripts, however, and in none of his figures is the slightest hint given of his having any knowledge of the spiral movements made by the wing in flight or of the spiral structure of the wing itself. Mr. Cook, as explained, also claims that Leonardo knew the direction of the stroke of the wing as revealed by recent researches and proved by modern instantaneous photography. As a matter of fact, Leonardo gives a wholly inaccurate account of the direction of the stroke of the wing. He states that the wing *during the down-stroke* strikes downwards and *backwards*, whereas in reality, and as demonstrated by me in 1867, it strikes downwards and *forwards*.

In speaking of artificial flight Leonardo says: "The wings have to row downwards and backwards to support the machine on high, so that it moves forward." In speaking of natural flight he remarks: "If in its descent the bird rows backwards with its wings the bird will move rapidly; this happens because the wings strike the air which successively runs behind the bird to fill the void whence it comes." There is nothing in Leonardo's writings to show that he knew either the anatomy or physiology of the wing in the modern sense. *He certainly did not know* that the wing is a screw structurally and functionally; that in captive flight it makes a figure-of-8 track; that in free *flight the figure-of-8 is opened out to form first a spiral and* then a waved-trajectory, and that it strikes downwards and *forwards* during the down-stroke, the wings pulling and not *pushing* the bird as Leonardo and all those who followed him believed.

St. Andrews.

AN UNUSUAL FORM OF FAMILY PARALYSIS.

BY J. A. ORMEROD, M.A., M.D. OXON., F.R.C.P. LOND.,
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TWO brothers have recently been under my care in St. Bartholomew's Hospital who were affected as follows. The elder one had for many years suffered from weakness of the legs and within the last four months had developed weakness accompanied with muscular atrophy of one hand. The younger brother had been weak in the legs for ten months. A third brother, whom I saw once, appeared to have a similar though much slighter affection of the legs. The following notes are largely due to my house physician, Dr. A. H. Hogarth.

CASE 1.—A man, aged 23 years, tailor by trade, was admitted to Luke Ward on Oct. 28th, 1903, complaining *of difficulty in walking and of loss of power in the right* hand. Dragging of the legs in walking was first noticed 17 years ago—i.e., at the age of six years; for this he attended at the London Hospital. 14 *years ago he attended* at St. Bartholomew's Hospital and was given a pair of surgical boots. 11 years ago he attended for a short time at Guy's Hospital. At St. Thomas's Hospital, nine years ago, operations (probably of the nature of tenotomy) were performed on his feet. Six years ago he began to use a stick. Three years ago he noticed that the legs were wasting. Four months previously he had to give up work on account of weakness in the right hand and this weakness had been increasing since. Apart from these affections he had had *no illness of any* kind. He had been attending the orthopædic department under Mr. W. McAdam Eccles and the electrical department under Dr. H. Lewis Jones. He was a *well-nourished though rather* small-made man of typical Jewish aspect and appeared to be very intelligent. The internal viscera were normal. There was no disease of the spinal column. Speech was natural. The tongue was protruded straight; it was not wasted. He had no difficulty in swallowing. As regards the eyes nystagmus was present on fixing to either side, especially *to the left*, the movements being rather large, horizontal in direction, and not maintained for very long together. The pupils were normal; the fundus of the eyes was normal; there was no *affection of vision*.

The lower limbs were thinned, particularly in the lower part of the legs; but the wasting was uniform, not picking out any special muscles. (This refers to the general appearance; it should be added that Mr. McAdam Eccles, who kindly saw these patients for me, thought that there was loss of power and atrophy of the short muscles of the feet, particularly of the abductor hallucis and the flexor brevis digitorum.) There was extreme flatfoot on both sides. The bones of the ankles looked big and prominent *and there was some stiffness* at the ankles but apparently no actual disease of the joints themselves. Marked hallux varus was present on both sides. There was no definite loss of any movement, except it were for a slight weakness in plantar flexion of the foot; neither were the lower limbs rigid. As regards gait the patient required some support. He walked with his legs held rather stiffly and his knees a little bent. There was very little movement at the ankles; his toes seemed not to leave the ground. In addition his feet sometimes became crossed and he then staggered to one side and nearly fell down. The knee jerks were much increased on both sides. Ankle clonus was present on the right side always, sometimes on both. The plantar *reflexes* showed a well-marked extensor response on both sides. Electrical reactions (examined by Dr. Lewis Jones) were normal in the legs, the thighs, *and the glutei; they were not obtained in the interossei* pedis.

As regarded the upper limbs the muscles of the shoulders, *the upper arms*, and the *forearms* were natural. In the right hand there was marked wasting of the thenar and hypothenar eminences and of the interossei. Of the thumb movements adduction and opposition were lost and flexion was done by the long flexor. It was this loss of power in the thumb which was mainly complained of. The grip of this hand was weak. *In the left hand there was perhaps some wasting*, but not nearly so much as in the right, and the patient himself had no complaint to make of this hand. The tendon reactions were well marked in both upper limbs, the right more than the left. In response to *electrical stimulation* all muscles of the upper limbs acted normally excepting in the right hand, where there was total loss of reaction in all the thenar muscles *and in the first dorsal interosseous* muscle. The other dorsal interossei and the hypothenar muscles acted normally and there was no reaction of *degeneration. There was no sphincter* trouble and sensory functions were quite normal.

The patient had electrical baths daily. He stayed in the hospital a fortnight, during which time no change in his sym- [illegible] his feet less when [illegible] in the opinion that the peculiarity of gait could not be wholly ascribed to the condition of flatfoot. To summarise, this patient suffered from deformities of the feet and toes; from a paralytic affection of the lower limbs, partly of the spastic type (as shown by the increased tendon reactions and *the extensor* plantar reflexes), but accompanied by some general thinning of the muscles; from a much more recent muscular atrophy in one hand; [illegible]

CASE 2.—[illegible] three and three quarter [illegible] on Nov. 13th, 1903, [illegible] a healthy-looking and [illegible] internal viscera was [illegible] and eyes were normal. There was no nystagmus. Speech was natural. The spinal column showed a rounded prominence (antero-posterior curvature) in the lumbar region. Mr. McAdam Eccles did not think there was evidence of caries; probably, *therefore, this curvature had little to* do with the weakness of the legs. As regards the lower limbs there was no flatfoot; some slight stiffness at the ankle-joints was present; there was no definite loss of power of movement. The knee-jerks were increased on both sides; no ankle clonus was obtained. The plantar reflexes were of *the extensor type* on both sides. The gait was peculiar. The patient could walk alone but he kept his feet apart; he balanced with his arms as he walked and his feet seemed to stick to the ground. He did not cross his feet like his brother. The upper limbs were natural, except that Dr. Lewis Jones reported some weakness in the electrical reactions of the extensors of the wrists and fingers on both *sides. All the other muscles, both of* upper and lower limbs, reacted normally. The sensory functions were normal. There was no sphincter trouble. *According to* his mother the child had been born strong and healthy, though instruments were used at his birth. He began to walk when 11 months old. Ten months previously—i.e., when he was nearly three years old—she first noticed a weakness of the legs which had become worse gradually.

This patient, therefore, like his elder brother, had a difficulty of walking, with indications of a spastic paralysis (increased knee-jerks, extensor plantar *reflexes*), *but had no* deformities of the feet, no muscular atrophy in the upper limbs, unless the slight electrical abnormality noticed by Dr. *Lewis Jones be taken* as the herald of such atrophy, and no nystagmus.

CASE 3.—A third brother of this family, aged seven years, was thought by his mother to be weak on his legs and was brought to see me in the ward on Nov 27th, 1903. He also was a healthy looking child and as he walked with his boots on there was really nothing noticeable in his gait except perhaps a slight waddle and a slight unsteadiness when he turned, but in walking barefoot he seemed to turn his toes up and to bring his feet down rather heavily. There was no definite deformity of the feet or spinal curvature. The knee-jerks were well marked; ankle-jerks were obtained; no ankle clonus was present. The plantar reflexes were of extensor type. There was no affection of the upper limbs or nystagmus. It seemed probable that this boy suffered in a very slight degree from the same affection as his brothers.

The eldest of the family, a woman, aged 24 years, I saw at the same time. She had a very considerable spinal curvature in the dorsal region, mainly lateral, with convexity to the right, but perhaps some kyphosis as well. There was no deformity of the feet. The knee jerks were rather marked; ankle clonus was not present. The plantar reflexes, unfortunately, could not be obtained owing to the coldness of her feet. The hands were normal; the wrist-jerks were rather marked. Nystagmus was not present. She walked quite naturally, and indeed beyond the spinal curvature appeared to have nothing the matter with her. The whole family, according to her statements, consists of the following members: Father and mother, both alive and well; (1) daughter, aged 24 years (has spinal curvature); (2) son, aged 23 years (Case 1); (3) daughter, aged 18 years (said to be anæmic); (4) son, aged 17 years (said to be healthy); (5) son, aged 15 years (said to be healthy); (6) son, aged 13 years (said to be healthy); (7) daughter, aged 11 years (said to be healthy); (8) son (Case 3); (9) daughter, aged five or six years (said to be healthy); and (10) son, aged three and three-quarter years (Case 2).

I make the assumption that all three brothers had the same disease, differing only in degree. It is, however, rather difficult to fit the disease into any of the usual types of family paralysis. Friedreich's disease may be excluded. So may peroneal muscular atrophy (to which there was a certain *primâ facie* resemblance), by the presence of increased knee-jerks, of ankle clonus, and of extensor plantar reflexes. Amyotrophic lateral sclerosis, in which there occurs the combination of spastic paraplegia and muscular atrophy of the upper limbs, does not run in families and has a more rapid course than the disease under consideration. Syringomyelia, which sometimes occurs in more than one member of a family and which exhibits the same combination of spastic paraplegia with muscular atrophy, is characterised by sensory paralyses which here were not present. The condition of the legs might be explained by a cerebral diplegia, but the gradual development of the disease, the complete absence of mental affection, and, most of all, the muscular atrophy in the hand must weigh against this diagnosis. Dr. S. J. Gee, in St. Bartholomew's Hospital Reports for 1889, published three cases of "hereditary infantile spastic paraplegia" in a man and two of his children. The man had also muscular atrophy of the hands and one child had indications of commencing atrophy. These cases therefore strongly resembled my own. They differed, so far as my personal recollection goes (as medical registrar to the hospital I had the opportunity of seeing them), in that the spasticity of the lower limbs and the cross-legged progression in particular were much more marked. There was, too, much less paralysis of the atrophied hand muscles than in my Case 1, for whereas my patient could not do his work as a tailor, Dr. Gee's patient, also a tailor, was still the first hand in the shop.

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A CASE OF FACIAL PARALYSIS ASSOCIATED WITH HERPES ZOSTER.

BY E. HEWAT FRASER, M.D., F.R.C.S. EDIN.

THE patient, a robust, middle-aged man, was seen on Oct. 20th, 1903 complaining of neuralgic pains in the face and head. On the 25th a widespread herpetic eruption appeared over the right side of the neck, spreading up on to the scalp and over the ear on to the lower part of the face; on the neck the rash extended down to the shoulder and over the clavicle on to the upper part of the chest. On Nov. 8th he was found to have developed typical Bell's paralysis of the affected side. The mouth was drawn to the left, the wrinkles had disappeared, and the actions of whistling and winking could not be performed; he also complained of the escape of food from between the teeth into the cheek of the paralysed side. No vesicles appeared on the upper part of the face but the skin was swollen and red and there was some conjunctivitis of the right eye. On mapping out the area of distribution of the herpes it was found to correspond to practically the whole region supplied by the superficial branches of the cervical plexus (second, third, and fourth cervical nerves), the ear and scalp in the area of supply of the great auricular and cervical nerves, the front of the neck in the region of the transverse cervical, and the lower neck, shoulder, and chest over the distribution of the suprasternal, supra-acromial, and supraclavicular branches being covered with herpetic vesicles. On the face the vesicles followed the distribution of the cutaneous branches of the inferior maxillary division of the fifth nerve. In regard to this it is of interest to note that the patient indicated with great accuracy the position of the mental foramen as a painful spot in describing his neuralgic pain. As regards the motor palsy this appeared to be restricted to the purely facial part of the seventh nerve supply. The occipital belly of the fronto-occipitalis was not paralysed. It was difficult to make out the condition of the platysma or of the retrahens and attollens aurem, but the facial muscles of expression were, as a whole, paralysed. No palsy of any of the muscles supplied by the fifth nerve could be made out. The neck muscles supplied by the cervical nerves appeared quite unaffected and the infrahyoid group supplied by the ansa hypoglossi, and so indirectly from the cervical nerves, was also uninjured. No drooping of the soft palate or uvula, such as has been described in cases of facial paralysis following herpes, was observed. On testing the special senses hearing was found to be quite unaffected, high- and low-pitched notes being quite readily appreciated on both sides. Taste was found to be decidedly dull on the affected side of the tongue. Tactile sense was markedly impaired all over the right side of the face and the tongue; compass points gave a single impression at a distance of six millimetres near the tip of the tongue on the right side but were recognised as separate at two millimetres on a corresponding point on the left. On the skin of the right cheek the points felt as one until a separation of one centimetre was reached. The temperature sense was unaffected. On Nov. 5th the patient had greatly improved and had almost regained control of the facial muscles, so that it seems likely that here, as in the majority of reported cases, complete recovery will ensue.

The association of paralysis of various muscles with herpetic eruptions is not uncommon. Many cases of facial palsy after herpes are on record, as is also paralysis of limb muscles—e.g., deltoid—after localised herpetic attacks, while Achard and Castaigne[1] report a case of permanent paralysis of the left pupil following herpes of the ophthalmic division of the fifth nerve. A curious point in the present case is the complete escape of the muscles supplied by the fifth and cervical nerves in contrast to the complete paralysis of the facial group. The absence of damage to the stapedius and to the muscles supplied early in the extracranial course of the seventh nerve (occipitalis, &c.) seems to show that the injury to this trunk was entirely peripheral in position. This may perhaps be explained by the spread of a neuritis along the numerous communicating branches from the fifth and cervical nerves to the seventh on the face. The tenderness at certain points of emergence of nerves noted above, seems to indicate the presence of some such inflamed condition of the trunks. In a somewhat similar case reported by Dr. A. S. Barnes[2] taste was lost on the affected side and hearing as regards high-pitched sounds was also impaired. Dr. Barnes therefore localised the injury to the facial nerve in the geniculate ganglion, thus explaining the paralysis of both the nerve to the stapedius and the chorda tympani. In the case now reported there was loss of taste but no change in the audibility of high notes, so then it seems probable that here the chorda became affected during its associated course with the lingual nerve. In another case recorded by Mr. H. A. Spencer[3] hearing and taste both escaped although there was complete facial paralysis, but the patient was a typical rheumatic subject and Mr. Spencer explained the condition as a simultaneous rheumatic neuritis of the facial and cervical nerves In the present case there were neither symptoms nor history of any rheumatic tendency The work of Campbell and Head[4] has definitely shown the cause of herpes zoster to lie in some damage to the Gasserian and posterior root ganglia as against the vascular theory advanced by Abadie,[5] so that in the present case one is forced to the conclusion that some lesion in the Gasserian and the second, third, and fourth cervical spinal ganglia set up a neuritis in the corresponding nerves *which spread by direct continuity to the terminal* distribution of the seventh nerve and so produced a temporary facial paralysis

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[1] Gazette Hebdomadaire, Paris, December, 1897.
[2] THE LANCET, Nov. 1st, 1902, p. 1197.
[3] THE LANCET, June 9th, 1894, p. 1447.

Hull

AN EFFECTUAL MEANS OF DEALING WITH THE CONDITIONS OF CHRONIC OBSTRUCTION OF THE LARGE BOWEL

RESULTING FROM THE ADHESIONS WHICH DEVELOP IN CONSEQUENCE OF CHRONIC CONSTIPATION

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SURGEON TO GUY'S HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN GREAT ORMOND STREET

IN a lecture entitled "Chronic Obstruction of the Cæcum and Ascending Colon" published in THE LANCET of Jan 17th 1903 p 153, I called attention to the mechanical obstruction of the large bowel which arises in consequence of its being overloaded with contents My attention was directed to this diminution of the lumen, particularly of the hepatic flexure, by the close resemblance of the symptoms which are presented in these cases to those of renal troubles whether of calculus or of excessive mobility Before I recognised this condition I frequently cut down upon the right kidney expecting to find a stone and after carefully separating it and its pelvis from surrounding structures and exploring the organ have been much disappointed at finding nothing To my surprise, however, the patient frequently lost all pain and discomfort These experiences have occurred to many and are well recognised As soon as I became familiar with this state of cæcal obstruction I have called attention to I saw that the cases I had operated on as renal were really of this character and that the extensive separation of the colon from the kidney in the process of exploring that organ thoroughly was often sufficient to remove the obstruction, if not for ever, at all events for a time As the lecture may possibly have escaped the observation of the readers of this paper I will recapitulate briefly the details to which I refer

When fæcal matter is allowed to accumulate in the intestinal tract there are two portions which are particularly likely to suffer and to become more or less inflamed from the irritation which its presence in excessive bulk or in excessive hardness produces They are the cæcum and ascending colon and the sigmoid flexure The splenic flexure is less commonly affected The segment which is most affected is formed by the cæcum and the ascending colon This part of the large bowel is the natural cesspool of the tract, material being collected in it, and in the recumbent position the overflow passes along the transverse colon usually without any difficulty When the trunk is in a position other than the supine there is required for the expulsion of the contents of the cesspool the expenditure of an amount of energy often in excess of that which the organism can afford, and as there is no obstruction to the passage of liquid from the ileum into the cæcum the distension of the cesspool and the weight of its contents become considerable In consequence of this its walls become inflamed to a certain extent and peritoneal adhesions form between it and the adjacent wall of the abdomen externally These adhesions oppose the downward and inward displacement of the loaded cæcum As time goes on these adhesions form above an omentum of considerable strength which having an attachment in the right flank above and external to the kidney, is distributed over the anterior and outer surface of the hepatic flexure and ascending colon and affords an excellent means of supporting and slinging this overloaded bowel in the erect position The arrangement is such, however, that while the erect posture is maintained there is an abrupt kink of the bowel in the situation of the hepatic flexure The adhesions which bind down the cæcum externally also fix the proximal half of the appendix In consequence of the fixation of this portion of the appendix distension of the cesspool is associated of *necessity* with an abrupt *kink of the appendix* at about its centre and with a coincident distension of the distal half of this structure which may produce all the very varying symptoms of what is called "appendicitis The emptying of the distended cæcum in the ordinary course of events relaxes the traction on the adhesions and may so permit of the escape of the dammed up contents of the distal portion of the appendix We are all very familiar clinically with the fact that symptoms of appendical irritation may subside at once after the intestines have been thoroughly evacuated by a purge

The formation of adhesions between the cæcum, the ascending colon, and the abdominal wall serves not only to support the overloaded cæcum but also to prevent its displacement upwards and inwards and the formation of a so called volvulus Though this condition is described as a volvulus and is put on a par with volvulus of the sigmoid flexure the conditions are quite different In the case of the cæcum and the ascending colon what is called a volvulus is merely the obstruction of the large bowel by the constriction of the hepatic flexure by the adhesions and omentum I have described The cesspool, over distended with its contents, moves in the direction of least resistance along a radius formed by the new mesentery which is downwards, inwards upwards, and forwards When seen in this position the distension of the cæcum is regarded as being brought about by the twist or volvulus, whereas the position of the overfull bowel in the situation of the volvulus is the natural and necessary sequence of obstruction of the flexure and an insufficient anchoring of the cæcum to the abdominal wall externally The obstruction of the hepatic flexure by adhesions and by the acquired mesentery which results from their presence is so remarkable and characteristic that one wonders how it escaped one's observation before

I soon became alive to the fact that the symptoms which arise in consequence of the obstruction of the bowel at the hepatic flexure were usually attributed to inflammation of the appendix which is naturally often associated with it The presence of adhesions about the proximal half of the appendix brought support to this view Consequently many cases came under my observation in which symptoms persevered unchanged after the removal of the appendix much to the disappointment of the patient and of the surgeon who operated On exploring them I found that precisely the same conditions of mechanical obstruction by band and adhesion existed in them all and that the symptoms were only relieved by the division of these bands and by insuring the subsequent efficient action of the bowel by purges, by massage or by exercise

In spite however of the thorough division of bands, adhesions, and the complete liberation of the cæcum and ascending colon from the constricting influence exerted by them I came across a certain percentage of cases in which the operation produced only a temporary cessation of the symptoms of obstruction, the old trouble reappearing very soon after This was the case especially in women who were physically feeble who suffered from respiratory incapacity and whose functions generally were performed in a *correspondingly* unsatisfactory manner An examination of their intestines at the time of the operation showed them to be flaccid and plastic retaining for an appreciable time the form and position in which they were placed by the fingers At first I attempted to avoid the re formation of adhesions by the administration of powerful purges before or immediately after the operation placing the patient on the left side, and by other methods I could think of Yet in a certain and by no means a small proportion of cases these efforts were unavailing Being of opinion that the harm to the individual, both as regards pain and the formation of ptomaines &c, consequent on the tedious passage of fæces through the large bowel, was greater than any advantage gained by absorption in that tract I determined to exclude the greater part of the large bowel from taking any share in the scheme of digestion I knew that the ileum had been connected with the sigmoid flexure or with the upper part of the rectum to deal with various troubles arising in special and rare cases, such as cancer, obstinate atony of the colon, intussusception, fistulæ, and the like, and that the result had been excellent so far as the nutrition of the patient was concerned. In these circumstances I determined to employ this method as a routine treatment in the definite group of cases of obstruction of the intestine produced by adhesions and by an acquired omentum in which the complete division of these constricting media will not afford relief, the recurrence or continuance of symptoms being produced by their re-formation. I make a very free lateral anastomosis between the lower limit of the ileum and the upper part of the rectum, or the sigmoid flexure if the rectum is too bound by fixation of the sigmoid flexure to allow of its being readily handled. For this purpose an efficient anastomosis can only be made by sacrificing a portion of the circumferences of both ileum and large bowel sufficient to insure that the resulting lumen at the junction shall not exceed the original size of the large bowel. The result of such operative treatment has been very satisfactory, the patient being freed from pain and tenderness, losing the dirty colour and inactivity consequent on the absorption of ptomaines, improving in weight, and obtaining regular daily evacuations by means of mild purgatives. The only objection to the lateral anastomosis is that the presence of any very large quantity of solid fæcal matter in the vicinity of the opening in the large bowel may possibly cause fæces to pass on into the cæcum. For this reason I now divide the ileum, closing its distal aperture and making its proximal section open into the lower end of the large bowel, so rendering it impossible for any material to enter the cæcum.

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[4] Brain 1900 Part II

[5] Annales de Dermatologie et de Syphilographie 1899 p 397

Cavendish-square, W.

ON THE ACTION OF VENOMS OF DIFFERENT SPECIES OF POISONOUS SNAKES ON THE NERVOUS SYSTEM.

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Preliminary Account: Cobra Venom.

IT is admitted by all workers, both of earlier date and those of more recent times, that snake venoms in general do seriously affect the nervous system. There has been, however, considerable dispute as to the manner in which the action is brought about and as to the exact part which this action plays in causing the symptoms and the fatal result in cases of snake venom intoxication. Thus, while nearly every writer who has specially studied the physiological action of cobra venom considers that that poison owes its lethal properties principally, if not entirely, to a direct action on the nervous system, Cunningham[1] contends that its primary action is on the blood and that the nervous symptoms which are observed in cobra venom intoxication are wholly dependent on the action of the poison on the blood. Again, this same observer,[2] as a result of his experiments with the venom of daboia Russellii, puts forward the opinion that when this poison causes rapid death it does so entirely by a direct action on the central nervous system. He looks upon its primary action as being that of a strong nerve irritant. It is not our intention in this preliminary account to enter into the discussion of this latter problem. One of us[3] has already put forward facts which proved the inaccuracy of Cunningham's hypothesis and which showed beyond a doubt that all rapid deaths the result of the injection of daboia venom were due to a more or less extensive intravascular thrombosis. The observations, in short, recorded in that paper and in another communication[4] of later date showed that daboia venom had a marked action on the blood plasma and on the red blood cells, but they did not show that it had no action on the nervous system. To this point, however, we shall return in another communication. From these few considerations alone, and they might be greatly multiplied, it would appear that renewed research is necessary with a view of trying to determine definitely the action of the venoms of different species of snakes on the central and peripheral nervous systems. Up to the present time this problem has been approached by all workers, with few exceptions, from one standpoint only—viz., the standpoint of the observation of the symptoms which result from injections of the various venoms and the observation of gross pathological appearances in fatal cases. Such a method of research as a means of determining the exact physiological action of a poison on the nervous system is surrounded with difficulties. These difficulties have been well stated by Martin[5] of Melbourne as follows: "The determination of the exact physiological action of a poison on the nervous system of the higher animals is always difficult. The difficulties are enormously increased when the poison, as is the case with most snake venoms, profoundly affects the blood and the whole circulatory apparatus also. In such a case it is not easy to distinguish effects which are due to the primary action of the poison on nervous tissue from those which are secondary to changes produced on the circulation and blood." It was therefore necessary to approach this question from another direction.

One of the exceptions to which we have referred above consists in an observation made by Dr. B. Kilvington,[6] working in Professor Martin's laboratory at Melbourne—viz., that the venom of the Australian tiger snake produces marked chromatolysis of the Nissl granules of the cells in at least one portion of the nervous system if the animal survives the injection of the poison for over three hours. Only one part of the nervous system, however, was selected for examination by this worker—viz., the cervical enlargement of the cord. The method which we have adopted was to combine the observation of the symptoms during life with histological examinations of portions of tissue taken from all parts of the central nervous system and from the peripheral nerves of animals, principally monkeys, which had received injections of the venom of a certain species of snake and which had died at varying intervals after these injections. It was thought that by following this method of investigation a definite opinion could be arrived at as to whether there was a direct action of the poison on the nervous system and also as to whether in those cases in which evidence of a direct action was present any relationship could be established between the symptoms observed and the histological appearances seen in the central nervous system and in the peripheral nerves. In this way we are investigating the venoms of several of the most deadly of the Indian snakes, among these being naia tripudians (cobra), daboia Russellii (chain viper), bungarus fasciatus (banded krait), and echis carinata (phoorsa). In the course of this investigation many interesting and important points have turned up which may throw light on other neuro-pathological conditions and which make it necessary that further research should be made along the lines we have indicated.

In this preliminary account we propose to deal with only one variety of snake venom and to leave over for future communications the observations made with the other poisons. Moreover, after further investigation we shall be in a better position to sift completely the data we have obtained and to show their bearing on the action of neuro-trophic poisons in general. The material which was used in all the experiments was pure, dry, and fresh poison. This was collected under the personal supervision of one of us during a period of several months from a number of healthy living snakes. The poison was obtained either by squeezing the glands or by allowing the snakes to bite through a sheet of waterproof cloth tightly stretched over the mouth of a stout wineglass. When the poison had been thoroughly desiccated over lime it was added to the general stock which was preserved in an air-tight tube kept from the light. Before the venom was weighed it was reduced to an impalpable powder and again dried over lime.

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[1] Scientific Memoirs by Medical Officers of the Army in India: 1895, Part IX., and 1898, Part XI.

[2] Loc. cit.

[3] Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. New series, 1903, No. 3.

[4] Ibid., No. 4.

[5] Clifford Allbutt's System of Medicine, vol. ii., p. 809.

[6] Journal of Physiology, vol. xxviii., No. 6, Dec. 15th, 1902.

The physiological action of cobra venom and the symptoms of the intoxication produced by it have been studied by many observers, especially in India. Nearly all these workers—Fayrer, Brunton, the members of the Indian commission, Wall, Aron, and Calmette—hold that cobra venom is a primary neurotic poison, acting directly upon the nervous, and especially the central nervous, system. This opinion, however, has only been arrived at by the observation of the symptoms which follow an injection of this venom. These symptoms certainly point, as we shall see, to an action of the poison on the nervous system. While this is the general opinion Cunningham, as we have mentioned above, has put forward the hypothesis that the primary action of cobra venom is an action on the blood and that the nervous symptoms, which have been observed and described by all alike, are dependent on, and can be interpreted by, the effects which the poison has on the blood. He holds that there is no satisfactory evidence that cobra venom has a primary action on the nervous system and he asks *for more direct proof of this hypothesis* than has hitherto been advanced. We hope in this communication to furnish sufficient direct proof of the effect of the action of this venom on the nervous system. As the symptoms of cobra-venom intoxication both in man and in animals are well known, having been described accurately by various Indian observers, it is unnecessary for us to enter into these symptoms in any detail. The following, therefore, is only a short summary taken from the data of the observations of one of us who has had the opportunity of studying the symptoms in two actual cases of cobra bite in man and in several hundred experiments in animals, including monkeys, horses, donkeys, dogs, &c.

When a large quantity of cobra venom is injected directly into the blood stream of an animal death takes place within three or four minutes after the injection. As a rule muscular twitchings and general convulsions are the only symptoms which are observed to precede death in these cases. On post mortem examination the blood is found to be liquid throughout; there is no trace of intravascular clotting to be found anywhere. If the quantity of poison injected intravenously approaches the minimum lethal dose the symptoms observed are the same as when the injection is made subcutaneously, the only difference being that they are of more rapid onset and terminate more quickly in death than in the latter case.

The first constitutional symptom which is observed to follow a subcutaneous injection of cobra venom is a state of lethargy and drowsiness. The head is seen to fall forward, almost immediately to be recovered with a jerk. The eyes are kept half shut but are opened suddenly on any stimulation. It is to be noted that there is no preliminary stage of excitement. Then paresis of the extremities becomes apparent and this is more marked at first in the hind limbs than in the fore-limbs; the animal has difficulty in moving and if a monkey it is seen to catch the bars of its cage to prevent itself from falling down. In man paralysis of the tongue and muscles of the throat soon makes itself evident; there is loss of the power of speech and the saliva which is profusely secreted trickles down the lip. Nausea, vomiting, and retching are common symptoms in man and in dogs. The paralysis rapidly advances, becoming more general and more marked. The animal soon lies down unable to move. The breathing still continues, although it may be slow and with much inspiratory effort. Just as the respiration ceases general convulsions may set in and close the scene This symptom, however, is not observed in all cases. If the chest be opened immediately after the respiration has ceased the heart is seen to be still beating regularly and pulsation may go on for from 20 minutes to half an hour after respiration has stopped. On post-mortem examination no gross lesions of any kind are to be found. In those cases in which death has been at all delayed or in which a large quantity of venom has been injected directly into the blood stream the coagulability of the blood is found to be diminished. No other pathological condition is apparent. We have mentioned above that Cunningham considers that the symptoms which we have just narrated are dependent for their cause on the action of the poison on the blood. Now the action of cobra venom on the blood cells and on the blood plasma has been fully investigated by one of us.[7]

The conclusions arrived at from this investigation were: (1) that cobra venom has a marked hæmolytic action but that the effects of this action *in vivo* were of little or no importance in the production of the constitutional symptoms; and (2) that cobra venom causes a certain but by no means well-marked diminution of the blood coagulability and that no symptoms as a rule result from this deficiency of blood coagulability. It is evident, therefore, that Cunningham's hypothesis is by no means an adequate explanation as a cause of the symptoms and of the fatal result in these cases and that we have still to search for other pathological lesions which might account for them. With this end in view we have examined the nervous systems of the following animals which died after having received injections of cobra venom:—

—	Weight in grammes.	Dose per kilogramme.	Time before death.	
		Milligrammes.	Hrs.	Mins.
Monkey No. 1	1830	0 25, subcutaneously.	6	0
,, ,, 2	3110	0 5, ,,	2	45
,, ,, 3	2770	0 5, ,,	2	30
,, ,, 4	2200	3·0, ,,	1	10
,, ,, 5	2050	10 0, intravenously.	0	3½
,, ,, 6	1900	10 0, ,,	0	2½
Rat ,, 1	—	0 25, subcutaneously. (+antivenomous serum)	45	0
,, ,, 2	—	0 05, subcutaneously.	20	0
,, ,, 3	—	0 25, ,,	3	0

The methods which were adopted for the histological examination of the nervous systems of these animals were as follows. Shortly after death portions of the cerebral cortex and cerebellum, the medulla, the pons, and pieces from different levels of the cord, as well as portions of the median, posterior tibial, and vagus nerves, were removed. Some of these pieces were fixed either in saturated solution of perchloride of mercury or in formol (10 per cent), and then mounted in paraffin.[8] Portions of the same tissues from four normal control monkeys were treated in a similar manner. This portion of the work was done by one of us in India. The paraffin blocks were sent home and sections were then cut, examined, and described by the collaborator. The staining of the tissues was according to Nissl's method either by theonine or toluidin blue. Some sections were also stained with hæmatoxylin and eosine. The following is a description of the changes observed in the nervous system in each case.

Monkey No. 1, weight 1830 grammes, died in six hours after subcutaneous injection of 0 25 milligramme per kilogramme of cobra venom. Throughout the cord the appearances are somewhat striking. In the cervical enlargement, at the periphery of each anterior horn—i e, in the antero- and postero-lateral groups—some ten to 15 cells are to be seen with well-stained and fairly well-defined Nissl granules. These granules, however, are not quite normal, for though not definitely fragmented they look as if little pieces had been clipped off their edges and under a high power it is quite apparent that their outlines are blurred and ill-defined as if some solvent had been acting on them. The rest of the cells in the anterior horn are degenerated and without any granules whatever. They are not typical "ghost cells," their nucleus and reticulum being too deeply stained for that; they look, rather, like a normal cell minus its chromatic granules. No cell is to be seen with the dust-like granulation so characteristic of a more chronic chromatolysis. In the lumbo-sacral region the same appearances are met with as in the cervical enlargement, though the number of these almost normal cells is less and a fair proportion of "ghost cells" is present along with the deeper stained cells with no granules. In almost all the cells the nucleus is central and the nucleolus distinct.

In the pons and the medulla the changes are much the same as in the cord, though not so marked. The twelfth, tenth (motor), and seventh nuclei all contain some of the almost normal cells, but also a considerable proportion of cells with the Nissl bodies much broken up. The cells of the seventh nucleus are less affected than those of the other two nuclei. In the cortex the vast majority of the pyramidal cells show an acute chromatolysis. As in the cord, there are some cells well stained and with their granules but little altered; but these are few and far between, not more than three or four to each section. In the cerebellum not one normal Purkinje cell is to be seen, most being deeply and diffusely stained, with a few dust-like granules in their plasma. The vessels throughout the cord, pons, medulla, and cortex are considerably dilated and in the cord some small hæmorrhages into the grey matter are to be seen. There is possibly a slight increase in the connective-tissue cells. These seem to be attracted by the ganglion cells, for one frequently sees such a cell with three or four connective-tissue cells around it and in close apposition to it In the peripheral nerves there seems to be a slight increase of the internodal nuclei, but this is not by any means well marked.

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[7] Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. New Series. 1903. No. 4.

[8] Other pieces of the same tissues were hardened in Müller's fluid and then passed through Marc[illegible] paraffin But owing to some bl[illegible] it was decided that the osmic ac[illegible] A note of this will be given in a [illegible]

Monkey No. 2, weight 3110 grammes. This animal received subcutaneously 0·4 milligramme per kilogramme of venom which had been kept in solution for some days. After the injection there were marked symptoms of poisoning but the animal recovered. Three days afterwards a second injection of 0·5 milligramme of poison freshly dissolved was given and death supervened in two and three quarter hours. The appearances in the cord seem somewhat different at different levels, some sections being practically normal, while others show quite a proportion of altered cells. Taken as a whole, there seems little doubt of the presence of degenerative changes, but they are not so well marked as in Monkey 1 As in that animal, there are cells with their granules slightly fragmented and others with almost no granules at all. The changes are most marked in the cells lying towards the central canal. The pons and medulla are almost normal. In the cerebral and cerebellar centres the cells are almost entirely devoid of granulation and the degenerative changes are just about as well marked as in Monkey 1. There is very slight increase, if any, in the nuclei of the peripheral nerves.

Monkey No. 3, weight 2770 grammes, died in two and a half hours after subcutaneous injection of 0·5 milligramme per kilogramme of cobra venom. In the cord the vast majority of the lateral cells seem practically normal, though they are, perhaps, rather more diffusely stained than they should be and their granules are possibly a little bit fragmented. Passing inwards there are cells found with more definite fragmentation and some have little granulation at all. The pons and medulla are normal. The cells of the cerebral cortex also are but little altered and may be considered as almost normal. The nerves show no abnormality.

Monkey No. 4, weight 2200 grammes, died in one hour and ten minutes after subcutaneous injection of 3·0 milligrammes per kilogramme of cobra venom. In the cord the vast majority of the cells seem quite normal, there being but a small proportion with their granules dissolved out. This may, however, be a commencing degeneration but if so it is not unequivocal. The cells of the pons, medulla, and cortex are almost normal. In the cerebellum the Purkinje cells are too diffusely stained and seem deficient in granules. The nerves seem little altered.

Monkey No. 5, weight 2050 grammes, died in three and a half minutes after intravenous injection of 10 milligrammes per kilogramme of cobra venom. The appearances throughout the nervous system may be considered normal.

Monkey No. 6, weight 1900 grammes, died in two and a half minutes after intravenous injection of 10 milligrammes per kilogramme of cobra venom The appearances are as in Monkey No. 5.

Rat No. 1 died in 45 hours after subcutaneous injection of 0·25 milligramme of cobra venom plus antivenomous serum The degenerative changes in the cortex, pons, medulla, and cord are extreme. The cells are deeply stained but they are much broken up and vacuolated. Some have pieces punched out of their edges, giving them an irregular and ragged outline. Almost none of these cells has any granulation whatever. There seems no doubt that in the majority of the cells their achromatic part is involved and that they are beyond recovery.

Rat No 2 died in 20 hours after subcutaneous injection of 0·05 milligramme of cobra venom. In the cord not a normal ganglion cell is to be found. Most of the cells are faintly stained with no granules and with a diffusely stained light blue nucleus and some cells have no nucleus at all. Other cells, again, are rather more deeply stained and contain broken up granules. There is no vacuolation to be seen. The appearances in the cortex and medulla are much the same as in the cord.

Rat No 3 died in three hours after subcutaneous injection of 0·25 milligramme of cobra venom. In this case there is quite a proportion of normal cells but, on the other hand, the majority of the cells show definite degenerative changes. In place of the pale cells of Rat 2 we have deeper staining, some cells having fragmented granules, and some no granules whatever. A few cells are very much disintegrated and vacuolated. In most cells the nucleus is central but it is rather ill-defined and diffusely stained. The degenerative changes are even more marked than in Monkey 1 (which died after six hours) and much more marked than in Monkeys 2 and 3, each of which died in rather less than three hours after injection, about the same time as this rat.

We see, then, that in cobra poisoning we have a toxic substance which when injected subcutaneously produces symptoms of muscle paralysis and that when we examine the nervous mechanism which controls these paralysed muscles there is found to be evidence of such degenerative changes as are known to be so frequently associated with paralysis. It seems fairly certain, therefore, that cobra venom has a direct action on the motor neurones. Doubtless this toxin, like most other toxic substances, has also a poisonous action on all the tissues of the body, but with such evidence as we have before us we cannot but conclude that it has a specially selective action on the nervous system and that it is from this that death results. There can be no reason, therefore, to ascribe, as Cunningham did, the cobra poisoning symptoms to blood changes which, even apart from the proof now furnished to the contrary, could not, as one of us has shown, account for them. Certainly not all the animals killed with the venom showed histological changes in the nervous system, for it would seem that time is required for these to develop. And here we would note that in such animals as Monkeys 3, 4, 5, and 6 we have had some difficulty in knowing how to interpret the slight changes found in some of their ganglion cells—whether to call them variations within the limits of what may be normal or to count them as evidence of an early degeneration. There can be no absolute standard to go by, for even in our four control monkeys a certain proportion of the ganglion cells were not without changes in their Nissl granules, and when we are dealing with the very earliest appearances of degeneration it must be difficult to know where to draw the line between what is normal and what is degeneration We have had this in mind in recording our cases and have described equivocal cases as being normal rather than make the error of finding evidence of degeneration where it does not exist. The degenerative changes in Monkey 1 (dead after six hours) were undoubted. In Monkey 2 (dead after two and three-quarter hours) and Monkey 3 (dead after two and a half hours) the appearances, though not so certain, may quite fairly be taken as showing an early degeneration. Monkey 4 (dead in one and one-sixth hours) is doubtful. Monkeys 5 and 6 (dead in a few minutes) may be considered normal. So that it would seem that two, and possibly three, hours are required to elapse after the injection of the venom before degenerative changes appear in these monkeys' cells. With the rat the time might be less, for in Rat 3 (dead after three hours) the degenerative changes were more marked than even in Monkey 1 (dead after six hours). Possibly the cells of the rat are not so stable as those of the monkey, but in any case one is never so sure of the results obtained in the smaller animals and we mean to deal with monkeys only in the future. One other point we wish to draw attention to is that in the six monkeys dying with cobra poisoning the staining of their ganglion cells was much more intense than that in the four control animals. This may be an accident, but we had to recognise the fact that in decolourising the section the length of time which was required was longer in the monkeys subjected to cobra poisoning than in the normal ones. This may, as we say, be an accident of fixing or staining, but we are disposed to regard it as due to the cobra venom producing some chemical change in the cells themselves.

In concluding, we wish to express our indebtedness to Dr. J. Lindsay Steven for the use of his laboratory and apparatus in carrying out a part of this investigation.

SOME OBSERVATIONS REGARDING THE SPECIAL CIRCUMSTANCES OF CASES OF LEAD POISONING OCCURRING AMONGST WORKERS IN WHITE-LEAD FACTORIES.

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THE circumstances influencing workers in white-lead factories vary considerably and may be regarded from the point of view of the workers themselves, their susceptibility to the action of the metal and also to the processes employed in the different departments of the works, and the special work undertaken by them. With regard to the susceptibility of the different workers this also varies considerably, so much depending on the habits of the worker, his attention to personal hygiene and his strict observance of the necessary precautions required in all white-lead factories that it is very difficult, and only after taking all these circumstances into consideration, to arrive at anything like a satisfactory conclusion. Some workers more than others seem to have something like immunity to the action of lead, and it would appear that in those cases after having imbibed a certain quantity of it into their systems they might work for long periods without becoming further susceptible to its action. Those cases are usually seen in well-developed, healthy, and temperate workers, who recognise the ordinary duties of health and the precautionary measures adopted at the works. That the latter have in some degree to do with this immunity is undoubted, yet others who observe the same precautions become victims. One instance of this was seen where the person had been employed in the works for over 40 years. Although decidedly anæmic he showed none of the symptoms which might have been expected after being employed for this period of time in a lead factory. So far as I could ascertain, he was a steady, temperate workman and careful as to his personal hygiene and the factory regulations.

Many of these workpeople come from the lowest classes and to persuade them to give attention to the crudest laws of personal hygiene is a very difficult matter indeed. Many are prone to excess, many subsist on a dietary of tea and bread with an almost total exclusion of fresh fruit and vegetables. It is no wonder then, that impaired nutrition plays such an important rôle in incipient lead poisoning. The worker thus when idle has only the barest subsistence and after a period of suspension it may be he returns to work with his health at a very low ebb, soon to find himself again the victim of plumbism.

An example of this is seen in the following case. A woman was suspended for three months from work in August as suffering from colic, constipation, and vomiting. During her suspension she had vomited on one or two occasions. She returned to work on March 9th following (seven months later) and had been working for one and three-quarter days in the white-lead department when she was seized with a convulsion at the factory which was followed by three others while she was being conveyed to her home in a cab. There was no previous history of epilepsy. She acknowledged, however, having worked for the one and three-quarter days without using a respirator.

As a rule anæmic young men and women are less resistant, judging from the frequency with which they are attacked. Men are less careful during work than women and are equally susceptible. I have never seen sufficient evidence to cause me to think that women were more susceptible than men. The greatest difficulty in the works was to get the employés to attend to the rules of the factory and amongst [illegible] drinks provided for them. Any [illegible] was eschewed by them. Sulphur [illegible]troduced and taken more readily. The period at which a good many showed symptoms of dyspepsia and constipation followed by colic was about six weeks after their commencing to work. This, however, varied and depended partly on the special employment of the workpeople. In the preparation of the carbonate of lead where the Dutch process was used—in which the lead in thin sheets is placed on the top of pots filled with acetic acid and is converted first into the subacetate and finally decomposed by carbon dioxide emitted from tan—the cases were most numerous. Over two-thirds of my cases occurred in this department. It is easy to understand how this should be so. The carbonate which is removed from the stacks (superimposed layers of pots, lead, and tan) by being either carried in trays on the heads of the workers or by machinery (hydraulic cranes) is placed in trolleys to be conveyed to the rolling mills. A cloud of white-lead dust is easily caused to ascend among the workers by careless handling of the lead and especially so when the carbonate has not been properly watered or moistened before removal from the stack. Indeed, where the removal is done by machinery, although fewer workpeople are required, the process is in itself more dangerous as the buckets containing the lead can be lifted and deposited in a more careful manner by the hand. A great deal, therefore, depends upon the way in which the workpeople handle the lead and in this they are often attentive at first but get hardened by association with less careful workers.

A large percentage of my cases from this part of the works presented symptoms of epilepsy, some, indeed, without minor symptoms appearing first, showing, no doubt, that the lead had gained entrance into the system in large quantities, and evidently cases of acute poisoning. Were these cases not also due to the entrance of the poison into the system through the respiratory tract? The facts pointed to this. Indeed, the respiratory tract is perhaps a more potent source than is usually considered, not perhaps in all parts of the works, but certainly in the departments where dust is prevalent. The ordinary respirator worn by the workpeople does not exclude this and a thoroughly good and serviceable respirator has yet to be devised.

Those who worked in the drying chambers, where the temperature was often very high (200° F.), were also frequent victims and after a short time they were usually transferred to less dangerous parts. The smallest number of cases came from the grinding and smelting departments, where wet grinding was carried on. In the red-lead department not more than from 1 to 2 per cent. of cases occurred. The removal of the carbonate from the stacks caused by far the largest percentage of cases and was obviously the most dangerous part of the work, but the suppression of the dust would have made it less so.

Smoking was prohibited in the works but chewing which is less easily detected, was more practised by the workers. This is one of the ways by which large quantities of lead may gain entrance into the system by the digestive tract. The workman whose hands are covered with white-lead twists off enough tobacco, which in turn gets covered with the white lead, and this he places in his mouth. In glancing down a file of workers who were being presented for examination I have seen one or two chewing when they thought they were unobserved, but when charged with it they would deny and when asked to open the mouth they would previously swallow the tobacco in order to escape detection.

Such are instances of some of the difficulties to be met with in dealing with workers who use every means to prevent information being conveyed to the officials that would endanger their future employment and to impose too strict limitations—e.g., to exclude all who are addicted to the abuse of alcohol in these works—would be a very difficult measure indeed to carry into operation. The remedy which would lead to a diminution of the cases of saturnine intoxication amongst white-lead workers seems to lie in the strict observance of the precautionary or preventive measures adopted in these works, in some means by which the quantity of dust in certain departments would be lessened, and to the suspension from work of cases presenting *early* symptoms at the periodical medical examinations as well as the necessity for *each* worker being medically examined and certified fit for work, at intervals of perhaps a week before being employed. This would tend to prevent employés escaping examination by being absent, wilfully or otherwise, on the day of the visit of the medical officer to the factory.

Fyvie, Aberdeenshire.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

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A CASE OF ASCITES RAPIDLY CURED ON THE ADMINISTRATION OF IODIDE OF POTASSIUM.

BY JOSEPH A. W. PEREIRA, M D BRUX., L.R.C.P. LOND., M.R C S ENG.,
MEDICAL OFFICER, EXETER CITY WORKHOUSE.

A MAN, 25 years of age, was admitted into the Exeter City Workhouse Infirmary on Dec. 28th, 1901. His condition was as follows. The abdomen was distended with fluid. The urine was scanty, high coloured, and showed a distinct trace of albumin. The liver did not seem to be enlarged; its edge could not be felt. There was no jaundice. The heart was displaced upwards and its sounds, though feeble, presented no murmur. There was no œdema about the eyelids, the thorax, or the upper or lower extremities. The face was not emaciated, neither was the complexion anæmic. The man was ordered a drachm of compound jalap powder every alternate morning and a mixture of digitalis, squills, and broom was prescribed. He took his discharge on Feb. 25th, the ascites being slightly more pronounced than on his admission He returned to the infirmary on March 3rd, 1902. His condition was greatly aggravated and, moreover, his lower limbs, his scrotum, and penis were very œdematous.

For a case like this tapping the abdomen is the recognised treatment. But there were certain noteworthy features in the case. The patient was under the age at which alcoholic cirrhosis is generally seen. He had not the hepatic facies of the tippler. His physical strength too, was remarkable, for he actually walked to the infirmary, a distance of nearly a mile. He presented none of the toxæmic symptoms which one would have expected in ascites of such a grade. The conclusion I came to was that there was pressure on some abdominal vein or veins, possibly the portal, which caused the ascites. All the other signs and symptoms were the natural consequences of the pressure. In a man of his age a gumma was the most probable cause and on this supposition I placed him on 7½-grain doses of iodide of potassium three times a day. The effect of the drug was that of a powerful diuretic. The urine became copious and free from albumin. He took his discharge on April 29th, without a trace of ascites or œdema anywhere. He is at the present moment earning his living as a labourer. I record this case because it is rare for ascites, from whatever cause arising, to disappear completely. It is also the most remarkable one in my experience of the effect of a single drug on a disease, for this man whose heart was very seriously embarrassed by reason of the great abdominal distension left the infirmary within two months perfectly well. It also presented features which, as I have shown above, differentiated it from alcoholic cirrhosis of the liver in which the iodide of potassium would have been useless.

Exeter.

A CASE OF POISONING WITH HYOSCINE HYDROBROMATE.

BY J. C. M. GIVEN, M.D., M.R.C.P. LOND.

ON Oct. 30th, 1903, a man, aged 69 years, came to me complaining of cramps in the muscles of the legs at night and also of senile tremor of the hands. He had been under my care at intervals for several years. Five years ago I attended him through a severe attack of basic pneumonia which was accompanied by much excitement, and then $\frac{1}{100}$th of a grain of hyoscine hydrobromate was used hypodermically with great benefit. At the present time he was in fair health for his age. The pulse was rather quick—about 90 per minute. The heart sounds were normal. The urine was high coloured; it was free from albumin and sugar. I ordered him $\frac{1}{200}$th of a grain of hyoscine hydrobromate in one drachm of water to be taken at bedtime. At 9.45 P.M. on the same day I was hurriedly summoned to see him. I was informed that at 9 15 P.M. one teaspoonful of the medicine was given him by his son (this was confirmed by the amount absent from the bottle). After swallowing it he undressed and got into bed. While undressing he remarked to his wife that his throat felt very dry and she noticed that his speech was rather thick. Two or three minutes after he got into bed his wife heard him breathing very deeply; she tried to rouse him but could not and sent for me. I found him half an hour after he had taken the medicine deeply comatose with stertorous breathing and flushed face. His pulse was 80 per minute and regular. his pupils were dilated and equal, and the conjunctival reflex was very slight; I could not rouse him by any means. I injected $\frac{1}{10}$th of a grain of strychnine hypodermically and gave one ounce of brandy by the rectum. At 10.45 P.M. there was no improvement; the coma if anything was deeper, the conjunctival reflex was quite absent, the pulse was smaller and weaker, and there was some twitching of the arms and legs. I sent for my syphon stomach-tube and for Dr. W. B. Paterson to help me. In the meantime I injected $\frac{1}{4}$th of a grain of morphine with one grain of caffeine citrate. In a few minutes the pupils became less dilated but otherwise there was no change. At 11.45 P.M., with Dr. Paterson's assistance, I washed out the stomach by the syphon tube with hot water, removing a small quantity of partially digested food, and then passed into the stomach about eight ounces of strong black coffee and one ounce of brandy. At 1 A.M. the conjunctival reflex began to return and the patient flinched on pinching the skin on the inner side of the arm. Improvement slowly set in, the breathing became less noisy, and the pulse fuller and stronger. At 3 A.M. he could be partially roused for a moment by pinching and shouting but at once relapsed into a somnolent condition; the pupils now reacted to light. At 5 A.M. he made an attempt to speak and swallowed some coffee. At 8 A M., that is 11 hours after taking the dose, he was really conscious and able to speak for the first time and he thenceforth made an uneventful recovery.

The prescription, which was for $\frac{1}{200}$th of a grain of hyoscine hydrobromate in one drachm of water with orders to send two ounces, was dispensed at a very trustworthy druggist's, and a very unfortunate and dangerous, though instructive, mistake was made in dispensing it. The druggists in question gave me, I am glad to say, every facility for investigating the matter. It appears that they had two establishments; at the one to which the prescription was taken they had no hyoscine in stock, so the dispenser sent a written message to the other place for 0 08 gr. of hyoscine hydrobromate in two ounces of water, which is equal to $\frac{16}{200}$ths of a grain, the exact amount he required for the whole bottle of medicine; the dispenser at the second shop, seeing that decimals were used, took it for granted that it was a foreign prescription and that "gr." stood for grammes and sent 0·08 gramme which the first man sent to my patient. The result of this was that he got more than 15 times as much as was intended, or about $\frac{1}{13}$th of a grain. This appears to be a good object lesson in the danger of the present condition of weights and measures in the Pharmacopœia, where it is now optional for either the decimal system or the apothecaries' measure to be used. Surely the time has come for the rational and scientific metric system to be enforced as the officinal standard.

The literature of hyoscine poisoning seems to be scanty and points to the fact that the drug is rather uncertain in its action, sometimes producing poisonous symptoms in very small doses while in other cases fairly large doses are tolerated. This is probably due to variations in its purity and mode of manufacture The hyoscine used in this case was Merck's. Professor J. Dixon Mann in his work on Toxicology states that in one instance $\frac{1}{40}$th of a grain taken by the mouth produced severe symptoms of poisoning, as did $\frac{1}{30}$th of a grain given hypodermically in another. On the other hand, Allan Gray[1] reports a case where $\frac{1}{10}$th of a grain was used every night with good effect. Dr. L. A. Weatherly, who used it largely in asylum practice, in an article in the *Journal of Mental Science* for July, 1891, states that he considers that the dose should be from $\frac{1}{200}$th to $\frac{1}{100}$th of a grain, very cautiously increased in some cases to $\frac{1}{50}$th. With regard to antidotes, besides those used in this case pilocarpine has frequently been employed. I had it with me but I did not use it and I confined myself to the use of strychnine, morphine, and caffeine, the last both hypodermically and as strong coffee, and it is in a great measure, I think, to the last drug that the patient owes his recovery.

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[1] Brit. Med. Jour., 1892, p. 705.

Liverpool.

SUCCESSFUL REMOVAL OF A VAGINAL TUMOUR DURING PREGNANCY.

BY L. C. MARTIN, M R.C.S. ENG., L.R.C.P. LOND.

ON Oct. 13th, 1903, I was called to see a patient alleged to be in premature labour. The presence of some hæmorrhage rather than labour pains which, as a matter of fact, were absent, made her think that labour had begun. She stated that she was about seven months pregnant. On examination I found a tumour of about the size of an orange protruding just outside the vagina and having the appearance of a polypus On its lower and posterior aspect there was a slough about three-quarters of an inch in diameter; throughout the greater part of its extent it looked congested and felt somewhat hard. I had no difficulty in replacing it in the vagina, the manipulation, however, leading to some hæmorrhage. I then made a vaginal examination and ascertained that it was not connected in any way with the cervix or os uteri, both of which were perfectly free and normal, but that it was attached along the posterior wall of the vagina It extended upwards for a couple of inches by a broad and shallow attachment, there being no pedicle. I advised its removal as soon as possible, as I had no doubt that it would prove a [illegible] urely. In [illegible] its septic [illegible] ossibly be overlooked.

On Oct. 15th I operated under A C.E. mixture and removed the tumour. There was a considerable amount of hæmorrhage during the operation owing to the great vascularity of the tumour; one large vein in particular gave some trouble and had to be ligatured. The oozing after removal was also troublesome and yielded to packing of the vagina with double cyanide gauze soaked in lukewarm carbolic lotion of strength 1 in 50 The subsequent progress of the case was entirely satisfactory and calls for no remarks. On the eleventh day after operation the patient was up. She was confined on Dec 2nd, labour being quite normal and the child healthy and well developed. The patient's previous history contains nothing of importance. I had attended her two years previously when I had to deliver her with forceps owing to a face presentation.

The following is the report of the Clinical Research Association on the histology of the tumour: "There is no evidence of malignancy in this specimen. It consists of fibro-muscular tissue permeated with very large veins, many of which are thrombosed. The surface is ulcerated and inflamed. These appearances suggest that the tumour was primarily a varix of the vaginal wall which has become polypoid and inflamed."

I have considered this case worth recording for the following reasons: (1) because of the occurrence and removal of the tumour during pregnancy; (2) because of the fact that labour was not induced by the unavoidable and frequent manipulation which the operation and subsequent dressing involved; and (3) because of the rather unusual site of the tumour.

Woolston, Southampton.

CENTRAL MIDWIVES BOARD.—At the last meeting of the Central Midwives Board, upon consideration of applications for certificates the names of 270 women were passed under Section 2 of the Act and ordered for entry on the roll. Of this total 65 claimed as holding the certificate of the Obstetrical Society of London, five that of the Rotunda Hospital, Dublin, one that of the Coombe Lying-in Hospital, Dublin, one that of the Liverpool Lying in Hospital, eight that of St. Mary's Hospital, Manchester, two that of the Salvation Army Maternity Home, and 188 were admitted as having been in *bonâ-fide* practice for one year prior to July 31st, 1902.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. GEORGE'S HOSPITAL.

CONSERVATIVE OPERATION IN A CASE OF ACUTE SUPPURATIVE SALPINGITIS.

(Under the care of Mr. HERBERT W. ALLINGHAM.)

FOR the notes of the case we are indebted to Mr. T. Crisp English, surgical registrar.

The patient, a female, aged 17 years, was admitted into St. George's Hospital on Oct 20th, 1903. Five days previously she had been seized with abdominal pain referred at first to the umbilical region and later to the right iliac fossa Vomiting occurred at the onset of the pain and twice on the following day. The pain became more severe in spite of rest in bed; the bowels acted once during the week before admission, no purgatives or enemata being used. Micturition had been painful and the vaginal discharge, which had existed for several months, had become more profuse. There was no history of a similar attack previously and in other respects she had always been healthy; menstruation had been regular, the last flow occurring a [illegible] ourished. [illegible] and the tongue was dry and furred. Pain was complained of over the entire abdomen but mostly in the right iliac fossa and the knees were drawn up. The abdominal wall moved but slightly with respiration; there were great tenderness and rigidity in the lower part of the abdomen, most marked on the right side; no swelling could be felt and there was no distension or abnormal dulness. A diagnosis of appendicitis or mischief in the right side of the pelvis was made.

Operation was performed by Mr. Allingham about one hour after admission. The abdomen was opened by an oblique incision over the right iliac fossa but the appendix was found to be healthy; further examination showed that the trouble was in the pelvis. The incision was therefore prolonged downwards. The right Fallopian tube was swollen and injected; on pressure a quantity of pus oozed from its fimbriated extremity which was patent. A similar condition was found on the left side but a larger quantity of pus was present; the uterus and ovaries were normal. The case seemed particularly suitable for conservative treatment, as the pelvic peritoneum was only slightly involved and there was complete absence of adhesions. The pus was therefore thoroughly pressed out of the tubes, the surrounding parts were carefully cleansed with sponges and a large strip of iodoform gauze was passed from the lower angle of the wound into Douglas's pouch, and the upper part of the [illegible] in the ordinary way. No pain, vomiting, wor [illegible] tion. The bowels were or [illegible] a turpentine enema and ope [illegible] flatus passed freely through a rectal tube. The temperature became normal on the third day. The gauze plug was removed three days later and a tube was inserted in its place; this was finally removed on the twelfth day. During the third week the patient had a slight rise of temperature with pain in the left hypochondriac regions but no local signs either in the thorax or abdomen were found to account for this. The symptoms were relieved by antipyrin and bismuth. She got up at the end of the fourth week, the wound being soundly healed, and was sent to the convalescent home on the thirty fifth day after operation.

Remarks by MR. CRISP ENGLISH —Only within recent years have conservative operations upon the uterine appendages been advocated and carried into practice. The value of conservative treatment, however, is not yet generally recognised and many still consider that removal of the tube and ovary *en masse* is the necessary treatment for disease of either of these structures. One of the first principles of surgery is to remove as little as is consistent with the safety and welfare of the patient, yet in the majority of cases of suppurative salpingitis the ovaries are removed with the tube. It is probable, though not certain, that the ovaries produce an internal secretion of essential importance in the maintenance of health in women and this is the strongest reason for urging that they should be left unharmed whenever possible. In certain cases more than this may be done; diseased tubes may be treated locally and may be left in their normal position with a fair probability that they will remain functional.

The possibility of restoration of function in diseased tubes has been clearly proved by clinical experience. Some of the cases thus treated have subsequently required laparotomy for other conditions and the tubes have then been found to be free from adhesions and apparently normal; in other instances pregnancy has followed and thus demonstrated that one at least of the tubes has remained patent.

The objections raised against this treatment are mainly theoretical, for the published records of conservative operations show no increased mortality and it has yet to be proved that the risks of extra-uterine gestation are greater than in patients with normal Fallopian tubes. It is said that chronic pelvic pain as the result of adhesions is a contra-indication to conservatism, but it is doubtful whether these adhesions are greater with conservative than with radical treatment, and even should they give rise to some chronic pain the patient is in a much better condition than if she had had her appendages removed.

The chief arguments in favour of conservative treatment in the case published above were the following. 1. There was the age of the patient; a healthy patient of this age would normally have some 30 years during which menstruation and the possibility of pregnancy would continue. Complete oöphorectomy would have entailed the troubles associated with premature menopause, whilst removal of the tubes would have condemned the patient to certain sterility, and in the case of a young girl these matters are of the greatest consequence. 2. The local conditions were favourable for conservatism. The tubes were free from adhesions, their fimbriated extremities were open, and there was but little reaction in the pelvic peritoneum. If there had been much peritonitis with extensive adhesions the prospects of restoration of function would have been small. 3. The disease was apparently gonorrhœal in origin and the prognosis was thus far more favourable than in cases where the mischief is due to other pyogenic organisms.

ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

CASES IN WHICH DEATH OR COLLAPSE OCCURRED AFTER EXPLORATORY PUNCTURE OF THE CHEST.

(Under the care of Dr. THOMAS OLIVER.)

CASE 1.—The patient was a man, aged 62 years, who when admitted into the Royal Infirmary, Newcastle-upon-Tyne, was supposed to be suffering from an unresolved pneumonia, the sequel of an acute attack which had commenced five weeks previously, and possibly, too, from the presence of fluid in the pleural cavity. There was dulness at the lower part of the right lung posteriorly, reaching as high up as the inferior angle of the scapula. Although the breath sounds were feeble at the base still a few crepitant and submucous râles could be heard there. The heart sounds were weak and there was distinct epigastric pulsation. The expectoration was abundant; it was frothy, muco purulent in appearance, slightly blood-tinged, and extremely fœtid. No tubercle bacilli were found in the sputum. The temperature was never high. Albumin and sugar were absent from the urine. On the sixth day after admission the senior house physician of that date inserted a needle into the right chest, the patient meanwhile sitting upright in bed. As no fluid was found the needle was withdrawn and reinserted into another part of the chest wall, when almost immediately afterwards the patient fell back in bed dead. At the necropsy the left lung was found to be somewhat emphysematous; the right pleural cavity contained several ounces of pus; the right lung was consolidated at the base and contained two small abscesses.

CASE 2.—In another patient, a man about 36 years of age, exploratory puncture of the pleural cavity did not produce any inconvenience at the time beyond slightly increased rate of breathing, but it was followed a few hours afterwards by delirium. The man became light-headed and died on the following day, death being undoubtedly an indirect result of the puncture.

CASE 3.—In this case, that of a man who had physical signs of fluid in his chest, no fatal effect followed the puncture, but for a period afterwards he was extremely ill. Exploratory puncture of the pleura was in him attended by very marked cyanosis and by the expectoration of large quantities of a thin, foamy mucus. The lividity persisted. For several hours the patient was collapsed and extremely ill but in two days he rallied.

Remarks by Dr. OLIVER.—Since in a large number of cases exploration of the chest by acupuncture has come to be regarded as a necessity, either for the purpose of confirming a diagnosis or for arranging a line of treatment, and is usually a simple and safe operation, it is yet well to remember that now and again, and without any signs of warning, puncture of the pleural cavity may be followed by a fatal result either immediately or a few days after the operation. In the St. Thomas's Hospital Reports, vol. xxxviii., Dr. A. E. Russell draws attention to this subject and gives the details of three cases in which there quickly supervened upon exploration of the chest by the needle a series of alarming symptoms. In one instance, that of a girl eight years of age, there developed lividity, signs of cardiac failure, muscular rigidity, and double convergent squint followed by death. In another patient, a girl, seven years of age, the operation was succeeded by collapse and convulsions; while in a man, aged 52 years, there quickly developed, after exploration of the chest symptoms of cardiac failure, cessation of breathing, convulsions, and loss of consciousness that was never regained. Two of Dr. Russell's patients died within three days after the exploratory puncture—a result attributed to the surgical procedure.

My object in publishing the above cases is to bear witness to the fact of death having occurred in circumstances similar to those mentioned by Dr. Russell. I can recall at least four patients into whose chest the insertion of a needle, either for diagnostic purposes or for determining a particular line of treatment, was followed by fatal consequences.

What is the probable explanation of death occurring in the above-mentioned circumstances? Since in two of Dr. Russell's patients, and in one of my own, exploratory puncture was followed by symptoms suggesting cerebral vascular derangement it may at once be stated that at the necropsies upon the bodies at St. Thomas's Hospital no trace of embolism or of thrombosis was found. Dr. Russell is of the opinion that death was induced through reflex action. When death has followed exploratory puncture of the chest there has probably occurred cardiac and respiratory inhibition. It is more than likely that in some way or other the pulmonary branches of the vagus nerve are irritated and thus inhibition is reflexly induced. In a series of experiments carried out by Dr Russell and Dr. T. G. Brodie it was found, when the root of the lung in an animal was exposed, that if the pulmonary branches of the vagus were stimulated not only was the ventricular systole of the heart arrested but the breathing, ceased as well owing to inhibition of the respiratory centre. Since, too, there is a tendency for œdema of the lung to be rapidly developed, judging from the foamy and sometimes blood-stained expectoration that wells up into the mouth, it would appear as if the vaso-motor centre might become affected. It is also possible that as a consequence of the compression the vagal nerves have been subjected to, or as a result of some inflammatory change, the nerve fibres become unduly sensitive to irritation. Rapid expansion of a collapsed lung under forcible aspiration is a procedure not altogether devoid of danger. Dr. Russell suggests anæmia of the brain as an explanation of the cerebral symptoms. He attributes the anæmia to a sudden fall of the arterial pressure. Death is not, so far as one can tell, the reflex result of pain. Whether the anticipation of pain likely to be caused by the insertion of a needle into the chest may not in a highly sensitive patient favour the occurrence of syncope I am not prepared to say I have known sudden death occur when an empyema was being emptied, the patient all the time being under the influence of chloroform. Such a circumstance points to the improbability of pain *per se* as the cause of death.

The precautions to be observed are avoidance by the patient of the sitting posture in bed at the time of the exploratory puncture, the administration by the nurse of brandy shortly before the operation, and should the heart cease beating or the breathing become suspended during or after the puncture immediate resort by the medical attendant to artificial respiration and the injection hypodermically of ether and strychnine.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Art[illegible] of the Orbit.—"Silver Wire" [illegible]—Pemphigus of the Conjunc[illegible] [illegible] Opacities of the Cornea.— [illegible]

A CLINICAL evening of this society was held on Dec. 10th, 1903, Mr. JOHN TWEEDY, F.R.C.S., the President, being in the chair.

Mr. N. C. RIDLEY showed a case of Arterio venous Aneurysm of the Orbit, recurring six months after ligature of the common carotid. The condition was probably due to a traumatic communication between the cavernous sinus and the carotid artery.—Mr. E. L. PRITCHARD showed a case of the same nature with corresponding result, and experiences in connexion with such cases were narrated by Mr. JOHNSON TAYLOR, Mr. W. ADAMS FROST, Mr. G. HARTRIDGE, Mr. P. FLEMMING, Mr. E T. COLLINS, and Mr. E. NETTLESHIP.—Mr. E W. BREWERTON thought that owing to the free communication between the branches of the two external carotid arteries it would be much better to ligature the internal carotid artery.—Mr. J. H FISHER considered that the result of ligature of the internal carotid must be doubtful, as it probably depended upon the size of the communicating arteries in the circle of Willis far more than upon the communications of the branches of the external carotid. For this reason he thought it unlikely that ligature of the internal carotid would be better than ligature of the common carotid, to say nothing of the much greater difficulties of the operation.—Mr. RIDLEY, in reply, did not think that ligature of the internal carotid would be any more likely to cure the condition than the operation on the common carotid. If he did anything more to his patient he should feel inclined to clear out the orbit, but in this case, as apparently in most of the others mentioned, the patient had derived much relief, although the condition could not be said to be cured.

Mr. FLEMMING showed the drawing of a Fundus with Marked Arterial Degeneration. The patient was a woman, aged 48 years, with granular kidney. She died from apoplexy a few weeks after the drawing was made. During life the arteries had a typical sclerosed appearance with "silver wire" lines along them. There was venous obstruction at the points where they crossed the veins. There were also hæmorrhages in the retina. Microscopic sections were shown of the retina with photomicrographs; there was enormous thickening of the vessels.—Mr. R MARCUS GUNN showed specimens of "silver wire" arteries from a similar case.—Mr. R W. DOYNE showed a woman, aged 54 years, with somewhat similar ophthalmoscopic appearances. Her urine was healthy but the radial arteries were thickened.—A discussion followed on the cause of the apparent constriction of the veins by the arteries.

Mr. DOYNE also showed a case of Retinal Effusion in a patient, aged 65 years, whose sight had recently failed There was no history of syphilis but years ago he had had gonorrhœa

Mr. WILLIAM ANDERSON showed a case of Conjunctival Pemphigus.

Mr. W. T. HOLMES SPICER showed a case of Hereditary Nodular Opacities of the Cornea and some drawings. It was, he said, a family disease, though probably not congenital. Fuchs in one case had removed a portion of the cornea and found it softened and Bowman's membrane absent. The deposit, which was amorphous, lay in the substantia propria. One observer had described the deposit as urate of soda but Mr. Spicer doubted whether it were so. The condition was progressive and in Mr. Spicer's example the father and a daughter were affected.—Mr. JOHNSON TAYLOR described a somewhat similar condition that he had seen in puppies; it [illegible]

Unilateral Anophthalmos. The child was very feeble and delicate and without an anæsthetic it was impossible to say if a rudimentary eye existed.—Mr. TWEEDY commented on the term used in describing this case. He thought that the condition should be termed "anophthalmia" and the child described as "anophthalmos."

CLINICAL SOCIETY OF MANCHESTER.

The Treatment of Severe Cases of Accidental Hæmorrhage.

THE monthly meeting of this society was held at the Palatine Hotel on Dec. 15th, 1903, Dr. W. MILLIGAN, the President, being in the chair. There was a large attendance.

Dr. H. BRIGGS (Liverpool) opened a discussion on the Treatment of Severe Cases of Accidental Hæmorrhage. He said he believed that there was a *primâ facie* case for reconsideration. He alluded to the original cases of Rigby, published in the sixth edition of the essay on "Uterine Hæmorrhage which Precedes the Delivery of the Full-grown Fœtus" Of the 42 cases of placenta prævia treated by Rigby by turning 31 women recovered and 11 died. Dr. Briggs also alluded to the disproportion of 42 cases of placenta prævia to 64 of accidental hæmorrhage, probably showing that the 64 cases of accidental hæmorrhage included many instances of lateral placenta prævia, *Rigby having apparently confined his cases of placenta* prævia to those in which the placenta was either over or on the internal opening of the cervix. Allowing for the cases of lateral placenta [illegible] Rigby as cases of acc[illegible] many severe ca[illegible] own words: "Many were alarming cases, as the patients had lost large quantities of blood and were extremely faint; not one proved fatal. They all terminated safely by waiting for the efforts of nature to expel the contents of the womb." Rigby had keenly appreciated the sources of danger in the treatment of cases of placenta prævia by podalic version. He avoided the greater risk of to[illegible] cervix and accepted the lesser or[illegible] relaxation by pains and discharg[illegible] The treatment he advocated differ[illegible] Cases of accidental hæmorrhage [illegible] placenta prævia) Rigby treated by palliation and waiting for nature's efforts to complete delivery, and cases of placenta prævia (central, partial, marginal, and some lateral) by more prompt delivery by art by turning. Dr. Briggs went on to say that Rigby did not as a routine practice rupture the membranes and he always before doing so waited for the pains of labour. Dr. Briggs considered that the prominence accorded to Rigby's observations and conclusions in this country was justified by a study of earlier, contemporary, and later work. Dr. Briggs then reviewed the earlier history of the subject, illustrated the improvement in the results of the treatment of cases of placenta prævia achieved by the adoption of gentler and more precise methods of controlling the bleeding, and asked whether corresponding improvements in the results of the treatmen[illegible] shown.

Rotunda [illegible] paper on the Treatment of Accidental Hæmorrhage published in the *Journal of Obstetrics and Gynæcology of the British Empire* in August, 1902. He considered that the Rotunda Hospital method (the application of pressure by an abdominal binder, vaginal tampon, and perineal bandage) seemed to have been effective in controlling the hæmorrhage in the most difficult class of cases to treat, in which, with accidental hæmorrhage, the os uteri was closed and there were no pains of labour. The patient suffered from shock but possessed a chance of recovery. He considered that the maternal mortality in this alarming complication had been reduced to a more encouraging level by the Dublin method. In conclusion, he quoted cases from his own practice.

Dr. W. K WALLS remarked that some five years ago he had summarised his observations on 38 severe cases in a contribution to the North of England Obstetrical Society. He considered the term "accidental hæmorrhage" a misnomer and in some measure responsible for unsatisfactory treatment. He believed that the cases should be regarded as influenced by some toxæmia of pregnancy and instead of "accidental" would prefer to speak of "avoidable" or toxæmic hæmorrhage, for the patients almost invariably expressed themselves as "never having been well during pregnancy" and in the majority of very severe cases the urine was loaded with albumin. When face to face with the grave emergency of a very severe case Dr. Walls mentioned the three great indications which guided his practice: first, to improve the patient's condition by quiet, rest, food, stimulants, and warmth, and encouraging the uterus to overcome its inertia by friction, binder, and vaginal plug, or de Ribes's bag. In the absence of proper uterine action, as shown by the cervix undergoing dilatation, Dr. Walls strongly condemned the practice of rupturing the membranes. The second indication was to deliver the patient if improvement ceased to follow the preliminary treatment (and this indication might include an *accouchement forcé*. Thirdly, it was necessary to guard especially against post-partum inertia and hæmorrhage.

Dr. W. J. SINCLAIR said that in his opinion true cases of accidental hæmorrhage were extremely rare, not more than 1 in 10,000, but when they did occur energetic treatment was demanded.

Dr. T. A. HELME agreed with Dr. Sinclair that interference by art was necessary, so that if there was a fatal result they could not reproach themselves that the patient had died before their eyes without anything having been attempted.

Dr. W. E. FOTHERGILL explained the rationale of the Dublin treatment of accidental hæmorrhage. A healthy uterus could not be distended to more than a certain extent, therefore if escape of blood from the cervix could be prevented by vaginal plugging the tension within the uterus would soon equal the blood pressure and bleeding should cease. In a diseased uterus, however, distension could go much further than in a healthy one and thus in cases of concealed hæmorrhage most of the blood in the body might escape into the uterus. An advantage of abdominal section in these cases was that if uterine inertia from local disease or any other cause should persist after delivery of the fœtus the uterus itself could be removed, a course which would give the patient the best chance in very serious cases.

Dr. P. R. COOPER thought that cases of severe accidental hæmorrhage were not very rare. The chief guide to correct treatment should be the condition of the uterine muscle. Where this was active or responded to stimulation, expediting delivery by the ordinary methods, or even by Bozzi's dilator, would probably suffice. Where, however, the uterus was completely inactive and irresponsive, forcible extraction was absolutely contra-indicated. A Porro's operation would probably give the patient the best, if not the only, chance of recovery. Regarding the after-treatment of the hæmorrhage and shock adrenalin was suggested as likely to prove useful for both indications.

Mr. E. STANMORE BISHOP urged definition of the object of the discussion and the more scientific consideration of the anatomy of the vessels supplying the blood lost. He pointed to the advantages of compression of the aorta to control the arterial supply and the elevation of the lower half of the body and legs to affect the venous supply. The essential thing was to keep the respiratory and cardiac centres supplied and so to obviate the tendency to death.

Dr. W. Y. MARTIN remarked that nothing had been said about ergot or ergotin and their preparations.

Dr. P. TYTLER suggested that in extreme cases as a last resource a clamp might be applied to the broad ligament so as to cut off the arterial supply of the uterus, but he did not know whether this had been tried.

Dr. BRIGGS replied and thanked the society for the interesting discussion on the views enunciated in his paper.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Dec. 16th, 1903, Professor JOHN CHIENE, the President, being in the chair.

Mr. C. W. CATHCART exhibited a female patient after Removal of a Calculus from the Common Bile Duct. For about 25 years she had suffered from various forms of gastric disturbance but whether these were associated with the calculus was unknown. For about a year, however, she had complained of severe dyspepsia with paroxysms like those due to gall-stone. As she was stout a long linear incision had to be made and a large stone was found impacted in the common duct. It could not be forced onwards so it was removed through the duodenum. The latter with the head of the pancreas was lifted forwards by Kocher's method of freeing the peritoneum, and the intestine having been opened on the free aspect the stone was removed. The patient has made an excellent recovery and can now eat anything, whereas formerly she could not take animal food.

Mr. J. M. COTTERILL showed the four following cases:—1. A man, aged 29 years, with Recurrent Sarcoma of the Shoulder manifesting marked improvement under treatment by the x rays. In January, 1903, Mr. Cotterill had removed a small sarcoma from the left shoulder of this patient. He returned to the infirmary, however, in October with a great recurrence of the disease. The man was exhibited at the meeting of the society on Nov. 4th when there were large ulcerating areas on the dorsum of the left shoulder as well as a marked growth in front. He had had 38 exposures of four minutes each to the x rays, or almost daily treatment, and whereas on Nov. 4th the lump was of the size of the fist, bleeding and fungating, it had now shrunk to a very small brawny infiltration. On commencing this treatment the pain disappeared at once and the bleeding within a few days. He had also increased six and a half pounds in weight. The growth was previously inoperable on account of its adhesions to the structures at the root of the neck but now it might be removeable. 2 A boy after Enterectomy for Tuberculous Stricture. He had for six months been ill with intermittent paroxysms of pain in the abdomen occurring every ten days, though between the attacks he was perfectly healthy and ate anything. The case was diagnosed as one of tuberculous peritonitis. On opening the abdomen a stricture of the intestine was discovered in a tangled mass of tuberculous tissue. The stricture was removed and the lumen was found to be so contracted that it only admitted a No. 6 catheter and yet had allowed the free passage of food between the paroxysms. 3. A man after Laminectomy for Paralysis of two years' standing. The patient, who was aged 36 years, had had complete sensory and motor paralysis of the legs, the anæsthesia extending as far upwards as the level of the anterior superior spines. Heat and cold sensory impressions were absent. The urine had a specific gravity of 1003 and was alkaline. On examination a projection of the ninth dorsal vertebra was found. At the operation the laminæ of the eighth, ninth, and tenth dorsal vertebræ were removed and a tuberculous lesion was found which had led to a bony deposit so constricting the cord that at one point the lumen was only of the size of a No. 12 catheter. In four months after the operation the patient went home much improved and at the end of the year he could walk almost perfectly. His urine was normal and could now be retained for several hours. His present occupation entailed his standing or walking almost the whole day. 4. A woman, aged 35 years, with a Tumour of the Frontal Bone. Mr. Cotterill was not prepared with a diagnosis; its slow growth was against its being a sarcoma.

Dr. A. LOGAN TURNER exhibited a girl, aged 12 years, after operation for Extensive Osteo-myelitis of the Temporal Bone, but not involving the middle ear. She had never had middle-ear disease and the membrane was intact and hearing was normal. A gradually increasing swelling formed behind the right ear, the bone felt distended, and the skin became discoloured. There was no rise in temperature until the evening preceding the operation. On incising the skin extensive mastoid disease was found extending to the lower part of the squamous portion of the temporal bone as well as to the occipital bone, the osseous tissue being full of pus and granulations. A large amount of bone was removed and the antrum was opened into. No evidence of tubercle was obtained but on examination of the sputum pneumococci were found.

Dr. TURNER also exhibited a girl, aged 10 years, after operation for Mastoid Abscess and Phlebitis of the Lateral Sinus with Ligation of the Internal Jugular Vein. At the operation the internal jugular vein was found to be thrombosed so it was ligatured and a large part was removed. Later the clot in the lateral sinus sloughed out. The child was making a good recovery.

Dr. H ALEXIS THOMSON exhibited (1) a female patient after Partial Gastrectomy for Cancer; and (2) a lad, aged 18 years, after operation for Perforated Gastric Ulcer. This latter was the youngest male patient whom Dr. Thomson had met with presenting this affection. For three weeks previously to the perforation he had suffered from gastric pain and vomiting.

Mr. F. M. CAIRD sent the following four cases:—1. A female patient after removal of a Malignant Stricture of the Pylorus and Malignant Stricture of the Jejunum. This double development of carcinoma was a very rare condition. As the diseased areas were widely apart, after the excision of the pyloric tumour a gastro-enterostomy was performed and then the tumour of the jejunum was removed. 2. A patient after operation for Hour-glass Contraction of the Stomach. 3. Two patients after Gastro-jejunostomy for Hæmorrhage. Both were cases of gastric ulcer and the object was to drain the stomach while giving no treatment to the ulcer itself. Both operations were successful in stopping the hæmorrhage. 4 A boy with Coxa Vara which looked like a case of congenital dislocation of the hip-joints, there being marked lordosis and projection of the great trochanters.

Dr. GEORGE A. GIBSON exhibited a boy with Peripheral Neuritis produced by arsenic. He suffered from chorea and was treated with 15 minims of liquor arsenicalis thrice daily for three weeks. The neuritis affected both feet, the left being the worst. The knee-jerks were absent and the muscles were atrophied. The condition was improving under massage.

Dr. ALEXANDER BRUCE sent (1) a woman, aged 35 years, suffering from Paralysis Agitans; and (2) a very unusual case of Post hemiplegic Tremor. The second of these patients, a female, had an attack of hemiplegia 18 months ago but recovered and six months later these curious movements commenced. The tremor consisted of very rapid flexion and extension movements of the fingers and thumb as well as of the wrist and at first amounted to 130 per minute. The movements were quite unlike the usual slow athetoid tremor subsequent to hemiplegia. On excitement they were greatly exaggerated and ceased during sleep, though this might be due to the fact that she slept on the affected arm so as to keep it quiet. Under the action of bromides and valerian there was a distinct improvement.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 15th, 1903, Dr. H. Angus, the President, being in the chair.—Dr. T. Jason Wood read notes on a case of Hydatid Cyst simulating enlarged prostate and causing complete retention of urine. The patient was a man, aged 68 years, who suffered from complete inability to void his urine. It was impossible to obtain any history as he was almost completely deaf and was of deficient intelligence. His friends knew nothing of what he had been doing for some time past. The bladder was distended up to the umbilicus and was relieved by a soft catheter which at first passed easily but after a few days only a silver instrument could be used successfully. Examination per rectum showed a large firm swelling in front of the rectum; it was smooth and rounded and no nodules were felt on it. A diagnosis of hypertrophied prostate (? tumour) was made. The patient was a healthy-looking man and showed no physical signs of disease. The urine was clear, acid, had a specific gravity of 1010, and contained no albumin at first. On the day of the operation, however, a trace of albumin was found. On August 6th suprapubic cystotomy was performed. On opening the bladder the swelling was at once seen, covered by the mucous membrane of the bladder. The urethral opening was in front of the swelling and hidden by its projection into the bladder cavity. On incising the bladder mucous membrane it was found to strip readily from the swelling and the latter was seen to be covered by a dense parchment-like membrane. It was not found practicable to enucleate the tumour owing to the limitations of the wound in the bladder and the depth to which it extended. The covering of the tumour was then incised and the nature of the case made evident by the escape of a large quantity of hydatid daughter cysts As much as possible of the cyst wall was cut away from the front and the cavity was packed with gauze, the end of which was brought out through a wound into the cyst through the perineum. The peritoneal cavity was accidentally opened during the attempt at enucleation of the cyst. The bladder wall was sewn up with interrupted catgut sutures, the suprapubic wound was partly closed, and a large drain was inserted. The patient did well for 12 days after the operation except that he was troubled with hiccough; this, however, ceased on the sixth day after the bowels had been well moved. There was no escape of urine through the perineal wound, there were no signs of peritonitis, and both wounds looked healthy. The temperature was normal but the pulse was quick (110 per minute). He took nourishment well. On the thirteenth day he became lethargic and refused his food, coma gradually supervened, and he died on the fifteenth day after the operation, apparently from uræmia. Post-mortem examination showed the cyst in the recto-vesical space; the peritoneal cavity was shut off by adhesions and the bladder wound was healed by soft tissue. The kidneys were cystic and their total weight was eight ounces. The ureters were dilated. There were numerous small cysts in the liver with no sign of hydatid disease elsewhere. The prostate was natural in appearance and size and in close relation to the cyst wall. The other organs were fairly healthy.—Mr. F. Farrow, Dr. B. H. Slater, Dr. David Goyder, Dr. J. B Hall, and the President made remarks on the case —Dr Goyder made remarks on a case in which there were Peculiar Phenomena attending Menstruation.—Dr. F. W. Eurich read notes on a series of cases of Epilepsy in which "fits" were not the prominent symptom. In some of them there were acute maniacal attacks with homicidal tendencies. In one case lapses of consciousness occurred in which the patient wandered away and did not remember where he had been.—Microscopical and pathological specimens were shown by Dr. Eurich, Dr. Slater, and Dr. O. M. F. Althorp.

GLASGOW SOUTHERN MEDICAL SOCIETY.—A meeting of this society was held on Dec. 10th, 1903, to hear a paper by Dr. W. D'Oyley Grange of Harrogate on Normal Saline Baths. Dr. Thomas Richmond, the President, occupied the chair.—Referring in the first place to the presence of sodium chloride in the tissues and fluids of the body, Dr. Grange proceeded to speak of the preservative properties of saline solution on dead tissues as compared with the action exercised by plain water. The outlines of treatment of rheumatic conditions at Harrogate were sketched and the speaker went into considerable detail as to the action of saline solution as compared with plain water in various forms of disease. The power of saline fluid as a stimulant and reviver in a depleted body, when injected by a vein or into the tissues, was briefly referred to, and this power Dr. Grange attributed to the readiness of absorption of the saline solution; plain water was not so readily absorbed by the tissues as plain water was not a normal constituent of these tissues. In dermatology saline fluid was of prime importance. The action of hot sea water and mineral water baths on the skin was explained by the existence of the non-irritating and even soothing effects of normal saline fluids. The difference in the ability for being absorbed was very marked between plain water and normal saline solution, so much so that whereas plain water might act as an aperient when taken by the mouth, normal saline solution had the reverse effect, its readiness of absorption having a very marked action on the kidneys. It was for this reason that he advocated the use of plain water at night and saline solution in the morning. Describing the waters of Harrogate Dr. Grange mentioned that the two principal ingredients of these waters were sodium chloride and sulphur which, next to sodium chloride, was most necessary to the metabolism of the body. Harrogate water or normal saline solution taken in the morning prevented uricæmia. Dr. Grange finally enumerated a number of conditions which called for the exhibition of normal saline solution; it was used for flushing the peritoneal cavity in cases of septic peritonitis; it was also useful in the washing of wounds; it was called for when washing was required or desired in irritable conditions of the skin; and its exclusive use was regarded almost as a specific in "chapped" hands. While speaking of rheumatism, especially of the low, subacute, or chronic variety, Dr. Grange emphasised the necessity of inquiring very carefully after any possible septic focus which might render the case intractable to treatment, and otorrhœa, rhinitis, balanitis, gonorrhœa, leucorrhœa, and anal fissure were instanced as having an etiological interest in this connexion. In cases where such might not be discoverable the drainage was advised to be investigated. In rheumatism in women, too, the condition of the generative system, and especially the pelvic organs, ought to be carefully reviewed.—The subject was very fully discussed by the members and some interesting points in the septic theory of the causation of rheumatism were brought out.—A cordial vote of thanks, on the proposal of the President, seconded by Dr. Renton, was accorded to Dr. Grange.

WINDSOR AND DISTRICT MEDICAL SOCIETY.—The third meeting of the session of this society was held at the Guildhall, Windsor, on Dec. 16th, 1903, Mr. W. B. Holderness, the President, being in the chair.—Dr. E. B. Hulbert read a paper entitled "The Importance of an Adequate Fluid Intake in Various Morbid Conditions." He said that the normal quantity of water that should be taken to compensate the daily loss should not fall below 40 or 50 ounces and mentioned among the various morbid conditions due to deficiency of liquid intake gout and its different manifestations. Migraine often connected with gout was, he said, much benefited by increasing the amount of liquid consumed. The relation of temporary increase of intraocular tension to migraine was alluded to and attention was drawn to the good results obtained by increasing the fluid intake in this condition and also in progressive myopia. The value of increasing the aqueous intake in anæmia was also mentioned and stress was laid on the importance of adding plenty of water to each dose of iron. Dysmenorrhœa was also specified, as also was the collapse following severe gastro-enteritis and hæmorrhage. Finally, Dr. Hulbert alluded to a case of bilateral parotitis in an aged patient which had apparently yielded to this line of treatment.—Dr. Alexander Haig, while agreeing with Dr. Hulbert that in gout and similar conditions where poisons were circulating in the blood free dilution of the blood would be likely to benefit the patient, said that it was difficult to explain that in migraine where the blood pressure was high good results should follow the ingestion of fluids—a proceeding which tended to raise the blood pressure. The same difficulty presented itself in other diseases mentioned by Dr. Hulbert, anæmia and dysmenorrhœa, where in practice Dr. Haig's conclusions did not tally.—Dr. Rayner D. Batten said that though he had no experience of gauging the blood pressure by the instrument employed by Dr. Haig his finger told him that copious draughts of water tended to lower the blood pressure, and he thought that this was the common experience. In treating acute glaucoma he thought that the time allowed was too short for treatment on general lines to do good. Besides, glaucoma having a more or less mechanical origin, treatment by operation seemed to be the most reasonable plan. He thought, however, that Dr. Hulbert's line of treatment might prove useful as a preventive measure. With regard to progressive myopia he said that the question as to why the sclerotic yields in this disease was still unanswered. In prescribing spectacles one was only treating the symptom of a disease, and he thought that it was quite possible that subsequent experience would prove that it was a cardiovascular change. He concluded by expressing the hope that more work would be done in this direction and his belief that such work would tend to show that Dr. Hulbert's advice as to the treatment of progressive myopia was based upon sound principles.

FORFARSHIRE MEDICAL ASSOCIATION.—The third ordinary meeting of this society was held in the University College, Dundee, on Dec. 11th, 1903, Dr. W. Graham Campbell, Vice-President, being in the chair.—Patients and specimens were shown by Dr. J. S. Y. Rogers, Dr. J. Mackie Whyte, and Dr. W. E. Foggie.—Dr. R Stirling of Perth gave an account of a case of Gastric Ulcer with Perforation which he had treated by suturing. The convalescence was delayed by diaphragmatic pleurisy following operation. He had kept up rectal feeding for a week after the operation —Professor David MacEwan referred to the difficulty in the diagnosis of such cases. In most suspected cases he thought that it was safer to operate — Dr. Mackie Whyte mentioned a case of recovery after symptoms all of which pointed to perforation. He discussed the advisability of giving morphine in small doses so as not to mask the symptoms.—Dr Stirling replied that in his case there were almost no symptoms of previous gastric mischief.—Dr. C. Templeman introduced the subject of the Municipal Supply of Sterilised Prepared Milk. He emphasised its importance and pointed out the success which its adoption in Liverpool, Battersea, and Leith had met with. He mentioned it as one possible preventive of the growing infantile mortality in Scotland and especially in Dundee. One thing, however, that must be guarded against was the inducement to mothers to shirk the proper nursing of their children. He considered that for the ultimate success of the proposed scheme the support of the medical profession of the city was necessary.—Professor A. M. Stalker thought it would be well not to cherish too high hopes of the success of the system to begin with. The people must have natural intelligence and natural affection, while a great deal depended on what happened after the baskets of nine bottles were handed over to the mothers. The system was a means of bringing before the working class the extreme importance of infant feeding, in which direction an immense amount of good could be done by the municipality. He considered it a good scheme and one which in the long run would be sure to impress itself on the populace.—Dr. A. P. Low dwelt on the necessity of proper veterinary inspection of dairies and spoke of the impossibility of cleaning the long glass tubes in some feeding bottles.—Dr. R C. Buist proposed a motion pledging the meeting to support Dr. Templeman and approving of his scheme.—Dr. Mackie Whyte, in seconding, said he thought that medical men should disabuse their minds of the idea that sterilised milk in infant feeding caused infantile scurvy and quoted Sir Thomas Barlow in support. Infantile scurvy had been caused by too long feeding on malted foods.—This motion was adopted unanimously.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Dec. 16th, 1903, Dr. J. Nigel Stark, the President, being in the chair.—Specimens were shown by Dr. Carstairs C. Douglas, Dr. R. Jardine, Dr. J. K. Kelly, Dr. G. Balfour Marshall, Dr. A McLennan, Dr. A. Louise McIlroy, Dr. Russel (for Dr. J. Edgar), and Dr. Taylor.—Dr. G. Scott MacGregor read a paper on the Management of Anterior and Posterior Displacements of the Uterus. The paper was discussed by Dr. Kelly, Dr. McLennan, Dr. Marshall, and Dr. Russel.—Dr. McLennan read notes of a case of Sarcoma of the Uterus. Hysterectomy was performed. The uterus was much enlarged. When split open it was found to contain a tumour involving the whole posterior wall and almost rupturing into Douglas's pouch. Dr. McLennan attributed the enlargement of the uterus to the poison secreted by the tumour acting on the myometrium.—Dr. J. Lindsay showed a Double Monster (Thoracopagus) and read a clinical note by Dr. Edgar. All the serous cavities in the two fœtuses were separate except the pericardium which was single and contained the hearts. The organs were normal except that the liver was composite. Dr. Lindsay gave a description of the circulatory arrangements.

Reviews and Notices of Books.

Sir Henry Wentworth Acland, Bart., K.C.B., F.R.S., Regius Professor of Medicine in the University of Oxford: a Memoir. By J. B ATLAY, late Scholar of Oriel College, author of "Lord Cochrane's Trial before Lord Ellenborough." London: Smith, Elder, and Co. 1903. Pp. 507. Price 14*s.* net.

IT is rather to be feared that this book may fall chiefly into the wrong hands: that it will not be seen by many who would be greatly interested in the record of a full, active, and useful life; and that, on the other hand, it will be read or at least looked into by many who have been taught to regard Sir Henry Acland as a great physician and who may therefore be disappointed in the record given. As a physician he was rather good than great and the course of events took him far afield from the quiet routine which is almost essential to the successful work of a leader of medical science.

To understand thoroughly the essential characteristics of Sir Henry Acland it is necessary to appreciate his hereditary disposition and his upbringing and it may be best to say first a few words on these points, for if they are not kept in mind a reader who had never met him in life and who for the first time makes his acquaintance through this book may be inclined to form an opinion of him which is not justifiable and to conclude that his undoubted success was due rather to luck than to the solid and great qualities which he undoubtedly possessed.

There is a saying in Devonshire—and as it is quoted in the book, we can refer to it without apology—that "the world is made up of men, women, and Aclands." Like most sayings which live it is not without meaning. Acland appears always to have judged things and people from his own particular standpoint. Fresh from Harrow, Oxford, and the plains of Troy, he was ready to write in the manner of an old stager on life in London, as learnt from a study of the medical students at St. George's Hospital. He resembled in some respects the amiable Mr. Barlow and had he been wrecked on a desert island it would probably not have seemed incongruous to him to adopt on Sundays the chimney-pot hat, without which, it may be remembered, Mr. Seagrave never walked abroad. A disquisition on the advantage of savings banks which Acland gave to some naval boys after presenting them with a shilling each did not apparently convert them to his views on these estimable institutions and he expressed himself as being shocked that so large a sum as the one which he had given to each of them should be expended in the acquisition of nuts and oranges—a course which he suggested might have been adopted by monkeys. Acland indeed took himself very seriously and resented it when he was not so taken by others. On a yachting cruise he drew up a series of rules and recommendations which were printed and hung up on deck for the instruction of the crew and of his guests. Amongst the rules was one "to obtain information as to sanitary wants of fishing villages and fishing populations whenever possible." On one occasion the exhilaration of a wet day ashore tempted some of his guests to write a somewhat playful report on the sanitary state of a fishing village. It was "received with eloquent silence and never referred to again."

A sense of humour is not a universal gift and if the general reader will pardon Acland for the deficiency he may find very much of interest in the book, for it shows clearly enough how great was the work he accomplished, how loveable he was as a man, how attractive to his friends, and how good to the poor. His life at Harrow was not happy but at Oxford he met John Ruskin who became his life-long friend. In the year of the accession of Queen Victoria—a period which seems very remote—he started for a tour to the East, visited Athens, Rome, and Constantinople and made drawings of the seven churches of Asia. Whilst a student at St. George's he preferred to the society of his fellow students that of Mr. George Richmond, the painter of Ruskin, of Newton of the British Museum, and of Philpott, then a master at Charterhouse, afterwards Canon of Hereford. At this period Richmond made a very fine drawing of him, which is reproduced in the book. It is curious that Ruskin either disliked it or thought it not good.

Acland soon left London and studied in Edinburgh. His health was delicate and Brodie warned him that if he settled in London he would not live till he was 40 years of age, and added that the "well-informed and intellectual society of Oxford" would be good for him. He was appointed to Lee's Readership and he married Sarah Cotton. His marriage proved the greatest blessing and gave him a fixity of purpose which he might never otherwise have obtained. Mrs. Acland became an ideal housewife and mother, was the kindest and most considerate of hostesses, and exercised the strongest power for good on what may be called the domestic university life of Oxford. Acland from time to time entertained successively and pleasingly a number of strange guests, a thing impossible in the absence of a hostess endued with kindness, with tact, and with common sense. Of the work done by Acland during the cholera epidemic of 1854 nothing need here be said and the great fight of his life—that for the establishment of the science museum at Oxford—is too well known to be here repeated. In 1857 he was appointed Regius Professor of Medicine and it is in that position that he was best known to the world at large. In 1858 he travelled with the King (then Prince of Wales) to Canada and his visit to America proved a great success and increased the number of his friends. Acland regretted the position taken up by Samuel Wilberforce in regard to science and saw clearly that it was untenable; he equally regretted the action of Owen in regard to Huxley. The book contains a very characteristic letter by Tyndall in which he says that, in his opinion, the English clergy appear to him "to be specially endowed with the capacity of bringing into contempt the noblest aspirations of the human mind."

Acland was a great hater of injustice and was profoundly disgusted with the treatment meted out to Sir Bartle Frere who was in turn disgracefully ill-used by Lord Beaconsfield and by Mr. Gladstone. A thoroughly religious man he saw the weakness of the position taken by Gladstone on "The Impregnable Rock of Holy Scripture"; his own teaching—which had the entire approbation of Henry, Cardinal Newman—is concisely expressed in one sentence of his Harveian Oration. "No student of Nature worthy of the name looks on the problem of this world as other than vast and inexplicable. He pretends no more than to see by an image darkly and to bend before the cause of all which is by us unattainable, by us only comprehensible."

No one interested in the religious and scientific life of the middle of the last century can afford to ignore this book. Everyone familiar with the chief personalities of the last half of the century will read much of it with interest. Mr. Atlay must be congratulated on having carried out conscientiously and well a work which must have cost him time and no little anxiety, for to write a fair, critical, and true biography is a literary achievement of no small merit.

The Practical Study of Malaria and other Blood Parasites. By J. W. W. STEPHENS, M.D. Cantab., D.P.H., Walter Myers Lecturer in Tropical Medicine, University of Liverpool; and S. R. CHRISTOPHERS, M.B. Vict., I.M.S.; Members of the Royal Society's Commission on Malaria in Africa and India, 1898–1902. London: Longmans, Green, and Co. 1903. Pp. 378 xxxv. Price 10s. net.

IN recent years the subject of tropical medicine has been enriched by many notable works. The student of to-day has the great advantage of Dr. Scheube's encyclopædic treatise on tropical medicine, of Sir Patrick Manson's book, of Dr. Daniels's recently published "Laboratory Studies in Tropical Medicine," and lastly of the work now under review. The major portion of this publication is occupied with the subject of malaria and contains some very useful details in connexion therewith. The last chapters tell us of blackwater fever and the facts concerning the hæmamœbidæ, Texas fever, African coast fever, spotted fever, spirillar fever, trypanosomata, and the filaria.

In considering the subject of malaria the authors give us an account of the best and most simple technique according to their knowledge gathered from the extensive experience of several years and their labours on the Royal Society's Commission on Malaria. They have found that for ordinary work it is better to use almost entirely dry films and the book opens with a description of the technique by which the latter are prepared. The making of wet films is also described. In the staining of films preference is, we think, rightly, given to Romanowsky's method which is fully described. Leishman's stain is also dealt with, and this is, perhaps, easier to carry out. The description of normal blood next follows and is succeeded by an account of the abnormal constituents of the same. In the third chapter the important subject of the malaria parasite is treated very fully. Then we come to certain subsidiary signs of the affection and the differential count of the leucocytes. The description of the examination for the presence of the parasites in the tissues follows. The Cambridge rocking microtome in its ordinary form suffices for all practical purposes. The student is then taught how to imbed, the precautions in the matter of imbedding are detailed, hints on the cutting of sections are given, and this part of the subject terminates with directions concerning the staining and mounting of the sections. Altogether this chapter is an excellent one. We next find a sufficient account of the life-history of the malarial parasite. The description of the mosquito follows. The ovum, the larva of the mosquito together with other larvæ, the nymphæ, and their examination are next portrayed, and then follows a very useful chapter on the capture and experimental feeding of mosquitoes. The methods of the dissection and examination of mosquitoes for the malarial parasite are given very fully, the chapter containing this account being one of the most valuable in the work. After describing the internal anatomy of mosquitoes the authors next tell us how to collect mosquitoes, how to kill them, and how to mount them. Theobald's classification is mentioned. The more common situations in which the anopheletes breeds are collected together in a very useful table. Those whose duty it may be to investigate the endemic malaria of any place will find in the chapter relating to this part of the subject the fullest directions. The estimation of the red cells, of the leucocyte count, and of the hæmoglobin and the blood platelets is next considered. We note the authors' opinion that there is practically no difference between quinine hæmoglobinuria and blackwater fever; this, however, will not be admitted by a great many observers. It is stated by Dr. Stephens and Dr. Christophers that blackwater fever occurs only in those who have previously suffered from malaria. If this theory really be true it is at least remarkable that we have never seen blackwater fever in India, although many hundreds of cases of malarial fever treated by quinine have passed through our hands. The organisms of Texas fever, African coast fever, spotted fever, yellow fever, and spirillar fever receive due attention. The last two chapters deal with the trypanosomata and the filaria and the work closes with a very useful appendix on the blood-sucking flies and a description of the various stains, mounting media, and the apparatus required for work in the tropics. We have thus briefly reviewed the scope of this interesting work which, supplementing the excellent treatise of Dr. Daniels, will be found of great value to observers in the tropics.

Hypnotism, its History, Practice, and Theory. By J. MILNE BRAMWELL, M.B., C.M. Edin., author of numerous articles on the Practice and Theory of Hypnotism. London: Grant Richards. 1903. Pp. 477. Price 18*s.* net.

"The author" of this book, we are told by the publisher, "has devoted the last 12 years to hypnotic practice and research and his personal observations of the practical work done in France, Germany, Sweden, Holland, Switzerland, and Belgium should also make the volume a valuable addition to the science of a subject which is exciting much interest at the present time." In the introductory chapter the author tells us that in the course of the volume he proposes "to refer not only to his own hypnotic 12 years' practice and research but also to give such a general account of the subject as can be brought within reasonable compass." Examining Dr. Bramwell's book in the light of his own account of his intentions we doubt if he has fulfilled the promises made. One chapter is devoted to the early history of hypnotism; it is short and very incomplete; for example, the account given of Mesmer is fragmentary. The work of Elliotson, of Esdaile, and of Braid is more fully treated. The section on the later History of Hypnotism contains an account of the practice of Dr. A. A. Liebeault of Nancy. A section follows entitled "History of My Own Practice." The remaining part of the book is devoted to dissertations on the methods of inducing and terminating hypnosis, susceptibility to hypnosis and the causes which influence it, the experimental phenomena of hypnosis, and the management of hypnotic experiments and an account of the "different stages of hypnosis." The therapeutic use of hypnotism is dealt with in chapters on hypnotism in medicine and surgery and in one on the management of medical and surgical cases. This is followed by a disquisition on hypnotic theories which occupies 150 pages, or nearly a third of the whole work. A chapter is devoted to "the so-called dangers of hypnotism" and this is followed by a summary, conclusion, and list of references. Of the two appendices one is the late Dr. Williamson's account of the origin of Braid's work and the other is a note on spiritualism, clairvoyance, and telepathy.

The general effect produced by the book is a feeling of wonder that such a subject, with all its suggestions of mystery and occultism bred of our imperfect knowledge, can have led to the production of so unstimulating a book. Doubtless Dr. Bramwell was particularly right to treat his subject very seriously, but he might have taken more steps to arouse and to hold our interest. The work would gain much if it were rearranged and rewritten so that the history of the subject and the theories of its various exponents were placed together. For example, the life of Esdaile is given in one place, while his theories will be found in another. The author's views naturally pervade the book, but while lessons from personal experience are of the utmost value in all medical treatises, an author should beware lest the actors of the past should appear merely as puppets in his play. Dr. Bramwell is, we are sure, unaware how strongly the impression is produced that views contrary to his own are erroneous and misleading.

LIBRARY TABLE.

Essays on Rural Hygiene. By GEORGE VIVIAN POORE, M.D., F.R.C.P. Lond., Commander of the Dannebrog; Emeritus Professor of Medicine and Clinical Medicine, University College, London; Consulting Physician to University College Hospital. Third edition. London, New York, and Bombay: Longmans, Green, and Co. 1903. Pp. 426. Price 6*s.* 6*d.*—The first edition of this book was published in the year 1893, a second edition was printed in 1894, and in the present volume the work has been arranged "in more orderly form," as the author says, some omissions have been made, and some new matter has been added. The book as now presented should prove of use to all those who live in rural districts and take an intelligent interest in sanitary matters and it will be found to be suggestive and stimulating. Dr. Poore recommends that the general supply of water in London should be given by meter but he does not apparently take into consideration the cost of the general installation of such a system. In speaking of the old water-supplies of London he says the Westbourne has disappeared and calls Bay's Water a stream. The general teaching of the book, as we have had the pleasure of pointing out on previous occasions, is excellent and its chief use is to show that the sanitation of rural districts must be arranged on plans entirely different from those suitable for towns. Dr. Poore has had considerable practical experience of dealing with human excrement in the country and he is evidently well pleased with the results which he has obtained. He gives, facing the title page.

the reproduction of a photograph of "some results of rural hygiene," which have assumed the material forms of gigantic cabbages and other vegetables. These are from a garden situated in a country town in Hampshire and the author in one of his essays gives the financial results of the sale of such vegetables. These figures would, we think, be more instructive if, in addition to the credit side, cost of labour and so forth were given. A full statement of expenses and profits would make this part of the book most useful.

The Medical Examination for Life Assurance, with Remarks on the Selection of an Office. By F. DE HAVILLAND HALL, M.D., F.R.C.P. Lond., President of the Medical Society of London, Physician to the Westminster Hospital, Physician to the Rock Life Assurance Company. Third edition, greatly enlarged. Bristol: John Wright and Co. 1903. Pp. 112. Price 4*s*.—This little volume will be found of great value to those practitioners who are engaged in medical examination for life assurance. Difficult problems often present themselves which the examiner may find it hard to solve. In Dr. Hall's book many of these are discussed and information is given as to the course which may be adopted in dealing with sub standard lives. There is a tendency at the present time perhaps to underrate the importance of heredity in certain diseases, particularly in the case of pulmonary tuberculosis. The discovery of the tubercle bacillus and the consequent infectious nature of the disease has certainly necessitated a reconsideration of the whole question, but we think there is a danger that the pendulum may swing too far. Possible exposure to infection, as in the case of a brother or sister dying from pulmonary tuberculosis, is, in the opinion of most physicians, of greater import than the death of one parent many years previously to the applicant presenting himself for examination. Dr. Hall is of opinion, however, that given a family history of pulmonary tuberculosis, if the applicant has a well-formed chest, with a weight above the average and has the appearance of robust health, then the life may be accepted at ordinary rates, but if contrary conditions are found then an addition to age will probably be demanded. We also agree with Dr. Hall that too much stress in the past has been laid on the age of the applicant as a factor in deciding whether a family history of tuberculosis should have weight. Statistics show that the death-rate per 1000 from consumption is fairly equal throughout life and that there is no limit as regards age to a person contracting the disease. Interesting observations are also made on the heredity of cancer, diabetes, gout, rheumatism, and insanity. As might have been expected, the attention which has of late years been devoted to the recognition and treatment of appendicitis has been reflected in life assurance. Dr. Hall considers that an applicant who has had a single definite attack which yielded to medical treatment might be accepted after three years' immunity. We believe this period of time to be too short and would suggest that there should be at least five years' immunity. With regard to the vexed question of "functional albuminuria" in regard to life assurance Dr. Hall wisely remarks, "At the present time sufficient data have not been collected upon which to found any definite conclusions." The observations which have been made on individuals who have manifested this phenomenon are of comparatively recent date and the after-history of those subject to this condition has yet to be ascertained. We can recommend a perusal of the work to all who are interested in the subject of life assurance.

JOURNALS AND MAGAZINES.

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, F.R.S., with the coöperation of ADAM SEDGWICK, F.R.S., W. F. R. WELDON, F.R.S., and SYDNEY J. HICKSON, F.R.S. With Lithographic Plates and Engravings on Wood. London: J. and A. Churchill. Vol. XLVII., Part III. December, 1903. Price 10*s*.—The memoirs contained in this part are: 1. On the Anatomy and Development of Distomum Cirrigerum v. Baer, by Ernest Warren, D Sc., of University College, London, with three plates. The encysted and adult trematode was found in abundance in the muscles of a cray-fish which was, it is believed, of continental and probably of German origin. Full and interesting details are given of the distoma at different stages of development so far as, in this specimen, they presented themselves for examination. 2. Studies in the Retina: the Continuity of the Nerves through the Vertebrate Retina, with three plates, by H. M. Bernard, M.A. Cantab. This is the sixth and final part containing the researches of Mr. Bernard on this subject The preceding five parts are contained in previous volumes of the journal. He is not in accord with the statements made by Ramon y Cajal, and now very generally accepted, to the effect "that there are interruptions in the continuity of the cells and their processes in the several layers of the retina" He describes the "ganglionic cells" of the retina as the innermost layer of the retinal nuclei which may or may not have a certain quantity of associated cytoplasm and he denies the existence of the diagrammatic axis cylinder process given off, or supposed to be given off, by these cells He denies also the existence of the "bipolar radially arranged ganglion cells" of the middle layers. He admits the presence of an intranuclear framework of extremely fine fibres, some of which pass from one nucleus to another, establishing intercommunication between them. These fundamental filaments are exquisitely delicate and achromatic. They are capable of conducting nerve stimuli, they are contractile, they can grow, and they can move freely upon one another. They differ from the uniting threads of adjoining nuclei which are short and thick. He terms the plexus of filaments the "protomitomic reticulum." The filaments of the reticulum are associated with chromatin, with a clear fluid matter, with granular cytoplasm, and with the glossy clear threads of the syncytial framework. 3. The Bionomics of Convoluta Roscoffensis, with special reference to its Green Cells, by F. W. Gamble, D Sc., of Owens College, Manchester, and Frederick Keeble, M.A., of University College, Reading, with two plates. The animal here referred to is a green accelous turbellarian peculiar to Brittany. The movements of the colonies of these animals and the causes of those movements are interestingly described. The green colour is due to the presence of cells in the body of the animal; and infection or invasion of the green cells, if it occurs, is by a colourless cell. 4. Trypanosoma in Birds in India, by W. Hanna, M.B., of Liverpool, with a plate. The birds mentioned by the author of this article are pigeons and crows. The trypanosoma is interesting as being found in the blood of patients suffering from sleeping sickness. 5. On the Modification of the Eye Peduncles in Crabs of the Genus Cymonomus, by E. Ray Lankester, F.R.S., with two plates.

The Journal of Physiology. Edited by Sir MICHAEL FOSTER, F.R.S., and J. N. LANGLEY, F.R.S. Vol. XXX., Nos. 3 and 4. London: C. J. Clay and Sons. Dec. 14th, 1903. Price 10*s*.—The articles contained in this volume are as follows:—1. By J. N. Langley, on the Sympathetic System of Birds and on the Muscles which move the Feathers, with 13 figures in the text. The author of the paper finds that some of the muscles attached to the feathers in birds are definitely erector and some are definitely depressor muscles; both consist of unstriated muscle and their arrangement is complex. He finds also that the spinal sympathetic fibres arise from a restricted region of the spinal cord lying between and slightly overlapping the regions of origin of the nerves to the limbs. The areas supplied by the sympathetic fibres in successive cutaneous branches only slightly overlap The disposition of the muscular fasciculi is given. 2. By H D. Dakin, 1851 Exhibition Research Scholar, the Hydrolysis of Optically Inactive Esters by Means of Enzymes. Part I., the Action of Lipase upon Esters of Mandelic Acid; the Resolution of Inactive Mandelic Acid, with four figures in the text. 3. By J. W. Scott-Macfie, on the Question of Direct Action of Tissue Extracts of Protoplasm. The author gives the results of his experiments on the action of the extracts of the adrenals, pituitary body, ovary, brain, thymus, and other organs on the embryonic heart, on the movements of leucocytes and on cilia. Little or no action was observed. 4. By John Malcolm, on the Influence of Pituitary Gland Substance on Metabolism. 5. By Sydney W. Cole, Contributions to our Knowledge of the Action of Enzymes. Part 2, the Influence of Electrolysis on the Action of Invertin. 6. By H. K. Anderson, M.D., Fellow of Gonville and Caius College, the Paralysis of Involuntary Muscle, with Special Reference to the Occurrence of Paradoxical Contraction. This article deals with the subject of paradoxical dilatation of the pupil and other ocular phenomena caused by lesions of the cervical sympathetic tract, with two figures in the text. 7. By Sydney W. Cole, on Certain Colour Reactions of Proteid due to Tryptophane. 8. By David Fraser Harris, M.D. Lond., on the Hæmoglobinometry and Hæmacytometry of the Blood of the Skate. The proportion of red to white corpuscles is about 12 to one and there are about 10,000 corpuscles to the cubic millimetre in this fish. 9. By Alexander O. M. Fehrsen, M.B., the Hæmoglobin and Corpuscular Content of the Blood of the Newborn. Dr. Fehrsen finds the blood of the newly born has a high percentage of hæmoglobin, a mean of 6,000,000 or a little more of erythrocytes, a well-marked leucocytosis of 18,000 per cubic millimetre, and an invariable presence of nucleated red blood corpuscles up to the third hour after birth. 10. By H. M. Vernon, M D. Oxon., the Peptone-splitting Ferments of the Pancreas and Intestine. 11. By A. E. Boycott, M.B. Oxon., on the Number of Nodes of Ranvier in Different Stages of the Growth of Nerve Fibres in the Frog, with two figures in the text. The volume concludes with the Proceedings of the Physiological Society.

# Analytical Records
FROM
THE LANCET LABORATORY.

(1) "TABLOID" ANTIFEBRIN COMPOUND; (2) TABLOID HYDRARG. PERCHLOR. ET POTASSII IODIDI; AND (3) "SOLOID" HEMISINE.

(BURROUGHS, WELLCOME, AND CO., SNOW HILL BUILDINGS, LONDON, E.C.)

1. THE tabloid antifebrin compound embodies an admittedly useful formula for neuralgic affections. Each tabloid contains two grains of acetanilide, one grain of caffeine citrate, and one grain of camphor monobromide. This combination is also stated to be valuable in obstinate cases of vomiting and in sea-sickness. Camphor monobromide is an excellent adjunct in a formula of this description. 2. The tabloid containing one thirty-second of a grain of perchloride of mercury and two and a half grains of iodide of potassium has been prepared in order to supply a convenient means of administering mercury at regular intervals and in small doses. Tabloids containing twice the amount of each of these drugs have been procurable for some time. As illustrating the accuracy of dosage of the tabloid products in general we may add that on analysis we found exactly the amount of drugs respectively represented. 3. Hemisine is the name given to a soloid which contains the principle of the suprarenal gland. This soloid will be found very useful for the hæmostatic and anæsthetic action of its constituent in local applications.

SPECIAL SCOTCH WHISKY.

(FINDLATER, MACKIE, TODD, AND CO., LONDON BRIDGE, S E)

This is a spirit of pale colour possessing only a slight flavour of malt. On analysis it yielded the following results: extractives, 0·09 per cent.; mineral matter, 0·02 per cent.; and alcohol, by weight 41·30 per cent., by volume 48·75 per cent., equal to proof spirit 85·43 per cent. As regards secondary products the following were the results expressed in grammes per 100 litres of absolute alcohol present: acidity reckoned as acetic acid, 12·30; aldehydes, 10·25; furfurol, 0·51; ethers reckoned as ethyl acetate, 5 33; and higher alcohols, 102·50. We do not hesitate to say that according to these results the bulk of this spirit consists of grain alcohol and that little of it is derived from barley malt. This is clear from the fact that the furfurol exists in only very small amount while the ethers and higher alcohols are relatively low. The whisky, however, has evidently been matured in sherry casks, judging from the amount of fixed acidity. Whilst these figures show a very large proportion of grain spirit there is no doubt that the whisky is free from those objectionable products which are removed by age. There is very little malt flavour in the spirit.

STERILISED CREAM.

(FUSSELL AND CO., 4, MONUMENT-STREET, LONDON, E C.)

When submitted to analysis this cream gave the following results: milk fat, 29·45 per cent.; sugar and proteids, 7·50 per cent.; mineral matter, 0·51 per cent.; and water, 62 54 per cent. It contained no preservatives and keeps in the tin satisfactorily. The flavour is that of fresh cream, for it is practically free from that peculiar taste which sterilisation by heat commonly produces. This cream satisfies critical examination as regards taste, analysis, and preservation.

PHYSIOLOGICALLY PURE SALICYLIC ACID PREPARATIONS.

(R W. GREEFF AND CO., 20, EASTCHEAP, LONDON, E.C.)

It has long been recognised that preparations of salicylic acid should be physiologically pure—that is to say, should not contain impurities which by reason of their toxic action render the preparations unsuitable for medical use. The introduction of the artificial acid made by acting on phenol with carbonic acid early sufficed to show that there were certain toxic phenol derivatives present which gave rise to objectionable physiological effects. This objection to the artificial acid has been removed by greater attention being paid to the processes of purification. We have received from the above firm four preparations which have been prepared with the utmost care so as to exclude all impurities. The physiological action of the product is thus due to pure salicylic acid itself. The preparations are salicylic acid powder and crystals and salicylate of soda also in powder and crystals. All these preparations respond favourably to laboratory tests. They are perfectly clean and well crystallised. In prescribing salicylic acid and its compounds only preparations of the degree of purity thus indicated should be employed. We have also received a sample of salol from the same makers which also gives evidence of perfectly pure materials having been used and of a process having been employed which yields a pure, clean product. These fine drugs are prepared by the Société Chimique des Usines du Rhône at St. Fons, near Lyons.

MAXIM ALE.

(C. VAUX AND SONS, THE BREWERY, SUNDERLAND.)

The analysis of this beer was as follows: alcohol, by weight 4·62 per cent., by volume 5·78 per cent., equal to proof spirit 10·13 per cent.; extractives, 5·01 per cent.; mineral matter, 0·22 per cent.; and sugar malt, 1·99 per cent. The beer was in sound condition and contained only a minimum of acidity. It appears to come midway between stout and light ale. The beer is somewhat "dry" to the taste owing probably to the relatively small amount of sugar which it contains; the deficiency is made up by a notable proportion of dextrin. The colour of the beer resembles that of brown Munich beer As it is only mildly bittered this beer would be more dietetically suitable for some individuals than heavy stout or ale.

(1) HOPOGAN; AND (2) EKTOGAN.

(The British Druggists, Limited, 85, Clerkenwell road, London, E.C)

Hopogan represents a peroxide suitable for internal administration and ektogan one for external use. The former contains peroxide of magnesium and the latter peroxide of zinc. According to our analysis hopogan contains 14·60 per cent. of magnesium peroxide, which is equivalent to 4 17 per cent. of available oxygen. Ektogan according to our analysis contains 41·40 per cent. of zinc peroxide which is equivalent to 7 per cent. of active oxygen. It is suggested that magnesium dioxide is useful in cases of deficient oxidation of the blood, while the fact that by interacting with the gastric juice peroxide of hydrogen is developed would suggest that fermentation of the gastric contents might be arrested. Clinical cases are cited in support of the favourable action of hopogan in these respects. Zinc peroxide is similarly regarded as an excellent antiseptic application in dermatological practice and in the treatment of wounds. Both preparations are of a very interesting kind and worthy the attention of our readers.

ROYAL DOUBLE CREAM CHEDDAR CHEESE.

(The Somerset, Dorset, and Devon Dairy Co., Limited, Chard, Somerset.)

Our analysis of this cheese was as follows: moisture, 35·24 per cent.; mineral matter, 3·84 per cent.; fat, 38 85 per cent.; and proteid, 22 07 per cent The cheese has an excellent and attractive flavour recalling that which has made real English cheddar famous. Nowadays the fact that a cheese is made entirely from milk is something for which to be grateful.

VOICE PASTILLES.

(Barker and Dobson, Franklin place, Whitefield road, Liverpool)

We have examined these pastilles and find that the materials employed are of satisfactory quality. The pastilles are demulcent and antiseptic They have a soothing effect. They are useful for relieving sore and irritable conditions of the throat. The formula is an excellent one.

COCOA ESSENCE.

(Cleeve Brothers, 22, Sir Thomas street, Liverpool.)

This is a pure unsophisticated cocoa containing, according to our analysis, 30·80 per cent. of the fat of the nib. The mineral matter amounted to 5·40 per cent., which showed an alkalinity expressed in terms of potash of 1·20 per cent. The moisture amounted to 5·90 per cent. This cocoa is of very good quality and gives a satisfactorily uniform decoction.

(1) BIEDERT'S MILK FOR INFANTS ("CREAM MIXTURE"); AND (2) BIEDERT'S SOMATOSE MILK FOR INFANTS AND INVALIDS.

(A. Prinzen and Co, Soetermeer, Holland Agency: Messrs. Burgoyns, Limited, India Buildings, Akers-street, Manchester)

1. According to our analysis the cream mixture gave the following results: moisture, 31·20 per cent.; mineral matter, 1·70 per cent.; proteids, 16·75 per cent.; fat, 13·71 per cent.; and milk sugar, 36 64 per cent. The preparation is thus seen to be not lacking in any particular element for the purpose of infant feeding. On diluting suitably with water a preparation may be obtained approximately representing the composition of mother's milk, for which it seems to be an excellent substitute according to the testimony of a number of German physicians. The food is retained well in many cases in which cow's milk is inadmissible. It is sterilised and keeps satisfactorily in the tin. 2. Somatose milk gave the following results on analysis: moisture, 33 39 per cent.; mineral matter, 1·58 per cent.; proteid, 14·99 per cent.; fat, 18·71 per cent.; and milk sugar, 31·33 per cent. As a preparation for infants and invalids this food has the advantage of containing a soluble and easily assimilable proteid. For use it is to be diluted with water in the same way as the previous preparation. Somatose milk is also sterilised in the tin but on exposure to air a discolouration set in probably owing to the interaction of the somatose. This detracts somewhat from the preparation unless it is used immediately after the tin has been opened.

HETRALINE.

(Charles Zimmermann and Co., 9 and 10, St. Mary-at-Hill, London, E C)

Hetraline is described as a new derivative of hexamethylene tetramine which in its action is similar to urotropine and helmetol when employed in the treatment of gonorrhœa. It is stated that in daily doses of from one and a half to two grammes, given after meals, this drug is well borne by the gastro-intestinal tract and the urinary passages and that in acute gonorrhœa the pain and strangury disappear and the urine becomes clear.

PURE GRANULATED CHOCOLATE.

(J. J. Provoyeur, Gand, Belgium, and Howell Bros. and Co, 20, Lombard street, London, E C)

Chocolate in a fine granulated form is somewhat of a novelty. In the preparation above described the granulation and dryness are evidently effected by employing a somewhat large proportion of cane sugar. In our opinion the chocolate is too sweet owing to this excess of sugar. A cup of chocolate may be very quickly prepared from this granulated powder. According to our analysis the powder contained: moisture, 2 40 per cent.; mineral matter, 1·40 per cent.; fat, 21·60 per cent.; sugar, 66·89 per cent.; and cocoa principals, 7·71 per cent. The chocolate is manufactured without any addition of alkali, as shown by an examination of the mineral matter. The cocoa flavour is decidedly good.

INDIA PALE ALE

(Warricks and Richardsons, Limited, The Brewery, Newark-on-Trent)

Our analysis of this beer was as follows: alcohol, by weight 6 57 per cent., by volume 8·18 per cent, equal to proof spirit 14·35 per cent.; extractives, 4·03 per cent.; and mineral matter, 0 26 per cent. The beer was sound and free from undue acidity. Though "full bodied" it is not heavy but refreshing and without that tendency to produce drowsiness to the same degree as do the heavier kinds of malt liquor. It is stated that care is taken so far as possible to suppress the development of higher alcohols during the fermentation.

PAUTAUBERGE'S SOLUTION.

(L. Pautauberge, Paris, and Wilcox, Jozeau, and Co., 49, Haymarket, London, S.W)

Each tablespoonful of this preparation is stated to contain ten centigrammes of pure beechwood creasote and 50 centigrammes of hydrochloro-phosphate of lime. The combination of the hydrochloro-phosphate of lime with the creasote is regarded as rendering the creasote better tolerated than when it is exhibited in the ordinary manner. This solution is said not to irritate the gastric mucous membrane and to have been used with favourable results in the treatment of tuberculosis. We have confirmed the presence and amount of the medicinal agents indicated.

(1) B B SMOKING MIXTURE; AND (2) LUMLEY MIXTURE.

(Bartlet and Bickley, 17, Brook street, Bond street, London, W.)

Both these tobacco mixtures gave no evidence on examination of objectionable manipulation. The aroma and flavour are due entirely to pure tobacco; no foreign scent has been added. The proportion of the kinds of tobaccos used is such that the smoke yielded is cool and pleasantly aromatic.

THE LANCET.

LONDON: SATURDAY, JANUARY 2, 1904.

The Public and the Medical Profession.

The beginning of the year is naturally made a season for moralising and we claim indulgence for a few words of serious reflection upon the relations now existing between the public and the medical profession. Each New Year's day is a milestone at which we pause, now to look back on the road already covered and now to look forward at the track stretching ahead. Instinctively we try to presume the future from the experiences of the past. Part of such a necessary review of the position of things medical we have already presented to our readers, for in the Annus Medicus, published in the last number of the old year, will be found a summary of the medical events of that year as they have been recorded, collated, or commented upon in our columns. It remains to surmise what are the directions in which medical advances may be expected during 1904, while assuring our readers that no efforts will be spared on our part to assist the cause of progress. It is particularly desirable that we should be able to anticipate in thought the more important medical and professional tendencies, for, as we have frequently insisted, the work of The Lancet is essentially coöperative. We can only give to our readers the latest medical learning and the most practical professional information if we, in our turn, are helped by our readers. All editorial efforts would be futile if we did not find among our public many willing and happy to communicate through us with their professional brethren, thus rendering our pages a bureau for the collection and redistribution of knowledge. It is valuable, therefore, that our many collaborators should know the directions in which useful developments, whether scientific or professional, may be looked for. It is generally impossible to say that any one pathological fact contains a more useful lesson than another, or that one question in medical ethics has a deeper sociological significance than another; and it is not in any such manner that we would attempt to prophesy what new theories or what illuminating deductions may be awaited. But it is not impossible to indicate what are the prevalent conditions of scientific research or how the cause of the medical man, as a professional man, can best be served.

We think that the most noteworthy sign of the times in regard to medicine is the enormous interest that is taken by the public in affairs that were wont at one time to be regarded as purely medical. This is the particular difference to be observed nowadays both in the discussion of purely scientific questions and in the consideration of medical politics; and everything points to the fact that the fusion of medical and public interests will become closer during the succeeding years. A sanatorium for the prevention and curative treatment of consumption is rising under the direct eye of His Majesty the King, paid for by a layman, and constructed in accordance with the choice and directions of a committee which is partly composed of laymen and in the hands of which the management will later be vested. Yet medicine is adequately—the public might even think preponderatingly—represented at every step of the proceedings. Research work into the origin of cancer is being busily pursued with funds largely subscribed by the public, and if the bulk of the investigations naturally falls to pathologists the help of all scientific students is freely demanded and acknowledged. It must be observed, too, that the funds are being subscribed not by an ignorant public who think that a certain sum of money being paid certain results must automatically follow, but by a thoroughly intelligent public, again with the King as the dominant spirit, who have grasped the point that definite knowledge must not be expected too soon, or indeed at any fixed period, from such labours as those undertaken by the workers in the pathology of cancer. No one knows in which direction a profitable start may be made for such investigations, and here it is well to say that great issues must not be attributed to the fact that certain carcinomata, and new growths which have been very generally classed as carcinomata, exhibit retrogression under treatment with radium or the x rays. The progress in therapeutics thus implied is most important, and undoubtedly during the year now begun medical practitioners will mutiply their observations and experiments along this line; but the public ought to understand from them that many of the claims made for the treatment of cancer by the x rays and by radium are as yet unproved. That certain cases have derived benefit is sure, and just so sure is it that no general therapeutic law has been revealed for the remedy of cancer. We need hardly multiply instances to prove that the public at large are aroused to a sense of the responsibilities of medicine and of the debt that is owed to our profession. Contributions to the hospitals on a scale of munificence which grows steadily highe are chronicled week by week; the daily papers a full of correspondence showing an almost embarrassin interest in the affairs of the same institutions; tropic medicine is recognised as an adjuvant to Imperial expan sion, and hygiene is now steadily preached from pulpit The ignominious end to an eccentric onslaught made by th National Antivivisection Society upon the work of certai physiologists showed the sensible public to be ranged a one man on the side of the cause of true medicine. It i unnecessary to say more to show that in 1904 the medica profession in this country will be carrying on their work in an environment which, despite occasional appearances, will be favourable to the growth of medical science.

The lesson from all this we take to be that the medical profession would often be well advised to invite the public more into their confidence. This country has, during the past quarter of a century, been transformed by education, so that the public are able to appreciate the reasons for scientific proceedings in a way which they could not have possibly done in the days of our fathers. Much medical research is the pursuit along specialised lines of general scientific procedure; many therapeutic measures are but a particular application of a common knowledge of chemistry or some ancillary science. When there were but three learned professions, and when a large proportion of the public was completely illiterate, no good purpose was served by any attempt on the part of the medical man to explain his actions. No member of the laity would have understood the elements of what he proposed to talk about. But now that medicine touches the borders, or passes over into the territory, of so many other sciences, and now that none of the public can be called completely illiterate, while a large proportion of them enjoy as good education as the average medical man, there is no need for the medical man to feel that he cannot discuss a professional topic with a layman. We are not advocating the publication by medical men of popular views on disease in the daily press—such unprofessional action is open to grave abuses and occasionally does serious harm. But we are suggesting that medical men should be quick to seize on this assistance of laymen, which events prove can be obtained if it is intelligently sought. The sympathy of the public need not be expressed only by the support of large educational schemes or the erection of splendid buildings. The payment of medical men for the discharge of State or municipal duties, the fees of medical witnesses and public vaccinators, the position of medical men working for provident institutions—we quote these as a few examples—are subjects in which our profession and the public have equal interests. On the surface these interests may be opposed, but frank discussion between intelligent men would soon show on which side justice lay. It is this *entente cordiale* that we would urge our readers to cultivate during the year now opening.

Plague Research in India.

IN all schemes for the improvement of the public health, and especially for the prevention of epidemic disease, there can be little success unless the general population cooperates with the sanitary authorities. A convincing proof of this is to be found in the behaviour of plague in Asia and Europe respectively, for in India and China it has caused an enormous annual loss of life for the last seven or eight years, whereas in European maritime countries the landing of plague patients from vessels coming from Indian ports has never been followed by any considerable extension of the disease. Differences of climate do not account for this recent immunity of the western nations, for all regions of Europe except the most northerly have been the scene of devastating epidemics at intervals during the last 600 years. In Europe, however, the idea has always been held that protection was to be obtained by interposing some barrier between the sick and the healthy. In former times it was hoped that this could be accomplished by rigorous quarantine and by military cordons round infected towns; many persons also, where circumstances permitted it, deserted their homes at the first alarm of plague and lived elsewhere till the danger was past. In modern times the underlying idea is the same but the method of applying it is so much improved that for practical purposes the old routine of quarantine has ceased. The whole question has passed into the hands of the medical profession who rely, for the safeguarding of the public, on early diagnosis of the disease and prompt removal of the patient from his home to an isolation hospital. At the same time the place which he has occupied is disinfected and all persons who have been exposed to infection are kept under constant observation until the period of incubation of the disease has expired. In India this system fails entirely, for the apathy of the population and their dislike of European interference lead to wholesale concealment of the presence of the disease and to murderous attacks on the sanitary officials with occasional rioting on the removal of a patient to a hospital. Dr. YERSIN, as is well known, established the fact that an attack of plague is due to invasion by a specific bacillus, the microscopic recognition of which either in the actual patient or after cultivation or inoculation forms the basis of the modern diagnosis of the disease. There are, in fact, only a few other diseases the presence or absence of which can be determined with similar rapidity and precision. Much, however, still remains to be done in explaining the etiology of plague and some printed reports which have reached us show that Dr. J. A. TURNER, executive health officer of Bombay, has been recommending that competent bacteriologists should be encouraged to study the relation of plague outside the body to the organism which is associated with the disease in its clinical aspect The frequent occurrence of plague in the lower animals shows that the human subject is not the only host of the specific bacillus, and Dr. TURNER believes, no doubt with perfect correctness, that light might be thrown, by investigation in this direction, upon the prevalence of plague in India. Dr. TURNER'S suggestions, made to the municipality of Bombay, were eventually submitted to the Governor of the Presidency, who approved of them so far that in the beginning of November certain appointments for the purpose of facilitating the proposed research were announced, but since that time nothing seems to have been done. Considering that hitherto all attempts to check the disease in India have yielded almost no result it is obvious that every effort of whatever kind should be made to throw more light on the pathology and propagation of plague. But the serious question of inducing the population to acquiesce in sanitary precautions will still remain, and for this dilemma there would seem to be no remedy.

The Functions of the General Medical Council.

NOTWITHSTANDING much that has been written and printed at various times with regard to the powers, the duties, and the responsibilities of the General Medical Council, we frequently receive evidence that these are not so correctly understood in the profession as they should be. Letters often reach us describing possibly some serious abuse or some crying evil and indignantly inquiring why the Council permits this, that, or the other subject of complaint, or why the Council does not put a stop to the conduct, of whatever nature, that is impugned. A letter of this sort, under the title that appears above this article, will be found on page 55; and as we fully believe the writer's statement that his mental attitude is that of many other medical men we think it will be useful exactly to define, not for the first time, what are the functions of the General Medical Council. Generally speaking—and it is the case in regard to the subject of "M.D. Cantab.'s" letter—the Council has no more power in the matter complained of than the complainants themselves, who frequently appear to think of it very much as the average Frenchman was once supposed to think of the "Lor' Maire." Its actual authority is derived from a small number of very simple enactments and does not extend beyond their purview. It is authorised to keep a medical register, intended to enable the public to distinguish "qualified from unqualified practitioners," and containing the names of all persons who are legally qualified medical practitioners and who, by virtue of their registration, are entitled to recover their professional charges in a court of law, to give valid medical certificates, to appear as medical witnesses, and to hold various offices or appointments. It has no discretion with regard to registration, but is bound to insert the names of all applicants who are provided with one or more of the diplomas or licences specified in the Medical Acts. It is authorised to remove from the Register, and thus to deprive of the above-mentioned legal privileges as practitioners, any persons who are convicted of crime or misdemeanour, or who may be adjudged by the Council itself, after due inquiry, to have been guilty of "infamous conduct in any professional respect." It is authorised to require from any of the licensing bodies information with regard to the courses of study and examinations to be gone through in order to obtain their respective registrable qualifications, to visit and to inspect the examinations, and in the event of considering the courses of study and the examinations insufficient to secure the possession by the persons obtaining the qualifications of sufficient knowledge and skill for the efficient practice of their profession, to "represent the same" to the Privy Council, which is then empowered to take such action as may be necessary. The Council is also authorised to make representations to the Privy Council on one or two other comparatively unimportant matters and to prepare and to publish a Pharmacopœia. In these few sentences the whole of its actual powers are described, but it has frequently been called upon as a medical body established by Act of Parliament to advise Government departments with reference to intended legislation. It was thus called upon in relation to the Midwives Act and was compelled to hold long and expensive meetings in order to reply to inquiries which were addressed to it by the Privy Council. In other words, the Privy Council obtained *from it a good* deal of gratuitous medical advice, the cost of affording which was defrayed from the fees paid by practitioners for registration. As these fees would come from the pockets either of the newly qualified men or from those of their parents, it may be said that the work of medically advising the Government has been entirely paid for by the medical profession—an arrangement which seems hardly consonant with what lawyers would describe as "natural justice."

The disciplinary powers of the Council with regard to the conduct of medical practitioners are both less extensive and less elastic than those of the Royal Colleges; and having been designed only for the protection of the public, are of very slight avail for the protection of the profession. The legislature evidently contemplated the possibility of conduct on the part of a practitioner which might be insufficient to bring him within the grasp of the criminal law, and yet sufficient to show his absolute unfitness to be trusted with professional opportunities and responsibilities. The Council was empowered to erase the name of such a person from the Register—that is to say, to deprive him absolutely and permanently of any legalised medical status or of any power of legally earning his living as a medical practitioner. No power of restoration to the Register was conferred. The result was, of course, that the Council shrank from taking the extreme step of erasure in any but very gross cases, and that others were left practically unpunished; while some of those whose names were erased appealed to the Courts and obtained judicial decisions as to the way in which the words "infamous conduct" should be interpreted. In 1862 the Council was made a corporation by a separate Act of Parliament, and thereafter, taking advantage of the general power of a corporation to review or to rescind its own decisions, it commenced the practice of restoring to the Register, after a certain period, names which had been erased from it. In this manner it obtained and exercised what is practically a power of suspension from professional privileges, although it is very doubtful whether the restorations thus effected would be sustained by the courts if the question were tried. A still further modification of procedure, with a great consequent increase in the power of the Council to deal with minor cases of professional misconduct, was suggested by Mr. BRUDENELL CARTER who obtained the passage of by-laws under which the Council, after hearing a charge and the defence, became able to postpone its verdict upon the case to a future session. It stopped short of pronouncing the proved conduct to be "infamous," a pronouncement which would have necessitated removal from the Register, and said to the defendant that he would do well to reconsider his course of action, and to come before the Council again in a position to show that he had abandoned it. In this way a moral suasion in excess of the statutory power was exerted; and many men who could not have been removed from the Register without great risk of the decision being reversed by the King's Bench were induced to abandon objectionable courses, such, for example, as the holding of undesirable appointments under touting benefit societies. In these two directions therefore the Council may be said to have strained its powers for the protection of the profession, but it still has no means at *all of* dealing with ethical questions as opposed to absolute misconduct. The Royal Colleges, on the other hand, have great powers if they choose to exert them, and it is to them rather than to the Council that the profession should look for the regulation of conduct in comparatively minor matters. The Colleges are able to withdraw their diplomas for any cause which they may consider sufficient, and their decisions are neither subject to the review of any other tribunal nor hampered by phrases such as "infamous conduct," which require to be technically interpreted by legal decisions.

It will be seen from this summary of the important but limited functions of the General Medical Council that the Council was established entirely for the protection of the public and that, instead of having been supine in the matter of protecting the profession, it has actually gained some limited power in this direction by means which may almost be described as a straining of its statutory authority. It has no mandate or powers whatever to prevent the evils of quackery to which "M.D. Cantab." alludes. In relation to the licensing corporations and to their requirements from candidates for qualifications it is almost, if not altogether, powerless. It has the right to visit and to inspect their examinations, but, if it is not satisfied, all it can do is to report "insufficiency" to the Privy Council, and the Privy Council would then hear the case and decide upon it, according to its lights. The corporations, if their actions were impugned, would, of course, defend themselves; and the practical result would be a trial, with a conflict of expert testimony, after hearing which a few lawyers would be called upon to give a binding decision upon medical questions concerning which they would be profoundly ignorant. Whether such a decision were in favour of the Council or of the corporations it could hardly fail to be derogatory to the dignity and prejudicial to the interests of medicine, and it may well be hoped that no occasion will arise for its being pronounced. The corporations may be expected to recognise before long that their own best interests are inseparably bound up with the maintenance of a high professional status and that this can only be effected by the maintenance of a high standard of education.

Annotations.

"Ne quid nimis."

THE IRISH POOR-LAW MEDICAL SERVICE.

The recent suggestion of Sir Lambert H. Ormsby, President of the Royal College of Surgeons in Ireland, that the medical officers of the Poor-law service should be chosen by competitive examination, although it has been often made before, has raised considerable discussion. Mr. J. S. McArdle, another Dublin surgeon, as reported in The Lancet of Dec. 12th, 1903, p. 1694, objects to this plan on the grounds that it would interfere with the privileges of local government and that it would be "contrary to the spirit of the age." To this the President of the Irish Medical Association (Dr. L. Kidd of Enniskillen) replies advocating that the service should be made a State one (like the naval and military medical services) and that the Treasury should find the money for the whole of the medical officers' salaries. The present arrangement for the election of Poor law medical officers is a deplorably bad one. They are not now elected on the ground of merit alone, but religion, politics, and acquaintance with the local guardians are the factors that weigh in determining a candidate's selection. In these circumstances is it any wonder that the service is gradually deteriorating, that the able young men of the medical schools refuse to enter it, and that as a natural result the problems of hygienic and preventive medicine (which are more pressing in Ireland than in any other part of the United Kingdom) are totally neglected? The dispensary medical officers are the sanitary authorities of their own districts but if they encounter glaring hygienic defects how can it be expected that they can take action when these conditions are present in the houses or farms of the people who appoint them? Recently at Sligo the Local Government Board inspector reported that he found the houses in which an epidemic was raging "perfectly indescribable with filth" and, as pointed out by Dr. Kidd, these words are unfortunately applicable to many parts of rural Ireland. Mr. McArdle forgets that the Irish Poor-law medical service is to a large extent already a State service, for it is a fact that no medical officer can be appointed or dismissed, no salary can be fixed, raised, or lowered, and no locum-tenent can be employed without the sanction of the Local Government Board. Further, the duties of the medical officers are drawn up by the Local Government Board and not by the guardians and the recommendations of the medical officer, if neglected by the guardians but approved by the Local Government Board, may be executed in spite of the guardians. The Local Government Board has the power, which it has been obliged to exercise on several occasions, of dissolving a recalcitrant board of guardians and of appointing officials of its own to discharge the duties of these guardians. Popular election of medical dispensary officers in Ireland is not a success and it would, in the opinion of many men of experience, be a much better plan and would in the end do away with the present deplorable state of the Poor-law medical service if it were made a State one on exactly the same basis as the medical services of the navy and the army. Entrance would then be by examination, promotion to higher posts, such as medical inspectorships and the like, would be made on evidence of efficiency and there would be superannuation with retirement at the usual age limit (65 years). It is perfectly absurd to speak of such a change being "contrary to the spirit of the age." In Ireland at the present moment, as we have said, religion and politics, not efficiency, determine the election of nine-tenths of the dispensary medical officers of that country. The true "spirit of the age" is to put a stop to such eighteenth century practices and to make efficiency alone the test of the appointment of those who are to attend on the poor, and this we believe can only be brought about by making the Poor-law medical service of Ireland a State one and by freeing it from the present baneful influences which are degrading it to such a level that soon no self-respecting man will enter it.

THE LATE REV. S. A. THOMPSON YATES.

A few lines of recognition—he would himself have cared for no more—are due to the memory of the Rev. Samuel Ashton Thompson Yates whose recent death has already been announced in our columns. He was known as a wise and munificent supporter of the interests of medical science but his gifts were for the most part anonymous and no one in all probability is in a position to enumerate them. The exceptions to his general rule of anonymity were his presentation to the University College, Liverpool, of the laboratories known as the "Thompson Yates" Laboratories and his donation of scientific literature to the Medical College of the London Hospital known as the "Thompson Yates" Library. The laboratories at Liverpool for the study of physiology and pathology were erected and supplied with apparatus at a cost of upwards of £30,000. They are unrivalled for their purposes by any laboratories in the United Kingdom and are probably not surpassed by any of the great laboratories of the continent or in America. They were opened in 1898 by Lord Lister, the occasion being made remarkable by the presence of Professor Virchow and a very distinguished gathering of medical men. The

Thompson Yates Library of foreign literature for the use of the Medical College of the London Hospital contains the chief foreign periodicals dealing with anatomy, physiology, and pathology, which were collected at a cost of nearly £1000. "Mr. Thompson Yates," writes a well-informed correspondent, "had a deeply-rooted abhorrence of fashionable philanthropy; his calm and enlightened judgment favoured objects which to common minds were not attractive and popular. He conceived the idea that the scientific side of hospital work was apt to be starved for the charitable side, and with this view he gave to the Medical College of the London Hospital considerable sums of money for the purchase of instruments and apparatus for the departments of physiology, advanced anatomy, embryology, and bacteriology. Within the last few months of his life in the same conviction that specialised knowledge and not sentiment was the need of the age he gave a large sum to promote the teaching of economics to one of the colleges of the University of London. Mr. Thompson Yates lived for some years at Mile-end and acquired a thorough insight into the social and charitable affairs of the district. He was a guardian of the poor, a member of the infirmary committee, and he was also a member of the Asylums Board for six years, during which period the metropolis was visited with two severe epidemics of small-pox. He took an active interest in the Poor-law schools, in the Tower Hamlets Pension Fund, and the East-end Nursing Association. In all that he did, in all that he gave, he was one of those who 'consider' the poor." Our correspondent's just remarks on the useful and unostentatious career of a good man will be read with interest by many of our readers to whom Mr. Thompson Yates was merely known by name as the munificent benefactor of the Liverpool Medical School.

THE PATHOLOGY OF THE BLOOD IN GENERAL PARALYSIS.

THE blood of patients suffering from dementia paralytica has been the subject of microscopic study by many observers for 20 years past but no regular and systematic investigation extending over a considerable portion of the course of the disease is known. A study undertaken with such an object in view was carried out during the past two and a half years by Dr. A. R. Diefendorf, lecturer on psychiatry at the Yale University Medical School, and an account of the results obtained is published in the *American Journal of the Medical Sciences* for December. Passing over the earlier studies on the blood of paretics made by Erlenmeyer (1846), Sutherland (1873), and Voisin (1879) with instruments which did not give results comparable with our own, we come upon the work of MacPhail (1884) who in his study of 15 cases of general paralysis discovered that the hæmoglobin and erythrocytes were relatively low in the first stage of the disease, increased slightly during the quiescent period, and diminished greatly during the final stage. He also found that the leucocytes increased proportionately toward the end of the disease and that states of excitement were associated with changes in the condition of the blood. Further detailed and concordant observations of the hæmoglobin percentages in various stages of the disease were published by Thompson (quoted by MacPhail) and Bevan Lewis (1889). More recent blood examinations of general paralysis have been made by Smyth (40 cases of general paralysis), Winkler (four cases), Kryspiakiewicz (15 cases), Roncoroni (15 cases), Capps (19 cases), and Jeliffe (17 cases) during the period 1890 to 1897 and a number of interesting facts have been ascertained. Dr. Diefendorf's studies were carried out on 11 patients with the following results. The blood examinations were made weekly, at the same time of day, and all the patients were on uniform diet. The erythrocytes and leucocytes were counted with a Thoma-Zeiss hæmocytometer and the hæmoglobin was estimated with a Fleischl's hæmometer. The hæmoglobin in all cases, says Dr. Diefendorf, showed a moderate anæmia which became more marked but never profound—i.e., below 65 per cent.—as the disease advanced. During the terminal stage the percentage of hæmoglobin was from 3 to 20 per cent. higher than that of the stage just preceding. The hæmoglobin during the various paretic states of quiescence, of excitement, and of stupor, not terminal, presented no constant or characteristic change. There was no increase in the percentage of hæmoglobin during the quiescent period when nutrition regularly improved. The erythrocytes in eight cases investigated during a period of many months showed normal proportions which sank to subnormal for a short period just previous to the stage of terminal dementia. In the latter stage the percentage rose again to the normal. This rise "was exactly coincident with the beginning of the terminal state" in five of the ten cases. The various paretic states, exclusive of the terminal state—viz., those of excitement and stupor—failed to exhibit any change in the erythrocytes. As regards the relation between bodily nutrition and the erythrocytes the latter gradually diminished in numbers as the disease progressed and nutrition was impaired, but in the terminal state of dementia, when there was a considerable loss of bodily weight, there was a marked increase in the number of red corpuscles. No appreciable changes could be observed in the erythrocytes at the time of, or immediately after, paralytic attacks. As regards the leucocytes the number and characters of these elements varied irregularly during the early and intermediate stages. But in all cases a rise in the number of leucocytes which amounted to slight or moderate leucocytosis occurred with the onset of terminal dementia. This leucocytosis varied from 10,700 to 27,000. Special states of excitement or stupor, apart from the terminal state, were not associated with any characteristic leucocytic changes. Plasma cells were carefully looked for in the differential counts but were never encountered. This observation is of importance because of the prominent rôle played by these cells in the vascular changes in the brain which have come to be regarded as a pathognomonic condition. The anæmia which occurs in general paralysis is, says Dr. Diefendorf, similar to that which accompanies chronic diseases, as chronic nephritis, cirrhosis of the liver, and syphilis, except that it is less pronounced. It is in accord with the progressive atrophy of the nervous system, accompanied by a gradual and complete loss of function as well as atrophy and arterio-sclerosis of the internal organs. The tendency for this anæmia to disappear and to be replaced in the terminal state by a progressive increase in both red and white corpuscles which in some cases passed the normal limits does not, so far as recorded, find its counterpart in other diseases and is most difficult of explanation. The presence of the leucocytosis accompanying paralytic attacks has already been established by Capps as being in harmony with the toxæmic theory, a view supported by the later studies of Kroubmiller, Pugh, and Diefendorf himself.

MORTUARIES.

IT is well known that many of the metropolitan mortuaries are very far from being what they should be. We have upon many previous occasions, notably in our issues of April 3rd (p. 972) and April 17th (p. 1105), 1897, called attention to the lack of proper mortuary accommodation and also of proper coroners' courts. Only recently Dr. F. J. Waldo, the coroner for the City and for Southwark, has been complaining of the lack of accommodation afforded for the holding of inquests in the latter borough. With regard to mortuaries we are willing to allow that some boroughs—for instance, Kensington and Chelsea—have properly appointed airy buildings where the dead may rest before burial and where there is also every facility for making post-mortem examinations decently and in order. But other boroughs are not so fortunate and in poor and densely populated parishes there is a natural disinclination on the part of the relatives of the dead to allow the body of one whom they have lost to be taken out of the house until the time for the funeral. We are aware of cases in which corpses have been kept in coffins for some days in rooms about nine feet square which were occupied night and day by four or five persons. This is not conducive to either health or decency and yet we can sympathise with the dislike, foolish though it be, which is felt in sending the body of a relative to the "parish" mortuary, even when this is a decent building. But a mortuary attached to a parish church is a different thing. Here is no question of rates, or of parish relief, or of inquests, but a quiet and restful place where the body may lie until burial. The vicar of St. Matthew's, Westminster, is at present endeavouring to build a mortuary in connexion with his church. The present Westminster mortuary is an unlovely building in the Horseferry-road and is but little used. Anyone who knows how poor are streets such as Great Peter-street will see that there is need for some place where the inhabitants may lay their dead while awaiting burial. However careless in churchgoing is the average Londoner, yet the poorest among them like to be married and buried by "the Church," and we are sure that if the mortuary can be built it will profit the neighbourhood, *not only from the point of view of* increasing reverence for the dead but from the still more important point of view in one sense, namely, that of preventing infection and of raising the standard of hygiene, for we think there is no doubt that it will be used with gratitude. If any medical men or their patients have any money to spare it will be gratefully received for the building fund by the Rev. W. B. Trevelyan, St. Matthew's Clergy House, Great Peter-street, Westminster.

THE MILK-SUPPLY OF MANCHESTER.

From time to time severe statements have appeared in the press as to the Manchester milk-supply. Recently Mr. James Sadler, secretary to the Cheshire Milk Producers' Association, gave an address on the subject at a meeting of the Ancoats Healthy Homes Society. He took, of course, the rôle of counsel for the defendant but gave some interesting facts as to the number of cows—from 15,000 to 20,000—required to supply Manchester and Salford. At present some 1400 cows are kept in the city. It would be better if they were away, for not only is the space occupied by them required for the population, as Mr. Sadler observed, but in the country they are in more natural and healthy surroundings. He objected to a statement by the veterinary inspectors of the Manchester corporation that "the milk trade is in a filthy condition" and also to an article in the *Manchester City News* which certainly does not lack "local colour." It contained the following passage: "Before it reaches the consumer the milk is handled by milkmen with dirty hands and clothes; it stands in hot and dirt-laden shippons. It is exposed to various blends of more or less polluted air and it is perhaps left for hours in unwashed pails at wayside stations, and all the while the bacteria are breeding by the million, spreading scarlet fever, diphtheria, typhoid, and other diseases." Another paper said: "The appalling child mortality that is directly traceable to the consumption of impure milk must be stayed at any cost." Mr. Sadler said that "having an accurate knowledge of the conditions under which milk was produced in Cheshire he could only characterise these statements as gross and mischievous libels." To prove this he stated that, whereas in 1892 and 1893 there were at Bradford in Yorkshire 10 per cent. of adulterated samples and last year only 2 per cent., in Manchester in the same period the adulteration had gone down from 6 to 3 per cent. This, however, does not meet the charges of want of cleanliness in dealing with the milk, and that there is too much ground for them is clear from the dispassionate statements in Dr. J. Niven's last report on the health of Manchester. Too often, no doubt, "the cowsheds are dirty, as are also the flanks and udders of the cows. The milkers do their work with unwashed hands. Insufficient care is taken in cleansing the milk cans and churns." To remedy these defects the sanitary authority sends a carefully drawn up memorandum giving suggestions and advice which would if followed soon raise the milk-supply above reproach. The cows kept in Manchester are in the majority of cases well fed and groomed but the sheds are sometimes overcrowded. Mr. Sadler with some justification blames "the crude and unsuitable arrangements" of the railway companies, and no doubt they might be improved. He also suggests that the health authorities should see that the arrangements for storage in the town are improved. He asks how it is, if the high death-rate of the children is due to the milk, that it is lowest in the districts using most milk and highest where the least is used. Though it is evident that the milk-supply of our large towns—for Manchester may be taken as a fair example—is far from perfect, the closeness with which it is now watched is of good augury for the future. *But there is even now far too much apathy not only* among the poor but also among the well-to-do. Some time ago an attempt was made to establish a company in Manchester for the supply of pure milk, something after the plan of the Moelke Forsyning Company at Copenhagen, but it failed for want of adequate support. Mr. Sadler's apologia would be more effective if he did not go quite so near to denying that disease is communicated at all by milk and threaten the opposition of the farmers to any further increase of precautionary powers on the part of the authorities. The outbreak of sore-throat at Woking, for example, was distinctly traced by the medical officer to four cows with diseased udders. The truth is that though on many farms every care is taken to insure cleanliness there are a good number where the occupants are in a lower state of civilisation and where they are only clean when compelled to be. At a meeting to be held later Mr. Brittleshaw, the veterinary inspector of the corporation, will treat of the milk-supply from his point of view and his picture may perhaps differ considerably from Mr. Sadler's.

ST. BARTHOLOMEW'S HOSPITAL.

In The Lancet of Dec. 19th, p. 1741, we expressed a fear that the governors of this ancient institution had decided too late to ask for more land seeing that the Post Office was in the field against them. Since we wrote thus we learn that the Post Office has practically secured the whole of the remainder of the site of Christ's Hospital. The Post Office, however, will, we suppose, sell a portion of the site if asked to do so, and on Dec. 29th a meeting of the authorities of St. Bartholomew's Hospital was held at which it was determined that a deputation consisting of the treasurer and two almoners should approach the Postmaster-General with a view to obtain some of the recently purchased site. We hope that the deputation will go as men in no doubt of gaining their desires; and, moreover, that they will go prepared with a definite plan of the land which they require. It is no good to approach a Government department in a meek spirit nor under the idea that the asker *will not obtain his wish. The Postmaster-General* must be told that it is vital to the existence of the hospital that more land should be handed over to it on a site contiguous to that which it occupies at present, and we earnestly hope that the deputation will lose no chance of impressing this fact upon him. "Ask and it shall be given unto you" is as true now as it was 1900 years ago.

THE MEDICAL DIRECTORY FOR 1904.

THE 1904 issue of Messrs. J. and A. Churchill's Directory appeared with commendable promptitude in the last days of 1903. Among new features is a list of the members of the Central Midwives Board, while the index to the abstract of the principal laws affecting the medical profession has been arranged alphabetically. The total number of names for 1904 is 37,730, being an increase of 439 over the total for 1903. Of departmental increase the provincial English list shows 16,553 names, as against 16,422 in 1903, and the Naval, Military, and Indian Medical Services 3016 names, as against 2917 in 1903. The article which appeared in the Directory for 1903 under the heading of "Medical Staff College, R A M.C.," has its place taken by one dealing with the "Royal Army Medical College." The somewhat humorous entries in the useful classified list of books to which we drew attention last year have been modified by the omission of the possessive "s" after the authors' names and therefore in place of "Bland Sutton's Ovaries" or "Murray's Hare Lip" we read "Bland-Sutton—Ovaries" and "Murray—Hare Lip," which is without doubt an improvement. For the rest we can only say that the Directory is as complete and useful in every way as possible and the information contained in the introductory and other articles is kept well up to date.

HELLEBORE POISONING.

A CASE of poisoning by hellebore occurring at Sackville College, East Grinstead, was recently investigated by the East Sussex coroner. Evidence was given to show that John Davis, an aged inmate of the college, by the advice of a friend, prepared an ointment made from helleborus niger in order to allay an irritable skin disease. On the day of his death, being afflicted with pains in the stomach, Davis swallowed what he thought was a liquorice powder but in reality was the powder from which he had prepared his ointment. The two powders were kept in similar papers in a canister and Davis possessed only one eye, whilst the remaining one was affected. He discovered his mistake and proceeded to a druggist's shop in the town with the object of obtaining an emetic. The assistant, who later remarked that Davis's manner was as usual, advised him to consult a medical man at once, but whilst on the way home, and it is believed 20 minutes after he had swallowed the hellebore, he was attacked with great pain and was supported back to the college. Mustard and water proved unavailing as an emetic and all efforts to procure a medical man were fruitless. Davis remained conscious to within ten minutes of the end and died within two hours. The coroner remarked that, whilst admitting the poison was one comparatively unknown, no one appeared to be aware of the seriousness of the case and as Davis had called for a remedy it was the assistant's place to have given it to him. The druggist pointed out that the poison was not included under Schedule 1 or 2 but nevertheless he marked the packet "poison." Mr. James Harrison, M.R.C.S., L.R.C.P. Edin., warden at the college, gave his testimony. He did not see Davis until within seven or eight minutes of his death. In answer to the coroner Mr. Harrison stated that the effects of hellebore were that in the first place intense burning in the stomach ensued and then as absorption took place it naturally paralysed the nerve centre governing the heart, resulting, as in the present instance, in heart failure. Olive oil could be given as an emetic, but at present no antidote was known. A teaspoonful was sufficient to cause the death of six men. The coroner remarked that there was comparatively little known of the poison and the jury returned a verdict of "Death from misadventure." Cases of poisoning by hellebore are undoubtedly rare. The symptoms are very similar to those produced by veratrum and the two poisons may easily be mistaken for one another. Hellebore is strongly irritant to the mucous membranes and has an action on the heart resembling that of digitalis and it also acts on the nervous system. Hence, in overdoses it produces nausea, vomiting, salivation, and diarrhœa. The primary stimulating action upon the motor centres and the heart may not appear and the general depression will then be very marked. The heart's action becomes rapid and feeble and death from syncope is likely to occur. A case of poisoning by hellebore with recovery was recorded in THE LANCET, vol. ii., 1856, p. 100.

DISSEMINATED SCLEROSIS AND ITS ASSOCIATION WITH DEMENTIA.

DISSEMINATED sclerosis of the central nervous system is generally accompanied by slight mental changes. In the larger number of cases these psychical alterations are insignificant and play a minor rôle in the list of symptoms. They may be summed up briefly as follows: mental dulness and apathy varied by mild states of exaltation or melancholic depression of an ephemeral character. Another group of cases with the somatic symptoms of disseminated sclerosis is characterised by a preponderance of the mental symptoms which appear early in the course of the disease, are of unusual severity, and terminate in complete dementia. An account of this latter affection, which seems to have affinities with general paralysis of the insane, is published in the *American Journal of the Medical Sciences* for December by Dr. J. Ramsay Hunt, neurologist to the Cornell University Medical School. The group is represented pathologically by two subdivisions: (1) an extreme development of the sclerotic process in the grey and white matter of the brain (cerebral type of disseminated sclerosis); and (2) a mixed or combined form in which symptoms of multiple sclerosis and general paralysis coexist. Both forms, says Dr. Hunt, are rare, seven cases being recorded in literature to which Dr. Hunt adds an eighth which is as follows. The patient was a woman, aged 53 years, the mother of seven children. There were no miscarriages or evidences of syphilis. Her symptoms began four years previously with progressive weakness in the legs and slight defect of memory. These symptoms grew more marked and on admission to hospital there was marked spastic ataxia of gait with considerable mental enfeeblement. The upper limbs also exhibited ataxia and weakness, the speech was stammering and syllabic, the facial expression was one of stupid hilarity, and there were occasional impulsive attacks of laughter. Ophthalmoscopic examination showed the presence of double optic neuritis passing into atrophy. The patient complained of occipital tenderness and pains in the limbs. Paræsthesiæ ("numbness and tingling") were present in the extremities. Nystagmus was present but the pupils, though small, reacted normally to light and accommodation. The knee-jerks were increased on both sides but the tendon reflexes of the upper extremities were wanting. The sphincters acted normally. Occasionally involuntary ataxic movements of the arms and head occurred. The lower extremities were usually held in a state of semiflexion. The patient's physical condition gradually grew worse and she died at the end of four years' residence in hospital. The necropsy revealed the following conditions. The brain substance was somewhat atrophied and there was excess of cerebro-spinal fluid. The ventricles were enlarged and the ependyma was granular. Yellowish plaques of sclerosis sharply defined were found scattered throughout the cerebral and cerebellar hemispheres, involving both white and grey matter. Similar plaques were observed in the pons and medulla. The nerve cells of the cortex were extensively atrophied and the neuroglia was increased. In many parts the leptomeninges were thickened and infiltrated with round cells. The cortical arteries were thickened and the perivascular and pericellular spaces dilated and beset with pigment cells and fat granules. By Weigert's method a considerable loss of the radiating and association fibres of the cortex was demonstrated in the frontal, temporal, and occipital lobes. In these areas the tangential fibres were absent. Although the symptoms of disseminated sclerosis were not apparent until the forty-ninth year the cerebro-spinal distribution of the lesions, says Dr. Hunt, and the pathological appearances were identical with the juvenile form of sclerosis, "while the extent, character, and severity of the cortical degenerative process would correspond only to that observed in general paralysis of the insane." The diagnostic difficulties encountered in such cases are considerable. Nystagmus, scanning speech, and intention tremor when typically present will leave no room for doubt as to the presence of disseminated sclerosis, but if epileptiform or apoplectiform attacks occur and there is marked dulness of mind the diagnosis is difficult. The Argyll-Robertson pupil if present will indicate general paralysis, as it is very rare (occurring only in 1 per cent. of cases) in sclerosis. In all the cases personally observed or collected, says Dr. Hunt, a hereditary taint was traceable, with evidences of a defective nervous system in early life (imbecility, weak-mindedness, and in one case epilepsy).

THE POISONOUS CONSTITUENT OF TOBACCO SMOKE.

The gaseous products of the incomplete combustion of tobacco, whether it be smoked in the pipe, the cigarette, or the cigar, are so complex that the question—to which constituent are the toxic effects of tobacco smoking precisely due—remains unanswered. Of course, it is well known that nicotine is a powerfully poisonous constituent of tobacco leaf but it is *by no means certain that the alkaloid* reaches the system by way of the smoke in sufficient quantity to act seriously as a poison. To begin with, the amount of nicotine in tobacco is very small—and there is reason for believing that the quantity given in previous analyses has been considerably over-represented—moreover, though a volatile poison, nicotine does not occur in the free state in tobacco but as an organic salt which is not volatile and which probably breaks up readily on combustion. It is doubtful whether a seventh part of the total nicotine in the tobacco reaches the mouth of the smoker and some investigators deny that any nicotine occurs in tobacco smoke at all. But assuming that nicotine is the toxic constituent of smoke the quantity must be quite minute since in most mild tobaccos the proportion is rarely over 1 per cent. On the other hand, the incomplete combustion of tobacco gives rise to the formation of aromatic compounds, oils, bases, amines, and gases, some of which are undoubtedly poisons and these are obviously produced in a far larger amount compared with the quantity of nicotine in tobacco. In this connexion too little attention seems to us to have been paid to the relatively large quantity of the poisonous gas—carbon monoxide—in tobacco smoke. When the insidious nature of this gas is considered its absorption in the system, which must be very rapid when inhalation is practised, would sufficiently explain the train of poisonous symptoms which excessive smoking is apt to set up. In some particulars the physiological action of nicotine and carbon monoxide is similar. The dizziness and stupor, the trembling of the limbs and the hands, the disturbance of the nerve centres and of the circulation, palpitation on a slight effort, and the feeble pulse may be the indications of either carbon monoxide or nicotine poisoning. But since one ounce of tobacco gives no less than one-fifth of a pint of pure carbon monoxide gas when smoked in the form of cigarettes—and probably as much or more in the form of cigars or in pipes—it is not improbable that to a very large extent these symptoms are due to the carbon monoxide. We have recently tried the following instructive experiment which bears upon this point. Two or three mouthfuls of tobacco smoke from a cigarette were shaken up with a few drops of blood diluted with water in a bottle. Almost immediately the blood assumed the pink colour characteristic of blood containing this gas, and further observations with the spectroscope confirmed the presence in the blood of carbon monoxide. Similarly a few mouthfuls of smoke from a pipe and a cigar were tried and the results were even more marked. In this experiment we have some explanation in particular of the evil effects of cigarette smoking, for it is chiefly cigarette smoke that is inhaled—an indulgence by which the poisonous carbon monoxide is introduced directly into the blood. This effect of tobacco smoke upon the blood appears to us to be of considerable significance.

THE NEED FOR CLASSIFICATION OF PAUPERS.

On several occasions we have called attention to the necessity for improved classification of the inmates of workhouses and have shown how hardly the present system presses upon that small *percentage of the poor whose misfortunes are not* attributable to their own evil courses. The abhorrence with which respectable paupers regard the institutions professedly designed to minister to their wants is well known and has unfortunately only too substantial a foundation. An article in the December number of the *Nineteenth Century* by Edith Sellers, entitled "Shifting Scenes in Rural Workhouses," fully bears out the contentions maintained in these pages. We select the following examples from those given as illustrations of the abuses still existing. In one workhouse were found, all occupying the same living room and dormitory, 12 men, of whom two were murderers who had served respectively 20 and five years' penal servitude for their crimes, while another was a repulsive lunatic. Another male ward elsewhere contained 13 men, some of them ill but doing their best to get well as soon as possible so that they might escape from the unpleasant propinquity of the two idiots and the dangerous lunatic with bullying tendencies whose society was thrust upon them. The women were in similar evil case. At one small workhouse there were but two, of whom one was imbecile, so that the other found little companionship or sympathy of a desirable kind. The women's ward at another place was terrorised by "a harridan of the worst sort," known as "the Tigress," whose vagaries neither the officials nor the magistrates could or would control. At yet a third workhouse the family party consisted of two imbeciles, two feeble-minded persons, one vicious woman, and one unhappy old lady who, to the detriment of her peace of mind, was none of these things. With scenes like these before their eyes is it any wonder that to the deserving poor the workhouse is an accursed place? For the more striking features of the picture the various boards of guardians and their officials are in great measure responsible. It is an abuse of the powers given under Section 24 of the Lunacy Act, 1890, that lunatics of the class described should be detained in a workhouse. But even where the provisions of the Act are adhered to there remains much to be done. After eliminating those paupers whose abnormality in the way of vice or mental disorder is sufficiently marked to justify their detention in prisons or lunatic asylums, there remain other well-defined groups whose deserts differ widely although under the present arrangement all share alike in the charity publicly dispensed. An essential condition of any measure of reform is therefore suitable classification. In the larger unions of London and the provinces something is done in this direction by the removal of children and imbeciles to special homes or asylums, the provision of wards for lock cases, the appointment of male nurses to deal with the more ruffianly of the sick, and so on; but where the total number of paupers is small even this degree of separation is impracticable. There should be available for the poor of any district at least one institution between the workhouse on the one hand and the prison or lunatic asylum on the other, and in country places this could only be managed by a fusion of parishes and by using the existing buildings for distinct classes of cases.

SUBSTITUTION UNMASKED BY THE ROMAN LETTER "M."

THERE is a curious provision in the Bread Acts of 1822 and 1836 which are still in force to the effect that "every person who shall make for sale, or sell or expose for sale, any bread made wholly or partially of peas or beans or potatoes, or of any sort of corn or grain other than wheat, shall cause all such bread to be marked with a large Roman 'M.'" It would thus appear that the baker who chooses to put potatoes in his bread could escape the charge of adulteration by marking the loaf with this letter in the manner described, and it would be well occasionally to examine all loaves for this imprint, for it might very easily be unobserved or, if there, might be taken to mean something quite different. The plan seems to us to offer some advantages to the public if they were aware of it and the Roman "M" might be of real help in suppressing the very prevalent fraud of substitution. Thus, if it could be made compulsory to print a Roman "M" on a bottle of whisky which is not all malt, or on a bottle of brandy which is not all grape spirit, or on a fabric which is not all linen, and so forth, the public would know what they were getting and much of the deceit at present practised would be brought to light. The vendors of substitutes could not logically raise any objection to this process because they invariably argue that the substitute is better for the health and comfort of the buyer than is the genuine article.

FIRST FRENCH CONGRESS OF CLIMATOTHERAPY AND HYGIENE OF TOWNS.

A CONGRESS under this complicated name will be held at Nice during Easter, from April 4th to 9th, 1904, under the presidency of Professor Chantemesse. Among the vice-presidents are Professor Renaut (Lyons), Professor Grasset (Montpellier), Professor Calmette (Lille), and Dr. Balestre (Nice). The discussions will bear on the following five questions: (1) the climate of the French Mediterranean coast; (2) adaptation of the individual to climate; (3) influence of the French Mediterranean coast climate on tuberculosis and tuberculous patients; (4) the influence of climate on the French Mediterranean coast on rheumatism and on those subject to rheumatism; and (5) disinfection of towns. The members of the executive committee for England are Dr. G. H. Brandt (Nice), Dr. H. J. Johnston Lavis (Beaulieu), Dr. J. A. Macdougall (Cannes), Dr. R. Price Mitchell (Monte Carlo), and Dr. Stanley M. Rendall (Mentone). Great travelling facilities in France and abroad will be granted to members of the Congress and their families. The hotel prices at Nice will be reduced in their favour and may be ascertained beforehand. Applications for membership should be sent to Dr. Bonnal, treasurer, 19, Boulevard Victor-Hugo, Nice (Alpes-Maritimes). Dr. Hérard de Bessé, secretary-general of the Congress, Beaulieu-sur-Mer, will be happy to give all further information.

THE REGIUS PROFESSORSHIP OF MEDICINE AT OXFORD.

IN THE LANCET of Dec. 26th, 1903, p. 1828, we announced the resignation of Sir John Burdon Sanderson as Regius Professor of Medicine at the University of Oxford. The appointment to this office is, as its name shows, in the hands of the Crown, and the University has therefore no *locus standi* in the matter. But courtesy would suggest that the opinion of the University should at least be sought and it has come to our knowledge that a name has already been submitted to the Vice-Chancellor and transmitted by him to the Prime Minister for succession to the post without any of the Oxford graduates in medicine having been given a chance of recording their opinion regarding the successor of the late Regius Professor or of intimating their wishes in the matter. As we have already said, the new Regius Professor should be one not merely with a grasp of modern medicine but also one who can take a broad and statesmanlike view of the principles and influence of the medical sciences. There are at least four or five Oxford graduates who would be willing and able to take the post and who, moreover, are men of the type which we have mentioned. But none of these has been asked and an attempt has evidently been made to rush the appointment through in what we think is a very undesirable manner. It is to be hoped that the Prime Minister will at least hold his hand until he has been able to learn the opinion of the Oxford graduates upon the matter. The Regius Professorship of Medicine is a post of dignity and one of importance to the University. Its holder should be a statesman-like man as well as a teacher and undue hurry in the appointing of the professor is most strongly to be deprecated.

GONORRHŒAL PYÆMIA IN INFANTS.

IN a recent number of the *Medical Record* Dr. R. B. Kimball calls attention to a form of gonorrhœal pyæmia not previously recognised. It appears that in American institutions in which infants and elder children are associated gonorrhœal vulvo-vaginitis is prevalent. The infection once introduced spread with great rapidity, attacking practically all the females and unless precautions are taken some of the males also. During one year 600 patients were admitted to the Babies' Hospital of New York among whom occurred 70 cases of gonorrhœal vulvo-vaginitis and ten of arthritis. In these cases there was only one case of ophthalmia. A large proportion of the vaginitis was acquired in the hospital. To check the outbreaks the most elaborate precautions were necessary. Nothing but complete isolation prevented the spread of the disease. In eight of the ten cases of gonorrhœal arthritis (pyæmia) no local source of the disease could be found. No similar cases appear to have been recorded. The following case is an example. A girl, aged three months, was admitted on June 18th, 1902, for acute entero-colitis. Until the 28th there were only symptoms of mild entero-colitis. Then the temperature rose to 105° F. and on the following day the left knee and hand were swollen, red, hot, and painful. On July 1st both knees and both hands were affected. On the 2nd the ankles were involved. On the 5th fluctuation was obtained over the right ankle and aspiration yielded a drop of pus. General œdema set in and death occurred on the 12th. There was never any vaginal discharge. At the necropsy pus was found in the right shoulder-joint, the tissues about the left shoulder-joint, and the tissues about the wrists (not the joints). The pus contained gonococci. The identification of the organism was confirmed by Professor Welch of the Johns Hopkins Hospital. In the eight cases all the patients were infants under the age of three months and, strange to say, seven were males. On the other hand, of over 70 females suffering from vaginitis only one had arthritis. In six cases there were purulent polyarthritis, peri-arthritis, and myositis. In two cases only one joint (the knee) was involved. The ankles and wrists were the joints most frequently affected In two cases the temporo-maxillary joints were involved and in three the toe- or finger-joints. The treatment consisted of aspiration or arthrotomy with application of wet dressings. The incisions healed and the joints were restored to normal with remarkable rapidity. No history of gonorrhœa in the parents or of ophthalmia neonatorum could be obtained. Six of the eight cases were fatal and at the time of the report the recovery of the two survivors was doubtful. In three cases necropsies were obtained. Arthritis, purulent infiltration of the muscles about the joints, and broncho pneumonia were found. In one case there were laryngeal abscesses and the pus as well as the laryngeal mucus yielded biscuit-shaped diplococci not retaining Gram's stain. In three cases a form of stomatitis resembling thrush was present and in one case intracellular diplococci not retaining Gram's stain were found in the scrapings from the mouth, but the organism could not be isolated and proved to be the gonococcus. Cases of gonorrhœal stomatitis in the newly born have been previously described. Dr. Kimball suggests that during cleansing of the mouth infection may have taken place from the nurse's hands and that the resulting stomatitis was the source of the pyæmia.

THE medical officer of health of the Cape Colony reports that for the week ending Dec. 5th, 1903, no cases of plague were notified in the Colony. Plague infected rats continued to be found at various places in the Colony, but of 400 rats which were examined in the Cape Town and harbour board area during the week none was affected with plague.

Dr. Arthur Newsholme will deliver the inaugural address in connexion with the post-graduate lectures and demonstrations at the Mount Vernon Hospital for Consumption and Diseases of the Chest, 7, Fitzroy-square, W., on Thursday, Jan 7th, at 5 P.M. The subject of Dr. Newsholme's address will be Public Preventive Measures against Tuberculosis in Relation to the Medical Practitioner.

AT the next meeting of the Incorporated Society of Medical Officers of Health, to be held at 9, Adelphi-terrace, Strand, London, W.C., at 8 P.M., on Friday, Jan. 8th, Dr. J. Spottiswoode Cameron will open a discussion on Sophistication of Foods and important motions will be proposed. The meeting is open to public analysts and those interested in the subject.

THE Royal Commission on Sewage Disposal at its meeting on Dec. 22nd settled its report on the contamination of shell fish by sewage. The report will be published in a few days.

THE LONDON SCHOOL OF TROPICAL MEDICINE.—Of the students of the above school who presented themselves for the examination at the end of the October-December, 1903, session the following have passed: A. E Horn (Colonial Service), A. H. Barclay (Foreign Office), G. Wilson, W. J. Radford (Foreign Office), D Cowin (Colonial Service), J. E Mitchell, S G. Ranaday, C. H. Allan (Colonial Service), J. T. Cartaya, F. A. Baldwin (Colonial Service), T. F. G. Mayer (Colonial Service), F. C. Sutherland, and Guy Ruata.

THE WORKING OF THE INEBRIATES ACTS.

THE report of Dr. R. Welsh Branthwaite, H.M. Inspector under the Inebriates Acts, which has recently been issued, contains even more information than its predecessors and either with or without them might usefully be studied by every county and borough councillor and magistrate in the kingdom. Indeed, it is difficult to see how, without the careful consideration by all concerned of the points to which Dr. Branthwaite calls attention in his comments upon the statistics which he presents, thoroughly efficient working of these important Acts can ever be obtained. The progress which he shows is satisfactory as far as it goes, but some of the defects which he also criticises appear to be unnecessary and capable of remedy. Those who consider the question of the responsibility of the community for the care of the habitual inebriate should, in order to avoid confusion, bear carefully in mind the distinct forms of establishment provided by law for this purpose. The retreat established under the Inebriates Act, 1879, is for the reception of habitual drunkards voluntarily submitting themselves to its restraint. The State Inebriate Reformatory instituted under the Inebriates Act, 1898, is primarily for habitual drunkards convicted on indictment of offences punishable with imprisonment under Section 1 of that Act. As its name implies it is a State institution, provided and maintained at the expense of the Treasury. The Certified Inebriate Reformatory, also a creation of the Act of 1898, may be instituted by county or borough councils or private individuals and is primarily for the reception of inebriates convicted under Section 2 of the Inebriates Act, 1898, of minor offences connected with drunkenness four times within 12 months Persons originally confined in State Inebriate Reformatories may be removed to Certified Inebriate Reformatories and *vice versâ*, and in practice this transference has been frequently found desirable, as the person who has been convicted of an indictable offence committed through drink often proves more tractable than the person who has become liable under Section 2 and so may be advantageously treated in the less rigorously disciplined surroundings provided by voluntary effort, whereas the comparatively harmless soaker who cannot be committed to any but a certified reformatory sometimes proves not amenable to the restraints that are there available. An important element of weakness in the administration of the Act of 1898 to which Dr Branthwaite refers lies in the fact that it does not cover the whole ground of habitual inebriety coming before courts of law owing to the voluntary element introduced into the working of certified reformatories Acceptance into these is dependent upon whether the managers of the institution are willing to receive the inebriate offered to them. A proportion of those convicted under Section 2 may fairly be described as cases hopeless of reform, at all events within the period for which detention is ordered. No case, perhaps, should be pronounced with authority to be beyond possibility of improvement, but persons of the type of Jane Cakebread and Tottie Fay, whose sad cases contributed largely to the institution of the certified reformatory, are precisely those whom managers of these institutions are likely to reject. This operates in two ways; the unfortunate inebriate after a short time in gaol is left at large to do mischief to himself and to the community and the magistrate who finds a drunkard thrown back upon his hands is discouraged from committing other inebriates to the reformatory. He may even misunderstand the causes at work, denounce the Act as inefficient, and delay its operation in the district where he presides. Dr Branthwaite makes out a strong case for the admission even of the worst cases to the institutions provided by local authorities for the benefit of their localities, although to do so would necessitate taking charge of

encourages the mag

future for himself as to which case is capable of beneficial treatment and which is not, a matter as to which he cannot possibly be in a position to form a correct opinion.

We have suggested above that the Blue-book containing Dr. Branthwaite's report might usefully be read by all county and borough councillors and by all magistrates, because upon the provision of accommodation for inebriates by the former and upon a proper appreciation of the work done by reformatories on the part of the latter the successful working of the Act of 1898 entirely depends. With regard to the provision of accommodation we have suggested that the reception of all cases, if possible, is desirable in the public interest. Apart, however, from questions of discrimination we find by the report for 1902 that at the end of that year a number of counties and boroughs had entirely failed to avail themselves of the Act or had done so to a very slight degree only. A study of Dr. Branthwaite's figures will show this in detail. It may be summarised by saying that on June 30th, 1903, out of 495 inmates of inebriate reformatories 259, or more than 50 per cent of the whole, came from London and the metropolitan district. Lancashire added approximately another 25 per cent. and the remaining 25 per cent. were made up by the whole of the rest of England and Wales.

The contribution of Wales at the end of 1902 amounted to 12 only, of whom 11 came from Glamorganshire and one from Carnarvonshire. We are not aware that any feature of universal sobriety entitles the rest of the principality to dispense entirely with the assistance which the Act under consideration offers, and the same observation applies to Bedfordshire, Cambridgeshire, Cornwall, Derbyshire, Herefordshire, Huntingdonshire, Lincolnshire, Oxfordshire, Rutland, Suffolk, Westmorland, and Wiltshire, from none of which at the same date had any person been committed to an inebriate reformatory. Four more counties had made use of the Act in one instance only, one on two occasions only, and Cumberland and Leicestershire, while sufficiently aware of the Act to contribute four each to the total, had not found it desirable to exceed that number.

The failure to make use of the powers given lies partly at the door of local authorities who are, however, in many instances making efforts to obtain the best possible accommodation for the treatment of their inebriates. Counties and boroughs may contribute to the construction and maintenance of a certified reformatory or may arrange for the accommodation of inmates in such institutions by payment. The majority of the certified reformatories which came early into existence were to be found in the southern portion of England. The Lancashire reformatory at Langho was not completed at the time when the Blue-book before us was compiled and the Yorkshire reformatory, the plans of which are given, had been but recently commenced. The completion of these two should inspire the building of others besides setting free accommodation elsewhere.

In addition, however, to that of the local authority the goodwill of the occupants of the bench is necessary. Magistrates may have been discouraged by the failure to obtain treatment which has followed their committal of individual cases. Want of accommodation and the unwillingness to treat apparently hopeless cases have contributed to this, but magistrates must be reminded with reference to the latter cause that the hopeless cases of the present day are due to the want of power to deal with cases not yet irremediable in the past. Reformatories are primarily for reform and must be used for those who are not too far gone to be treated if the treatment is to be effectual. Any tendency to give the drunkard "one more chance" to reform himself when he is qualified for compulsory treatment is false kindness which may result in his final ruin, and any attempt to minimise his sentence is no less cruel to him. The reformatory cannot do him much good during a term of a few months only. If it proves effective in less than the period for which his committal has taken place those who manage it have power to allow him out on licence, and considerable care is exercised to render such period of probation a useful part of the treatment.

It is possible, moreover, that the judges, who at assizes have the opportunity of calling marked attention to the Inebriates Act of 1898, do not always exercise their influence with regard to it to their fullest extent. Mr. Justice Grantham by his observations at the last Durham assizes and by the controversy in which he has involved himself with the licensed victuallers has drawn a good deal of public notice to the connexion between drunkenness and crime. He has, however, thrown upon the publicans a very large proportion of the blame which in many cases may be deserved and has not, so far as we are aware, contributed in any marked degree to the effectual working of the Act, either by reference to the powers which it gives or by criticising, with the aid of his experience, its merits and demerits. The man or woman whom drink converts into a violent criminal is a person whom most publicans would gladly be rid of, but it is for judges and magistrates to place such inebriates under salutary restraint.

Section 1 provides as follows:—

> Where a person is convicted on indictment of an offence punishable with imprisonment or penal servitude, if the court is satisfied from the *evidence that the offence was committed* under the influence of drink or that drunkenness was a contributing cause of the offence, and the offender admits that he is, or is found by the jury to be, an habitual drunkard, the court may in addition to, or in substitution for, any other sentence order that he be detained for a term not exceeding three years in any State reformatory or in any certified inebriate reformatory the managers of which are willing to receive him.

The rest of the section deals with the procedure to be adopted should the prisoner refuse to admit his habitual drunkenness so as to necessitate evidence being heard upon the subject. Up to the end of 1902 there had been no State reformatory available and so the figures given in Dr. Branthwaite's report refer only to certified reformatories willing to receive the inebriate convicted on indictment. This accounts in a measure for the number of committals to reformatories being small, coupled as it is with the necessity which still remains for conviction upon indictment at quarter sessions or assizes. It is, however, to the nature of the offences which have led to committals to reformatories under this section that Dr. Branthwaite points in support of his suggestion that insufficient use has been made of it. There have been in four years 96 such committals, of which no less than 78 have followed convictions under the Cruelty to Children Act. This is equivalent to saying that but for the efforts of the National Society for the Prevention of Cruelty to Children to save children from neglect and ill-treatment (not to reform drunkards) this useful section would have been almost inoperative. This state of affairs must to some extent be due to the apathy of judges and magistrates, although there is one cause which no doubt prevents it from being put into effect in some otherwise suitable instances. To this Dr. Branthwaite does not appear to give weight. It is the necessity, which reference to the section cited will show, of proving by evidence that the convicted person is a habitual drunkard in cases where he denies it. In some instances this may be easy—as, for example, where frequent convictions at a police court for offences connected with drunkenness have preceded the conviction on indictment. On the other hand, the convicted person may not be a "habitual" drunkard at all, or he may be one, and yet there may be considerable difficulty in proving him to be such to the satisfaction of the jury. Again, apart from lack of evidence, juries have their prejudices; there may be persons upon any jury who for various reasons would rather see the convicted person punished without reference to the Inebriates Act. It is, however, for judges and chairmen of quarter sessions primarily to render this section effective if the community and the victims of inebriety are to reap the full advantage of it. Imprisonment may precede the term in a reformatory as the section shows.

The statistics which relate to the use of retreats under the Act of 1879 by persons consenting to be treated in them are not very encouraging, although they show some increase in the number of those admitted. There were 552 received into retreats in 1902, as against 433 in 1901 and 422 in 1900. In 1899 there were 437. The increase for 1902 is accompanied by a curious rise in the number of females admitted. This rose to 305, as against 186 in the previous year. As a rule there has been a preponderance of women among those committed to reformatories and a preponderance of men among those voluntarily consigning themselves to retreats, and the new condition may be merely temporary and accidental. That the use made of the power of self-committal to restraint of this kind should be small compared with the number of habitual drunkards is not surprising when we consider that the drunkard in his soberest moments is not a person whose good resolutions are likely to last long and no doubt they have often time to weaken before the formalities imposed by the Act are complied with. At present the inebriate in England cannot as such be compelled to accept treatment, as he can in some countries. To the possibility of providing for this Dr. Branthwaite refers, as well as to the other cause which has militated against the success of the retreat. This is simply the lack of funds. The poor patient finds little accommodation provided for him and the destitute inebriate finds none unless charity will come to his aid. These persons are, in fact, in a worse position than if drunkenness led them to offend against the law. On the whole the Blue-book shows regular if somewhat slow progress in the work of the two classes of reformatory and of retreats, and the perusal of its contents may be recommended to those who can accelerate a development which is much to be desired.

POST-GRADUATE WORK ABROAD.

VIII. CHICAGO.[1]

BY J. B. MURPHY, A.M., M.D.,
PROFESSOR OF SURGERY IN THE NORTH-WESTERN UNIVERSITY SCHOOL, CHICAGO; SURGEON-IN-CHIEF, MERCY HOSPITAL, CHICAGO, ETC.

THE conditions underlying post-graduate study in Chicago are entirely different from those obtaining in Europe, and especially in Berlin, Vienna, or Paris. The great majority of hospitals are not under government or municipal control and we have no "faculty of medicine" in a public official sense. Neither have we bodies like the "Assistance Publique" whose ticket entitles the holder to admission to the various hospitals under its control. The place of these two bodies is largely taken by the post-graduate schools, of which more anon. Chicago, like Gaul, is divided into three parts, separated by the Chicago river and its branches. Each of these has a post-graduate school, one or more medical colleges, and many hospitals.

The largest division—the west—has the so-called "medical centre" of Chicago, with the County Hospital for a nucleus. This institution is one of the largest general hospitals in the United States, having 1200 beds. The county morgue and the Detention Hospital for the Insane are on the same grounds. Clinics are held in the amphitheatre continuously throughout the day by various members of the attending staff but there is no bedside instruction. A ticket, good for one year, admitting the holder to all clinics and necropsies costs five dollars (one pound). Within a square or two are four medical colleges, a post-graduate school, and three hospitals, which are the Presbyterian Hospital, the West Side Hospital, and the Women's Hospital.

The south division has the new but very prosperous Chicago University. The medical schools and hospitals are again located close to each other but some miles nearer the city proper than the university. The principal hospitals are the Mercy Hospital, with 260 beds, the Wesley Hospital, with about half the number, and St Luke's Hospital. The north side has fewer hospitals and medical schools The most important of these are the Alexian Brothers' Hospital for men only (this is the best constructed and equipped hospital in Chicago and has 280 beds; all of the patients may be used for clinical purposes, though many of them are pay patients), St. Joseph's Hospital, and the Augustana Hospital.

A prospective seeker for post-graduate instruction could write to the secretaries of the various post-graduate schools for their annual announcements. Their addresses are as follows: west side, Dr. W. L. Noble, 819, West Harrison-street; south side, Dr. F. H. Martin, 2400, Dearborn-street; and north side, Dr. M. L. Harris, 176, East Chicago Avenue. After perusing the lists of faculties and weighing the advantages offered by each institution he will probably make a decision or possibly he may delay it until arriving in the city. The clerks at the schools are provided with lists of rooms, boarding houses, &c. The faculties of the schools are all connected with a hospital, sometimes with several, and schedules of the various operations and medical clinics for the day and the day following are displayed on the bulletin board. The time is pretty well occupied with the clinics in the schools and at the hospitals near by. However, most physicians find time for a course in some special line—operations on the cadaver, bacteriology, pathology, histology, and the like. As a general rule, tickets for two or three months stay at a post graduate school will cost from $75 to $100 (from 15 to 20 pounds); the special courses each cost from $10 to $25 (from two to five pounds), depending on the number of sessions, &c. Some reduction is generally made when a stay of two, three, or more months is made. No precise figures can be given for board or lodging, as individual tastes differ so much. The former in families will run from 15*s.* per week, the latter from 8*s.* to 10*s.*, including heat, light, and attendance There is no lack of opportunities for special work. For instance, in ophthalmology and otology the Illinois Eye and Ear Infirmary, which is maintained by the State, is located here and has a very large out-patient department in addition to the wards. Clinic tickets, good for one year, cost five dollars. There is also a private Eye, Ear, Nose, and Throat Hospital (Dr. J. R. Hoffman, secretary, 206, East Washington-street) which gives regular instruction in diseases of any or all of these organs. For laboratory work there are abundant facilities also. Arrangements may be made with the instructors in the schools or colleges to pursue any desired subject, the cost depending on the importance of the subject and the length of time necessary. The University of Chicago offers courses on every conceivable subject—advanced anatomy, pathology, bacteriology, anatomy of the eye and ear, neuro pathology, &c. These usually occupy one quarter (three months) of the university year and cost from $25 to $50 (from five to ten pounds) each.

For those interested in psychiatry the Detention Hospital affords a wide field. The Insane Court is held here every Thursday and all patients brought in since the previous session are examined. If committed to the asylums they are generally sent to the county one at Dunning, some 15 miles out in the suburbs (fare, six cents) The infirmary, or poor house, is located here also, the two institutions combined having a capacity of some 2500. The nearest State asylums are at Elgin, 25 miles west (fare $1, or 4*s*), with a capacity of 1500, and Kankakee, 50 miles south (fare $1½, or 6*s*), with a capacity of 2500. As regards medical libraries, the Newberry Library on the north side (ten minutes' ride), while of recent origin, has some 20,000 volumes and about 200 current periodicals. Chicago has nothing to boast of in the way of pathological museums These are of slow growth and as the medical colleges were burned in the great fire or have been started since there is little but a nucleus as yet. In general museums the Field Columbian Museum (south, 30 minutes' ride), though less than a decade old, has a really wonderful collection of specimens in comparative anatomy, anthropology, zoology, &c. The Academy of Sciences (north, 20 minutes' ride) has a similar but smaller collection.

The various medical societies, surgical, gynæcological, &c., have been recently combined with the Chicago Medical Society and are now branches of it. The parent society and its branches have meetings once a week or more often. Little or no influence is exerted by the season of the year on the character of the work. The summer is never unduly hot for any length of time and the nights are generally cool owing to the lake breezes. Early in the spring—February and March—there is (as elsewhere) some raw, damp weather for a few days. For physicians desiring to spend a few days only in the various medical centres of the United States, combining business with pleasure and coming over, as the Hindoos say, "to smell the air," the presentation of a professional card will insure them courteous attention and admission to the clinics for the short time of their stay.

The advantages of Chicago post-graduate students are the accessibility of the different institutions. All distances were measured from the court house and the principal hospitals, colleges, &c, are within a radius of two miles in each direction. By a series of electric trams (fare five cents., or 2½*d.*) nearly every desired point can be reached within a square or so. The surgeons in Chicago rarely ever operate in private residences; all of their operations are made in the hospitals. Visiting physicians are admitted to the private operations The custom adds enormously to the opportunities for witnessing surgical work in Chicago.

Next, the hospitality of the Chicago people which, of course, includes the physicians The latter take especial pains to interest their visiting brethren and divide their stores of wisdom with them The enterprise which has made Chicago world-famed from a commercial standpoint extends to the medical fraternity also. Nowhere in the country do we find the doctors more harmonious, skilled, and progressive.

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[1] No I. (Paris), No. II. (Berlin), No III. (Vienna) No. IV. (Budapest), Nos. V. (Florence) and VI. (Milan), and No VII. (New York) were published in THE LANCET of Sept. 12th (p. 781), Sept. 26th (p. 912), Oct. 17th (p 1121), Oct. 24th (p. 1194), Nov. 21st (p. 1465), and Nov. 28th (p. 1534), 1903, respectively.

Looking Back.

FROM

THE LANCET, *SATURDAY*, DEC. 31, 1825.

REVIEWS.

II.[1]

Case of Carotid Aneurism, successfully treated by tying the Artery above the Aneurismal Tumour. By JAMES WARDROP, Esq., Surgeon Extraordinary to the King. Part 1st of the 13th Vol. of the Medico-Chirurgical Transactions. Longman. London.

WHILE the *science of Medicine* may be said to revolve in a circle, and while it may be fairly questioned whether *the practice of Physic* be more or less useful to the human species than it was in the days of Galen and Hippocrates, the merest tyro has only to glance at the history of the *art of Surgery*, during the last half century, and be delighted, nay, fascinated, by its astonishing progress—its almost incredible improvement.

In connexion with the subject to be treated of, it may be added, that in no department of surgery is the triumph of genius and talent, of anatomy and pathology, more conspicuous than in that which relates to the history and the treatment of aneurism. Before the days of the immortal John Hunter, the nature of this disease was not well understood, and the means of cure often proved ineffectual. Some patients were cured spontaneously by an effort of Nature, some by the assistance of pressure, and many were left to the horrid fate of lingering out life under an impression that every moment might be their last; the parietes of an aneurismal sac, or the common teguments, often being the only barrier between existence and eternity. Of those persons, who submitted to the *old operation*, a great many died, and many had very tedious cures. In this state of anxiety, uncertainty, and imperfection, with respect to the proper treatment of aneurism, Hunter arose, like the morning sun, and dispelled the shades of darkness. His profound knowledge of the animal economy enabled him to form a rational theory, upon which he not only grafted a new operation—the celebrated operation for popliteal aneurism,—but he also laid the basis of the astonishing operations of his successors. Could our ancestors start from their graves, with Hunter in the front rank, what would be their surprise—their amazement, on beholding the surgeons of these days, not only successfully tying the femoral, the humeral, and the external and internal carotid arteries, but absolutely putting ligatures on the common iliac, the external iliac, the internal iliac, the common carotid, and the subclavian arteries?—Would they believe their own eyes when they remarked one dexterous operator tying the *arteria innominata*, and another still more hardy, as the *ne plus ultra* of our art, ripping up the abdomen, turning aside the intestines, and absolutely carrying a ligature around the great trunk of nourishment of the whole animal system, *the aorta? ! !*

Since Hunter's days the pathology of aneurism has been fully developed, especially by Scarpa and Burns. The mode in which nature arrests hæmorrhage, and the manner in which ligatures act upon tied arteries, have been completely investigated by Thompson, Jones, and many others. In consequence of a combinaion of the improvements of the whole of the *faculty of surgery*, the above mentioned series of new operations has been performed; every artery of the system has been included in a ligature.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8581 births and 5159 deaths were registered during the week ending Dec. 19th The annual rate of mortality in these towns, which had been 17·6, 18·6, and 19 2 per 1000 in the three preceding weeks, declined again to 17·8 per 1000. In London the death-rate was 16·8 per 1000, while it averaged 18·3 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 8·2 in King's Norton, 9·0 in East Ham, 9·1 in Bournemouth, 9·7 in Barrow-in-Furness 10·3 in Grimsby, 10·6 in Hornsey, and 11 1 in Burton-on-Trent; the highest rates were 23·1 in Hanley, 23·2 in Walsall, 23·5 in Wigan, 23·6 in Warrington, 24·0 in Swansea, 24·1 in Stockton-on-Tees, 24·4 in Gateshead 34·5 in York, and 36·0 in Preston. The 5159 deaths in these towns included 423 which were referred to the principal infectious diseases, against 430, 402, and 42 in the three preceding weeks; of these 423 deaths, 134 resulted from measles, 113 from whooping-cough, 71 from diarrhœa, 43 from diphtheria, 35 from "fever" (principally enteric), 24 from scarlet fever, and three from small-pox. In Croydon, Hornsey, Tottenham, Norwich, Derby, Halifax, South Shields, Newcastle on-Tyne, and in ten other smaller towns no death from any of the principal infectious diseases was registered; while among the other towns they caused the highest death-rates in Willesden, Wigan, Warrington, Bury, Preston, Rotherham, York, and Gateshead. The greatest proportional mortality from measles occurred in Willesden, West Ham, Ipswich, Aston Manor, Warrington, Bury, Preston, Rotherham, and York; from whooping-cough in Wolverhampton, Walsall, Liverpool, Wigan, Warrington, Rochdale, York, Gateshead, Merthyr Tydfil, and Swansea; and from diarrhœa in Walsall, Preston, Gateshead, Rhondda, and Merthyr Tydfil. The mortality from scarlet fever, from diphtheria, and from "fever" showed no marked excess in any of the large towns. Two fatal cases of small-pox were registered in Gateshead and one in Warrington, but not one in any other of the 76 large towns. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 40, 35, and 32 at the end of the three preceding weeks, had further declined to 26 at the end of the week; six new cases were admitted during the week, against three, three, and two in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital on Dec. 19th, was 1654, against 1770, 1715, and 1717 on the three preceding Saturdays; 188 new cases were admitted during the week, against 157, 161, and 173 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory organs, which had been 399, 358, and 417 in the three preceding weeks, declined again to 344, and were 45 below the number in the corresponding period of 1902 The causes of 56, or 1·1 per cent., of the deaths in the 76 large towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Nottingham, Salford, Bradford, Leeds, Hull, Newcastle-on-Tyne, and in 49 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Wallasey, Liverpool, Bootle, Halifax, Sheffield, and South Shields.

During the week ending Saturday last, Dec. 26th, 6251 births and 4464 deaths were registered in 76 of the largest English towns. The annual rate of mortality in these towns, which had been 18 6, 19 2, and 17·8 per 1000 in the three preceding weeks, further declined last week to 15·4 per 1000. The rates in the several towns ranged from 7·1 in Barrow-in-Furness. 7·3 in Leyton. 7·6 in East Ham, 7 8 in Walthamstow, 7·9 in Hastings, 8·0 in Hornsey, 8·9 in Smethwick, and 9·0 in Tottenham and in Reading, to 21·1 in Great Yarmouth, 21·5 in Bradford, 22·6 in Merthyr Tydfil, 23·4 in Stockport, 24·1 in Stockton-on-Tees, 24·6 in Preston, 26·7 in Warrington, 29·4 in Wigan, and 30·6 in York. In London the death-rate was 13·6 per 1000, while it averaged 16·3 per 1000 in the 75 other large towns. The 4464 deaths from all causes in the 76 towns last week included 388 which were referred to the principal infectious diseases, against 401, 422, and 423 in the three preceding weeks; of these 388 deaths 130 resulted from measles, 111 from whooping-cough, 47 from diarrhœa, 38 from diphtheria, 32 from "fever" (principally enteric), 25 from scarlet fever, and five from small-pox. In Croydon, Hornsey, Walthamstow, Brighton, Reading, Hull, South Shields, and eight other small towns no death from any of the principal infectious diseases was registered; while among the other towns they caused the highest death-rates in Willesden, West Bromwich, Warrington, Preston, Rotherham, Gateshead, and Swansea. Measles was proportionally most fatal in Willesden, Great Yarmouth, West Bromwich, Warrington, Preston, Leeds, Rotherham, and Sunderland, diphtheria in Hanley, and whooping-cough in Leyton, Liverpool, Wigan,

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[1] Only a portion of this Review has been transcribed.

Warrington, Stockton-on-Tees, Gateshead, and Swansea; the other principal infectious diseases caused no excessive mortality in any of the large towns. Three deaths from small-pox were registered in Warrington, one in London, and one in Tynemouth. The Metropolitan Asylums hospitals contained 27 small pox patients on Saturday last, Dec. 26th, against 35, 32, and 26 on the three preceding Saturdays; seven new cases were admitted during the week, against three, two, and six in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 1715, 1717, and 1654 at the end of the three preceding weeks, had further declined to 1617 at the end of last week; 142 new cases were admitted during the week, against 161, 173, and 188 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory organs, which had been 358, 417, and 344 in the three preceding weeks, further declined last week to 271, and were 138 below the number in the corresponding period of last year. The causes of 54, or 1·2 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Bradford, Leeds, Newcastle-on-Tyne, and in 48 other smaller towns; the largest proportions of uncertified deaths were registered in Northampton, Liverpool, Bootle, Warrington, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18·7, 20·0, and 22·4 per 1000 in the three preceding weeks, declined again to 21·0 per 1000 during the week ending Dec. 19th, but showed an excess of 3·2 per 1000 over the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 13·7 in Leith and 15·8 in Greenock, to 23·2 in Perth and 23·3 in Paisley. The 686 deaths in these towns included 33 which were referred to measles, ten to diarrhœa, nine to whooping-cough, three to diphtheria, two to small-pox, two to scarlet fever, and two to "fever." In all, 61 deaths resulted from these principal infectious diseases during the week, against 62, 53, and 73 in the three preceding weeks. These 61 deaths were equal to an annual rate of 1·9 per 1000, which was 0·4 per 1000 above the mean rate for the week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been 17, 22, and 34 in the three preceding weeks, declined again to 33, of which 30 occurred in Glasgow and two in Edinburgh. The deaths from diarrhœa, which had been 22, 12 and 15, in the three preceding weeks, decreased again to ten, all of which were registered in Glasgow. The fatal cases of whooping-cough, which had been nine, seven, and 13 in the three preceding weeks, declined again to nine and included four in Glasgow and three in Aberdeen. The deaths from diphtheria, which had been five, four, and two in the three preceding weeks, rose again to three, of which two occurred in Edinburgh. The fatal cases of small-pox, of scarlet fever, and of "fever" were all registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 148, 138, and 192 in the three preceding weeks, declined again to 184, but were 14 in excess of the number in the corresponding period of 1902. The causes of 27, or nearly 4 per cent., of the deaths in these eight towns were not certified.

In eight of the principal Scotch towns the annual rate of mortality, which had been 20·0, 22·4, and 20·9 per 1000 in the three preceding weeks, declined to 20·8 per 1000 during the week ending Dec. 26th, but was 5·4 per 1000 above the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 12·0 in Paisley and 13·7 in Leith to 23·3 in Greenock and 24·9 in Dundee. The 680 deaths in these towns last week included 25 from measles, 16 from whooping-cough, 16 from diarrhœa, four from small pox, four from scarlet fever, four from diphtheria, and four from "fever." In all, 73 deaths resulted from these principal infectious diseases last week, against 53, 73, and 61 in the three preceding weeks. These 73 deaths were equal to an annual rate of 2·3 per 1000, which was 1·0 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been 22, 34, and 33 in the three preceding weeks, further declined last week to 25, of which 23 occurred in Glasgow. The deaths from whooping-cough, which had been seven, 13, and nine in the three preceding weeks, rose again to 16 last week, and included eight in Glasgow, five in Aberdeen, and two in Edinburgh. The fatal cases of diarrhœa, which had been 12, 15, and 10 in the three preceding weeks, increased last week to 16, of which 10 were registered in Glasgow. The deaths from small pox, which had been three, two, one, and two in the four preceding weeks, further rose to four last week, and all occurred in Glasgow. The fatal cases of scarlet fever, which had been one, six, and two in the three preceding weeks, rose again last week to four, of which two were registered in Glasgow. The deaths from diphtheria, which had been four, two, and three in the three preceding weeks, further rose to four last week, and included two in Glasgow and two in Edinburgh. The fatal cases of "fever," which had been two in each of the two preceding weeks, increased last week to four, of which two occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 138, 192, and 184 in the three preceding weeks, further declined last week to 180, and were 13 below the number in the corresponding period of last year. The causes of 26, or nearly 4 per cent., of the deaths registered in these towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·8, 27·5, and 24·6 per 1000 in the three preceding weeks, rose again to 25·6 per 1000 during the week ending Dec 19th. During the previous four weeks the death-rate averaged 25·6 per 1000, the rate during the same period being 17·7 both in London and in Edinburgh. The 186 deaths of persons belonging to Dublin registered during the week under notice were seven in excess of the number in the preceding week and included ten which were referred to the principal infectious diseases, against 11, 13 and 11 in the three preceding weeks; of these, four resulted from whooping-cough, two from scarlet fever, two from diphtheria, one from "fever," and one from diarrhœa, but not any from small pox or from measles. These ten deaths were equal to an annual rate of 1·4 per 1000, the death-rates for the week from the principal infectious diseases being 1·3 in London and 0·8 in Edinburgh. The fatal cases of whooping-cough, which had been three, five, and seven in the three preceding weeks, declined again to four. The 186 deaths of persons in Dublin during the week included 33 among children under one year of age and 63 among persons aged 60 years and upwards; the deaths of infants exactly corresponded with the number in the preceding week, while those of elderly persons showed a slight excess. One death from violence and seven inquest cases were registered; and 64, or more than a third, of the deaths occurred in *public institutions*. The causes of nine, or nearly 5 per cent., of the deaths registered in Dublin last week were not certified.

The death-rate in Dublin, which had been 27·5, 24·6, and 25·6 per 1000 in the three preceding weeks, declined again to 19·9 per 1000 during the week ending Dec. 26th. During the past four weeks the death-rate has averaged 24·4 per 1000, the rates during the same period being 16·8 in London and 17·1 in Edinburgh. The 145 deaths of persons belonging to Dublin, registered during the week under notice, showed a decline of 41 from the number in the preceding week, and included seven which were referred to the principal infectious diseases, against 13, 11, and 10 in the three preceding weeks; of these, three resulted from whooping cough, two from "fever," one from measles, and one from scarlet fever, but not any from small pox, diphtheria, or diarrhœa. These seven deaths were equal to an annual rate of 1·0 per 1000, the death-rates from the principal infectious diseases last week being 1·2 in London and 0·6 in Edinburgh. The deaths from whooping cough, which had been five, seven, and four in the three preceding weeks, further declined last week to three. The fatal cases of "fever," which had been four, one, and one in the three preceding weeks, rose last week to two. The 145 deaths in Dublin last week included 26 of children under one year of age and 38 of persons aged 60 years and upwards; the deaths of infants showed a slight decline from the number in the preceding week, while those of elderly persons decreased very considerably. Five inquest cases and two deaths from violence were registered, and 61, or more than 42 per cent., of the deaths occurred in public institutions.

The causes of six, or more than 4 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

Royal Naval Volunteer Reserve.

The undermentioned gentlemen have been appointed surgeons, viz. :—Marcus Sinclair Paterson and Reginald John Edward Hanson (dated Dec. 23rd, 1903).

2nd Life Guards.

Surgeon-Captain J. H. Power, from Royal Horse Guards, to be Surgeon-Major (dated Dec. 21st, 1903).

Royal Army Medical Corps.

Lieutenant-Colonel J. F. Williamson, C.M.G., to be Colonel to complete establishment (dated Dec. 20th, 1903).

Major H. Carr and Lieutenant M. C. Beatty are nominated for service in the Bombay Command, vice Lieutenant-Colonel Birrell and Captain MacDougall, whose tour has expired. Captain J. M. Cuthbert, attached to Agra Station Hospital, is ordered to assume the medical charge of the 17th Infantry (the Loyal Regiment). Lieutenant E. S. Worthington, attached to Agra Station Hospital, is ordered to Jhansi for duty.

Indian Medical Service.

The King has approved of the following promotions made by the Government of India :—Majors to be Lieutenant-Colonels : *Bengal Establishment :* James John Pratt and Robert Shore. *Madras Establishment :* William Burney Bannermann and Henry Thomson. *Bombay Establishment :* Carrapiet John Sarkies.

The King has also approved of the retirement from the service of the undermentioned officers : Lieutenant-Colonel Henry Augustus Fitzroy Nailer (dated Oct. 20th, 1903), Lieutenant-Colonel William Keith Hatch (dated Nov. 15th, 1903), and Lieutenant-Colonel Daniel Francis Barry (dated Dec. 16th, 1903).

Medicine and Sanitation in Morocco.

We learn from recent articles in the *Archives de Médecine Navale* that Dr. Raynaud, the chief sanitary official in Algeria, has embodied the observations that he made during several visits to Morocco in an octavo volume of 205 pages, with plates and a map, which has been published under the auspices of the Governor-General of Algeria. The work is divided into three parts which are devoted respectively to hygiene, medicine, and climatology. The first part comprises four chapters under the following headings : 1. General Hygiene, including ethnology, slavery, marriage, burial, clothing, cosmetics, food, dwellings, physical exercises, and monastic establishments. 2. Public Hygiene, including mosques, baths, markets, conservancy, slaughter houses, sewers, drinking water, cemeteries, prisons, and pilgrimages (Moslem to Mecca and Christian to Jerusalem). 3. Public Assistance, including hospitals and benevolent institutions (in Morocco this branch of civil polity is entirely in the hands of the foreign population). 4. Causes of Depopulation, including famine, epidemics, alcohol, tobacco, *kif* (Indian hemp), opium, and aphrodisiacs. The second part of Dr. Raynaud's book contains seven chapters on the following subjects : 1. Present State of Medicine in Morocco, including medical schools and curricula, text-books, diplomas, *tobibs*, *santons*, talismans and amulets, precious stones and their medicinal properties, and general notions regarding the science of medicine. 2 External Pathology, including surgical instruments, anæsthesia, hypnosis, minor surgery, ophthalmology, and obstetrics. 3 Internal Pathology. 4 Syphilis and Cutaneous Diseases. 5. Therapeutics, including organo-therapy and native drugs. 6. Veterinary Surgery. 7. Arab Medicine.

The Care of Soldiers' Teeth.

Mr. A. F. A. Howe, L.D.S.R.C.S., who read a paper before the October meeting of the Southern Counties Branch of the British Dental Association on the Dental Requirements of the Army, has had his observations reprinted in pamphlet form. It contains, perhaps, nothing that is new, but it is nevertheless a powerful plea for a more adequate recognition of the services of the dentist The old policy of doing nothing for a soldier's they ache and then extracting them is not an procedure. During the late war reserve men jected in consequence of loss of teeth and at the of war many men were temporarily disabled and had to be invalided home in consequence of some the teeth. Then again recruits are rejected who saved to the army if the services of a dentist were In the post office and prison service a candidate otherwise fit is accepted provisionally subject to his or her made serviceable, and the same rule ought to be made regard to recruits, though in this case the expenses would have to be borne by the army. The matter is one of great importance and should receive greater atten has hitherto been given to it.

The Royal Naval Hospital, Plymouth.

The Civil Lord of the Admiralty, who is on a visit tion at Devonport, on Dec. 17th, 1903, paid a visit Royal Naval Hospital where he was received by Inspector-General T. Bolster, Deputy Inspector-General T. D. C. Fleet-Surgeon W. Eames, and Fleet-Surgeon D. J. McNabb. Various departments were inspected, the Trafalgar block, in which temporary arrangements were made a short time ago for the accommodation of tioner sick-berth stewards and where, it is extensive alterations will be carried out to facilitate efficient training of probationers. The lunatic ward general wards were also visited. A scheme for the greater part of the hospital is now being carried

Deaths in the Services.

Surgeon-Colonel Sir George Thomson, K.C.B., Dec. 23rd, in his sixty-first year. He entered the Medical Service in 1865 and was attached to the 4th and 1st Punjab Cavalry. In 1878–79 he served in Afghan war (mentioned in despatches), was medical officer with the Chitral Relief Force on the of communications in 1895 (mentioned in C.B.) and in 1897–98 he acted as principal medical of the Tirah Expeditionary Force (mentioned in and K.C.B.).

Correspondence.

"Audi alteram partem."

THE FEES AND EXPENSES OF PUBLIC VACCINATORS IN RURAL DISTRICTS.

To the Editors of The Lancet.

Sirs,—The article by your correspondent on vaccination fees[1] is in no way too strong. I have worked out the figures of payment in my own district for the last four years and they are as follow :—

Year.	Number of vaccinations per year.	Number of visits paid to secure vaccination.	Mileage to secure vaccination.	Average fee per visit.	Average fee per mile.
1900 ...	70	200	800	2s. 0d.	6d.
1901 ...	54	150	600	2s. 4d.	7d.
1902 ...	54	180	720	1s. 9½d.	5½d.
1903 (three quarters)	45	150	600	2s. 2½d.	6½d.

The fees paid to me are the minimum fixed by Local Government Board—viz., 1s. each child who is vaccinated by the end of the fourth month and 5s. f successful vaccination. When we consider that a large proportion of my cases lie many miles from my home, that they must be visited at least twice and many of them more than that, and that the visits must be made by will appear how ridiculously inadequate the fees are. The Local Government Board is, I believe, aware of this hardship but it makes no attempt to protect the interests of public vaccinator unless the public vaccinator appeals it on the establishment of a "contract" with his board of guardians. I am, Sirs, yours faithfully,

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[1] The Lancet, Dec. 19th, 1903, p. 1759.

Rugby, Dec. 21st, 1903. J. HUTCHINSON.

To the Editors of THE LANCET.

SIRS,—The article on this subject from a correspondent in THE LANCET of Dec. 19th puts the matter very clearly, but there is one point not mentioned by him, or in your annotation in the same issue, which I think in fairness to public vaccinators ought to have received some comment. It is this. Persons (mostly young women) get vaccinated at a surgery and instead of coming for inspection at the appointed time, either do not come at all or else send, generally late in the evening, to say that they are ill and want to be seen at once. Of course, such messages have to be attended to only to find the healthy reaction usual eight to ten days after inoculation and the sole cause of complaint. In the rush of work those who had not returned for inspection could not always be visited and in some instances, owing to wrong addresses having been given, they could not be found. These vaccinations and visits are not paid for.

I once had to attend a patient right through a sharp attack of pneumonia contracted six days after I had vaccinated. When I sent my account it was promptly brought back by the father who told me more plainly than politely that he would not pay; that as I had put the disease in his child it was my duty to get it out; and that if he had thought the illness due to anything else other than the vaccination I should have been the last person he would have had for a medical attendant. As the vaccination had not taken I got nothing except a lot of trouble, expense, and two night calls, to say nothing of the abuse.

I am, Sirs, yours faithfully,

Dec. 21st, 1903. A SEMI-RURAL P. V.

To the Editors of THE LANCET.

SIRS,—Public vaccinators must one and all be grateful to your correspondent who in THE LANCET of Dec. 19th has given such a telling array of facts and figures against the menaced reduction in the present hardly enough earned fees for public vaccination. That the recent "big bills" which guardians have been called upon to pay have been entirely due to revaccinations necessitated by the small-pox scare is strikingly shown by the following figures from a certain union:—

Year.	Primary vaccinations.	Revaccinations.
1900	1018	0
1901	964	1
1902	1028	55
1903	1089	3794

At the present time there are practically no revaccinations and the average of primary vaccinations continues pretty much as it was during the previous four years, so that while the revaccinations have risen from zero to 3794 and have again sunk to zero the primary vaccinations have maintained their average. To base a claim for reduction of the fee for primary vaccination upon the altogether abnormal and temporary increase of the numbers of revaccinations would therefore be most unjust. The two classes of cases are upon an entirely different footing, as the following will show:—

Primary Vaccinations.	*Revaccinations.*
1. The parent must be notified of intention to visit.	1. No notification required
2 The patient must be vaccinated and inspected at home.	2. The patient may be vaccinated at surgery.
3. Patients must be vaccinated upon day of notification and between the hours of 9 A.M. and 4 P.M.	3 May be done any day and at any time.
4. Must be certified.	4. No certificate required
5 Cases occur singly as a rule and often far apart.	5 Often occur in groups and close together.

Comparisons are sometimes made between the fees of the [illegible] public vaccinator, but [illegible] entailed upon each is [illegible] of the differences:—

Private Practitioner.	*Public Vaccinator.*
1. Has no register to keep.	1. Must keep strict record of every case in register of 16 columns for each case.
2. Has no official clerical work	2. Has all sorts of "forms," "notices," "returns," and statistics to make up.
3. Has no unclaimable work. Can charge for every visit, for all medicines, &c.	3. Has a great deal of unremunerative work, such as fruitless visits, unsuccessful cases, postponement certificates, after attendance upon cases, supply of dressings, supply of medicines, &c.
4. Can vaccinate and inspect at surgery at any time.	4. Must vaccinate and inspect all primary vaccinations at their homes between 9 A.M. and 4 P.M.
5. Is not responsible for certification of case.	5 Is responsible for certification.
6 Is under no compulsion *re* asepsis and after treatment, or as regards number of marks.	6. Is under compulsion *re* all of these.
7. Is not under Government inspection.	7. Is under Government inspection.

It is also contended that the vaccination work of the public vaccinator is more efficiently done than that of the private practitioner, and it is a well-known fact that the great majority of "insusceptible" certificates are filled up by the latter.

Another point which ought to be borne in mind is the unpopularity of the work of the public vaccinator and the undoubted loss of practice that is involved in the conscientious performance of his public duty and the vast amount of time that this takes up—time, too, which he can ill spare from his ordinary visiting work. The amount of the latter, in consequence of his inability to attend to it and the unpopularity of his vaccination work, he soon finds diminishing. I therefore hold that any reduction in the present minimum scale of fees would be unjustifiable.

I am, Sirs, yours faithfully,

Dec. 21st, 1903. DELTA.

THE LUNG REFLEX OF ABRAMS.

To the Editors of THE LANCET.

SIRS,—In a former letter (Nov. 7th, p. 1322) I endeavoured to show that pulmonary suction or "tension" (which is much the same thing) depends essentially upon the action of the inspiratory muscles. Dr. Auld in his reply (Nov. 21st, p 1462) adversely criticises my conclusion. While admitting that the muscles of inspiration take part in the initial establishment of pulmonary tension soon after birth, he denies the action of these muscles in maintaining it throughout life; he denies, to use his own words, "that such action is thereafter maintained and perpetuated to a similar purpose" because "the conditions are ...... reversed and the inspiratory muscles instead of endeavouring to establish a pulmonary suction are in reality directed rather against it" I can put no other interpretation upon these words than that Dr. Auld at the time he wrote them meant to imply that the inspiratory muscles, once pulmonary suction is fairly established, do not contribute to the main*tenance* of what we may call the normal average suction and that he had overlooked the fact which I pointed out in my next letter (Nov. 28th, p 1531)—namely, that even in ordinary quiet breathing the effect of the action of the inspiratory muscles is to make the mean size of the chest, and therefore pulmonary suction, greater than they are when breathing ceases in expiration and consequently that these muscles take a life long, *moment by moment*, part in the maintenance of normal average suction. Now how does Dr Auld meet this argument in his last letter (Dec. 5th, p. 1614)? He is surprised that I should "deem it necessary to insist on such an elementary fact as that the inspiratory muscles augment pulmonary suction" The elementary fact I insisted on was the fact, overlooked by Dr. Auld, that so long as breathing lasts the mean of the chest is greater than when the inspiratory muscles cease to *act and that* therefore these muscles constitute a constant factor in the maintenance of normal suction.

Dr. Auld proceeds to repeat his statements to the effect (1) that after the initial establishment of pulmonary suction (or tension) the inspiratory muscles are "directed against this resistance," whereas (2) this is not the case during the initial stretching of the child's lungs. I submit, Sirs, that the first of these propositions is irrelevant and that the second is untrue. 1. Pulmonary tension cannot exist except by the action of forces "directed against" it. It is impossible for the lungs to be stretched by any other means. How, I would ask, can Dr. Auld use this elemental fact to controvert any of my contentions? 2. From the very moment the pulmonary tissue is first put on the stretch *in the smallest conceivable degree* the inspiratory muscles are "directed against" pulmonary tension, which can only come into being as a result of some force or forces thus directed.

I come now to the next point in Dr. Auld's letter. He writes in respect of passive recoil: "If Dr. Campbell *now admits* [my own italics] this factor to be alone competent to produce a certain degree of thoracic expansion," &c., thus suggesting that I have abandoned a position. In point of fact, I was the first to allude to this factor in connexion with the present discussion and have in each of the previous letters in the most precise language of which I am capable maintained its competence to cause thoracic expansion.

In my last letter I argued that Dr. Abrams's contention that the pulmonary margins may by reflex dilatation be made to extend further downwards than by voluntary inspiration must be erroneous, seeing that in the latter way they can be brought to the uttermost confines of the pleuræ, further than which they cannot go—so long, of course, as the pleuræ remain intact. Dr. Auld does not admit the cogency of this argument; he believes it "can be disposed of without much difficulty." He quotes Cunningham to the effect that the pleura does not in ordinary circumstances "dip down to the bottom of the narrow interval between the thoracic wall and the diaphragm," and argues that "after the pleural cavity is fully filled by the lung there remains an interval into which the lung can be stretched." Here Dr. Auld brings out a fact—certainly of great interest—i.e., that the lower confines of the pleuræ are not stationary; but how does this affect the validity of my statement that the lungs cannot pass beyond the confines of the pleura? Whether those confines are fixed or moveable is altogether beside the question. Were my body imprisoned in a vast pleural sac would it be possible, so long as the sac remained intact, for me to pass beyond its uttermost confines, be the sac stretched never so much? But observe into what further impossible position Dr. Auld lands himself. He is all the while implying that while by a deep voluntary inspiration the lungs can only be made to travel as far as (what we may call) the usual confines of the pleuræ, these organs, when relaxed by reflex dilatation, can be made to stretch the pleuræ so that the latter shall extend downwards beyond their wonted limits and, moreover, that all this can be effected by a passive outward recoil of the chest walls! That such can be the case is to me as inconceivable as that the whole is greater than its parts.

Regarding Dr. Albert Abrams's letter (Dec. 19th, p. 1756), I would repeat that I have never denied the existence of a pulmonary reflex of dilatation. I have simply sought to show that much at least of the evidence adduced by Dr. Auld in proof of its existence is open to criticism. Nor do I regard as conclusive the evidence which Dr. Abrams brings forward in favour of the existence of a "counter reflex of lung contraction." He tells us that if the chest be concussed in a certain way there is induced for a few seconds a (local) area of dulness together with a darkening (as shown by the Roentgen rays) in the corresponding region. Dr. Abrams concludes that these phenomena are due to a localised lung contraction. For myself I cannot explain them, but I would raise the question whether they may not be quite as satisfactorily explained on the assumption of a changed condition in the chest wall as on that of changes in the underlying lung. I am not, it is true, able to say how the chest wall can be altered by concussion so as to induce the phenomena in question, but there seem to me to be grave difficulties in the way of referring them to a pulmonary causation. Dr. Abrams postulates a momentary contraction of a limited pulmonary area sufficiently pronounced to cause a local darkening in the fluoroscopic picture and a local area of percussion dulness. Such a contraction could only be induced, so far as I am able to judge, by a primary contraction of the alveoli themselves leading to their complete, or all but complete, obliteration, and the question arises whether such an event is possible. It is true (if I remember aright) that unstriped muscle fibres are found in the alveolar walls, but if the vesicles are susceptible of such extreme contraction it is a fact new to physiology. I need scarcely point out that of the pulmonary tubes the only ones capable of completely shutting off all access of air to the alveoli are the bronchioles. Now even if we suppose that in the area of fluoroscopic darkening the bronchioles are completely obliterated, this does not by any means imply collapse of the air-vesicles belonging to them. Quite the opposite effect, indeed, would be induced, for the contracting bronchioles would drive some of their contained air onwards into the vesicles; moreover, by so much as the tubes diminished in their volume by just so much would the volume of the vesicles tend to increase, so that the related vesicles would actually increase in volume and in the tension of their walls; pointing in the same direction is the further fact that in spasmodic asthma, an affection avowedly due to narrowing of the tubes, the lungs expand, while the chest becomes *hyper-* rather than *hypo* resonant.

May I, in conclusion, Sirs, introduce an entirely new consideration regarding the question of a lung reflex? One of the contentions of Dr. Abrams and his disciples is that by stimulating a limited part of the chest wall the subjacent lung can reflexly be made to expand, so that when, e g., the præcordium is stimulated the pulmonary margins near the heart will move more extensively than those more distantly situated. Now I would point out in this connexion that inasmuch as pulmonary tension tends to be equal in all parts of the lung, when a limited area of pulmonary tissue is relaxed the remaining more tightly stretched portions will drag upon the relaxed portion until it is stretched in an equal degree with them, a circumstance which must tend to prevent the pulmonary margins moving more in the region of the area reflexly affected than in other parts.

I am, Sirs, yours faithfully,

Wimpole-street, Dec. 27th, 1903. HARRY CAMPBELL.

THE BORDERLANDS OF INFECTIOUS DISEASES AND THEIR MANAGEMENT.

To the Editors of THE LANCET.

SIRS,—I certainly resented, and do still resent, the language used by Dr. C. Dukes in his letter dated Nov. 14th. His words imputed apathy and callousness to all those who like myself have to do with the management of fever hospitals and implied that little, if any, attention had been paid to what I have elsewhere termed "isolation within isolation"—the provision in fever hospitals of quarantine and observation rooms. Dr. Dukes in that letter made no distinction between one fever hospital and another; the responsible managers of all were included in one sweeping condemnation. Therefore I resented, and I think I may say justly resented, the attack he made; nor, in my opinion, has he in his last letter added anything to justify his action.

With respect to the hypothetical instance put to me by Dr. Dukes, curiously enough he has succeeded in imagining a very out-of-the-way case. In the first place, it is very unusual for equivocal cases of scarlet fever resembling diphtheria to be sent to hospital as scarlet fever, so that such cases do not get sent to the diphtheria wards. Secondly, supposing that such a case did resemble diphtheria and was sent to the diphtheria wards, strange as it may seem, the chances of the patient getting diphtheria are very remote. The most likely occurrence would be, not that the particular equivocal case would contract any second infection, but that some of the other patients in the ward would catch scarlet fever. I have no desire, however, to shirk the question and I will take the case of a child who, admitted to hospital with one disease, contracts another, from which he dies, and I suppose that this is the sort of case that Dr. Dukes really means. As to whether the use of strong language is necessitated or justified depends entirely upon the circumstances. The occurrence may or may not be the fault of the hospital authorities. What I resent is that Dr. Dukes assumes that it is always and everywhere their fault, whereas I assert that the reverse is the case.

I must thank Dr. Dukes for the candour with which he has admitted that his experience of infectious diseases is limited, for he has informed us that it has been confined principally to observations on cases that have occurred during a period of several years in a school of 700 males between the ages of nine and 19 years, these males, moreover, being members of the well-to-do classes of society. I need hardly point out that the bulk of cases of infectious disease (except typhoid fever and nowadays small-pox) occur in children under ten years of age and of the poorer classes, and that it is in young children rather than adolescents that they appear in their protean and severe forms. So I can quite understand how it is that Dr. Dukes has never come across any of the ases described by Dr. H. E. J. Biss under the term "border-and." The description given by Dr. Biss of these cases is ccurate enough; they are quite familiar to those of us who ave had the opportunity of studying infectious diseases in arge cities. I am, Sirs, yours faithfully,

Homerton, Dec. 27th, 1903. E. W. GOODALL.

To the Editors of THE LANCET.

SIRS,—Dr. Clement Dukes, in his letter dated Dec. 18th, writes: "I regret that I am not prepared to follow the lead of Dr Biss and support Dr. C. K. Millard in his proposal for an inquiry into fever hospitals, inasmuch as his aim is to end hese valuable institutions, whereas mine is to mend them."

Allow me to say that Dr. Dukes scarcely represents my attitude correctly. It may be true that some have condemned solation hospitals as being radically wrong in principle and have advocated their entire abolition, but I have never gone so far as this. I have carefully avoided condemning isolation hospitals *in toto* and have purposely restricted myself to asking for an inquiry. Moreover, I have confined myself to the case of a single disease—viz, scarlet fever.

Of course, in order to make out a case for an inquiry I have had to call attention to certain facts which undoubtedly appear to tell strongly against hospital isolation. Thus I have pointed out that it is very difficult, if not impossible, to find any satisfactory evidence that fever hospitals, as worked in the past, have done any real good. On the other hand, I have adduced some evidence which suggests that they may to some extent have actually done harm. I have called attention to the baneful influence of "return cases" and to the dangers of cross infection, &c. I have also tried to show that it is much more practicable to treat scarlet fever at home than is usually supposed. But all this has been urged avowedly as ground for an inquiry. If the indictment makes the case for hospital isolation look rather bad that is scarcely my fault. It only shows how desirable it is that an inquiry should be held. It is surely as unjust to accuse those who ask for an inquiry into the working of isolation hospitals of wishing to put an end to them as it would be to accuse a bench of magistrates of wishing to get a man hung whom they had committed on a capital charge. As Dr. Biss has well said, if isolation hospitals will bear investigation they have nothing to fear from an inquiry and they will emerge from the ordeal more firmly established than ever. If, on the other hand, they will not bear investigation, then the sooner a full and searching inquiry is held by some competent body the better it will be. This is so obvious that it is really extraordinary that such an inquiry was not held at once when the utility of isolation hospitals was first challenged some years ago.

As a matter of fact, Dr. Dukes, although he says he is unable to support the proposal for an inquiry, is almost as sweeping in his condemnation of isolation hospitals as anyone I know. In his first letter[1] he wrote: "The sooner, then, isolation hospitals, which apparently are not isolation hospitals but disease-developers, are mended or ended, the more creditable will it be for us as a profession and the safer will they be for the public."

It is true that he proceeds to give what he believes to be the remedy, but, even though he may be right in this, it is scarcely likely that the mere opinion of one man will carry very much weight in a great question such as this is, and the evils of which he complains will almost certainly continue. Dr. Dukes rightly says that "the question of the influence of fever hospitals is a burning one at the present time." In other words, very great difference of opinion exists amongst experts as to what the influence of fever hospitals really is. Certainly a very great change in opinion has taken place within the past few years. When the movement against isolation hospitals was first started by Mr. E. D Marriott of Nottingham some five years ago it was treated with indifference and contempt, if not with ridicule The value of isolation hospitals had been so completely taken for granted that few had taken the trouble to inquire into it. Now, however, it is very different. Several medical officers of health of high standing and others well qualified to form an opinion on the subject have expressed themselves as being very doubtful as to the wisdom of the policy which has hitherto been pursued as regards hospital isolation. Others are looking into the subject *de novo*, whilst very few, I think, would now be prepared to speak dogmatically about the "enormous and undoubted value" of fever hospitals as was formerly the case.

But, unfortunately, whilst all this uncertainty and doubt is steadily increasing, fresh hospitals continue to be built on the old lines, at great expense, out of loans which will have [illegible] of the future. Whether they [illegible] y of debt is another matter. It is for this reason that some of us regard this question as one of urgency and think it desirable that the whole subject of hospital isolation should be fully and thoroughly investigated, by special commission or otherwise, with as little delay as possible.

I am, Sirs, yours faithfully,

Town-hall, Leicester, Dec. 28th, 1903. C. KILLICK MILLARD.

To the Editors of THE LANCET.

SIRS,—The article by Dr. H. E. J Biss on the Borderlands of Diphtheria and Scarlet Fever, together with the subsequent correspondence aroused by it in your columns, illustrate one of the difficulties constantly experienced in the administration of isolation hospitals I have for years, doubtless in company with other medical officers of health, pinned my faith on the isolation hospital as one of the chief factors for the prevention of scarlet fever. I accepted the dicta of the leading public health authorities, backed as they were by the Local Government Board, on the value of the isolation hospital without hesitation and without criticism; the theory seemed to me sound and if I did not get the results hoped for I concluded the fault must lie in some unrecognised conditions which would in due course be explained and remedied.

In recent years, however, articles by Mr. E Dean Marriott and Dr. C. Killick Millard have caused me to investigate the subject more carefully for myself. Mr. Marriott has expressed the opinion that isolation hospitals, so far from limiting the disease, actually tend to increase its prevalence Dr Millard, basing his opinions on statistics collected from all the large towns of the kingdom, showed that towns isolating only a few of their scarlet fever cases in hospital suffered no more, and often not so much, from that disease than those towns which went to the expense of isolating 70, 80, or 90 per cent of the cases. Now, neither Mr. Marriott's nor Dr Millard's arguments have been refuted. Dr. Millard's paper was read before the Incorporated Society of Medical Officers of Health, a body of men who were above all others qualified by their experience to correct and detect any fallacies in his arguments. The only serious attempt to controvert his facts was made by Dr. J. R Kaye who produced a laboriously constructed paper in which, however, he was only able to detect a trifling error in one set of Dr. Millard's figures

As medical officer of health of one of the large towns I have had the opportunity for some years of studying the effect of isolation hospitals in controlling scarlet fever, and I confess that the result of my observation has been such that I have felt compelled to advise my authority against further expenditure in this direction. Further, while there may not at present be other medical officers of health who have gone so far as this, yet I feel convinced that there are numbers who are much exercised in their own minds on this question. The fact that isolation hospitals have failed to accomplish what was sanguinely anticipated at their inception will not, I think, be denied even by their most enthusiastic supporters. What, then, is the reason for this failure? Is it, as maintained by some, due to the faults of administration, or are the theories, upon which the success of the system depends, at variance with the actual facts as they occur in practice? For in connexion with this latter alternative it must not be lost sight of that although the isolation hospital for the control of scarlet fever has been in vogue for 20 years or more its general employment throughout the country was not based on the result of experience but upon theory. In support of this theory millions of money have been expended—in fact, neither money, time, nor trouble has been spared to render the isolation hospital a success.

Now, Sirs, it seems to me very desirable, in the interest not only of the medical profession but also of the public, that an inquiry into the subject should be instituted, and I believe you would be rendering a marked service if you would open the columns of THE LANCET with a view to ascertaining the opinions of medical men on this matter.

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[1] THE LANCET, Nov. 28th, 1903, p. 1529.

After all these years there must be a mass of evidence obtainable, the careful consideration of which by an authoritative body of men should result in a report which could not fail to be of immense value. Possibly such a report would find that the isolation hospital was not so beneficial as is generally conceded; on the other hand, it might indicate improved methods of administration whereby the usefulness of such institutions could be greatly enhanced. In any case such an inquiry can do no harm and, in view of the diversity of opinion on the effect of the isolation hospital in controlling scarlet fever, appears to me eminently desirable.

I am, Sirs, yours faithfully,
A. MEARNS FRASER, M D.,
Medical Officer of Health, Portsmouth.

Portsmouth, Dec. 22nd, 1903.

WATER-CRESS AND TYPHOID FEVER.

To the Editors of THE LANCET.

SIRS,—I have read with interest the admirable report of Dr. J. King Warry on an outbreak of typhoid fever in Hackney in June last and also your editorial comment in THE LANCET of Dec. 12th, p 1671, and lastly the criticism of Dr William Bruce in THE LANCET of Dec. 26th, p. 1834. May I say at once that in my opinion Dr. Warry's conclusions appear to be amply justified by the facts he has collated and that Dr. Bruce's criticism appears to me to be an apt illustration of a logical fallacy.

Dr. Bruce says: "If eating water-cress was the real reason of the outbreak surely the first evidence would require to be that *everyone* attacked partook of the article in question." (The italics are mine.) How can Dr. Bruce advance this argument when he believes (as, indeed, all persons with any considerable experience of typhoid fever *know*) that the disease is frequently "spread by infection from person to person." Surely the earlier cases in Hackney may have been infected by the polluted water-cress while some of the later cases may have been cases of personal infection and yet some of them indirectly attributable to the infected water-cress. Considering the various channels by which the typhoid bacillus may reach the alimentary canal it is preposterous to advance the view that everyone attacked should have partaken of the suspected article. Some of the cases were probably quite independent of the water-cress. I do not suppose for a moment that Dr. Warry suggests that the whole of the cases were traceable to the polluted water-cress but merely that that infected article was the origin of the excess of typhoid fever in June, 1903, as compared with the average June incidence in previous years.

Dr. Bruce does not seem able to grasp how one sample of water-cress may be infected and another innocuous, even though both may be obtained from the same polluted source In the first place, typhoid bacilli are particulate matter in suspension (and *not in solution*) in the contaminated water; they are not, therefore, present in every drop or cubic centimetre, or even litre, of the contaminated water; hence *only portions* of the water-cress growing in the sewage-polluted stream become contaminated with typhoid bacilli. In the second place, even an infected portion of water cress may be rendered innocuous by being very thoroughly washed under a running tap. Some persons are more careful and cleanly than others and wash their water-cress more thoroughly. Such persons may thus get rid of the particulate pathogenic bacteria by the mechanical force of a stream of water. Dr. Bruce again says: "The specific bacillus has never once been demonstrated as present in any single sample of suspected water." Though I would be extremely cautious as to the use of the word "never" it may be granted that it would be quite exceptional to find the typhoid bacillus in a suspected water. Has Dr. Bruce never reasoned as to why this is so?

I have already shown above that not every litre of a contaminated water would necessarily contain a few particulate bacilli, while most bacterioscopical examinations of water are carried out with only fractions of a cubic centimetre. Apart from this consideration it is a question to be decided whether the specific pollution of the water is a continuous pollution or was of a past and temporary nature. More often it is the latter and by the time that cases of typhoid fever have arisen in sufficient numbers to cause suspicion to be attached to a particular water-supply several weeks have probably elapsed since the date of specific pollution. It is therefore not a matter for surprise if the specific bacillus is not to be found, but if the bacterial examinations afford ground for suspecting the presence of sewage pollution (even if the specific bacillus is not isolated from the small quantities which only can be plated out) the likelihood of the suspected water being the probable vehicle of the poison is greatly strengthened.

Again, as regards shell-fi [illegible] no means every shell-fish [illegible] particulate specific bacter [illegible] imbibe a particular porti [illegible] The typhoid bacillus *has* [illegible] shell-fish but the majorit [illegible] the same layings reveal [illegible] sewage bacteria All, [illegible] Just so with water-cres [illegible] actually infected with t [illegible] sidered as potentially [illegible] from previous cases is under-estimat [illegible] assert and on this point I am in agreement with D[illegible]

In my annual report on the health of the borough of Southend-on Sea and again in a paper which I read before the Royal Institute of Public Health at Liverpool in July 1903, I have reiterated the following precautions which I think if followed would very greatly reduce what I term the "residual" typhoid fever in this country: 1. By avoiding *the touching* as well as the *eating of all forms of* shell-fish except such as are beyond any suspicion of pollution. 2. By avoiding the eating of any uncooked vegetables (such as water-cress) which have been subjected to manurial or sewage pollution. 3 By the early removal to hospital of any case of typhoid fever which may occur (a large proportion of cases are secondary consequent upon the nursing of patients by untrained relatives). 4. By careful and constant attention to effective sewage schemes and to frequent and effective disposal of trade and house refuse, &c. 5 By all forms of cleanliness, which must apply particularly to our water-, milk, and other food-supplies and more particularly to shell-fish and water-cress than hitherto. To these I may add another which I mentioned in my annual report for 1901. 6. The routine administration to typhoid fever patients of urotropin before they pass from professional observation. Yet a seventh preventive measure is—Warning convalescent patients of the possibility of their excreta being infective for a considerable time after recovery and instructing them in simple methods of disinfection and other precautions to be observed.

I am, Sirs, yours faithfully,
J. T. C. NASH, M.D. Edin., D.P.H. Camb.,
Medical Officer of Health, Borough of Southend-on-Sea.

Dec. 29th, 1903.

THE TREATMENT OF CERTAIN FORMS OF OBSTINATE CONSTIPATION BY ENTERO-COLOSTOMY.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 12th, [illegible] that you mention a new method of d[illegible] cases of intractable constipation whic[illegible] successfully carried out by Mr. W. [illegible] meeting of the Medical Society of Lon[illegible] I read a paper on a precisely simil[illegible] successfully performed the same op[illegible] I saw the patient a year later and [illegible] operation (it was the fourth occas[illegible] had been performed upon her) ha[illegible] of her symptoms. I am, Sirs, [illegible]

Wimpole street, W., Dec. 24th, 1903. [illegible]

THE SIMULTANEOUS OCCURRENCE OF TWO ACUTELY DEVELOPED CUTANEOUS LESIONS.

To the Editors of THE LANCET.

SIRS,—The interesting case of concurrent psoriasis [illegible] erythema nodosum described by Dr. H. W. Syers in THE LANCET of Dec. 19th, p. 1718, furnishes yet another illustration of the principle of co-existence in diseases of the skin. The possibility of the development of two, or even more, acute cutaneous disorders side by side is one which is very apt to be *overlooked* clinically, but it is a fact that this association occurs more frequently than is generally believed. I have been accustomed to divide the cases into those of: (1) natural—i.e., causally related; and (2) accidental association. As an instance of the former may be mentioned the acute development of alopecia with a seborrhœic dermatitis upon the trunk, while as an illustration of the latter I may refer to a case which I have described in detail elsewhere[1] of a man, aged 40 years, who came to the skin department of the Tottenham Hospital suffering from an acute attack of psoriasis. Within a short time he developed an eruption of secondary syphilis which was perfectly distinct and separate from his psoriasis, his skin presenting a most unusual spectacle. Curiously enough, it is psoriasis, the "disease of the healthy," which most often co-exists with other independent cutaneous affections and it is generally the one first in the field, the second disease appearing shortly after its efflorescence. Syphilis, purpura, and leprosy have all been observed to co-exist with psoriasis, but, with the exception of the first, they are rare. In Dr. Syers's case the erythema nodosum appears to have developed quite simultaneously with the psoriasis. Although there was no history of rheumatism in the case, yet it will be admitted that the concurrence of two such cutaneous disorders, both of which are so frequently associated, directly or indirectly, with that disease would form a strong reason for treating such a case with salicin or the salicylates. As was originally pointed out by Dr. Radcliffe Crocker, these remedies often exert a favourable influence upon the course of psoriasis alone. Regarded from the diathetic standpoint Dr. Syers's case would fall into the category of my first group—namely, those concurrently developed acute cutaneous disorders which are "naturally" associated through a more or less causal relationship.

I am, Sirs, yours faithfully,
G. NORMAN MEACHEN, M.D., M.R.C.P. Lond.
New Cavendish-street, W., Dec. 18th, 1903.

MALIGNANT GROWTHS AND NORMAL REPRODUCTIVE TISSUES.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 26th, p. 1830, you give a very full account of the interesting paper recently communicated to the Royal Society by Professor J. B. Farmer, Mr. J. E. S. Moore, and Mr. C. E. Walker in which they dwell on the resemblances between certain of the cells of malignant growths in man and those of normal reproductive tissues, and from which resemblances *they draw the conclusion* that the malignancy of these tumours is intimately connected with the reduction of the normal somatic cells into reproductive or germinal tissue. To me this communication is of special interest as I have already put forward a similar view in my paper on Inoperable Mammary Carcinoma read before the Edinburgh Medico-Chirurgical Society in May, 1896, and published *in extenso* in THE LANCET of July 11th and 18th of that year. I there say, when dealing with the etiology of cancer, that "in whatever way brought about there seems to me a reasonable ground for thinking that the active processes seen in a cancerous tumour are best explained by regarding the epithelium of the part as having taken on the properties and powers of the germinal epithelium." I further expressed the belief that the special cells seen in sections or scrapings of cancer and known as "cancer bodies" may eventually be shown to be special germinal cells corresponding to the ovum cells elaborated by the ovary in the female and by the testis in the male

While Professor Farmer and his coadjutors seem to have come to the same conclusion as the result of their microscopical inquiry I did so clinically and chiefly in consequence of the results obtained by oöphorectomy in inoperable mammary cancer. Under that procedure cancerous activity has been arrested and proved cancerous tissue has disappeared with, in addition, diminution of pain and improvement in the general health, a state of matters that has never before been observed in this disease under any other medication and that, too, in advanced cases of the malady. In writing thus I am not giving only my own individual experience. Other surgeons have observed the same results. Unfortunately, I think, the *profession has regarded* this method of treatment from a therapeutic aspect only and judged it solely by the standard of its value as a *curative* agent. This is, of course, quite right, but whatever be the final decision on this point *I would fain hope that the effects following oöphorectomy* will not be lost sight of, especially as we are dealing with a disease the true nature of which has, so far, baffled inquiry. To cause cancerous tissue and cancerous glands to disappear is a very remarkable fact and one that should have more importance attached to it than it has yet had, for I look upon it as furnishing a clue to the real nature of cancer and as strongly confirmatory of the opinion I expressed in May, 1896, "that the disease consists in the epithelium of the part affected taking on the active proliferation which is the marked characteristic of the germinal epithelium." The observations of Professor Farmer and his coadjutors seem to support this view of mine, which, however, was arrived at by a different line of inquiry.

I am not sure that Professor Farmer and Mr. Moore and Mr Walker are altogether correct in the statement they make as to the exact mode of development of the special cells to which they give the term "gametogenic," but a letter such as this is not the place to go into such a question. The mere establishment of the presence of such cells in malignant tissue is a point of the greatest importance and strongly corroborative of what I may call the *germinal-cell theory* of cancer.

I am, Sirs, yours faithfully,
Glasgow, Dec. 27th, 1903. GEORGE THOS. BEATSON.

THE LATE FLEET-SURGEON KIRKER, R.N.

To the Editors of THE LANCET.

SIRS,—In the sympathetic notices of the late Fleet-Surgeon Gilbert Kirker no mention seems to have been made of that officer's work on the effects of the modern rifle bullet of small bore. Dr Kirker's observations were communicated by the late Professor T. Longmore to the Section of Military Medicine and Surgery of the International Medical Congress of 1881 and have since lain buried in the ponderous volumes of the Transactions of that meeting[1] A careful study of his paper, entitled "A Comparison of the Cylindro conoidal and Round Bullet Wounds," would have rendered many of us less free in the expression of surprise at the results of the modern bullet wound as observed in the late war. The late Dr. Kirker, I know, felt that his work had scarcely obtained the recognition it deserved and it seems only right that, although late, attention should be drawn to his pioneer work in this direction

I am, Sirs, yours faithfully,
G. H. MAKINS.
Dec 30th, 1903

THE FUNCTIONS OF THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—In reference to your frequent allusions to rampant quackery, is it not possible for the General Medical Council to take some practical steps for the protection of the medical profession and the public? No doubt the Council's work is good as far as it goes but I express the feeling of many other medical men when I say that we think the professional needs of our class do not receive adequate attention. You say in your section of the Annus Medicus dealing with the Council that the preliminary education of the student and the consideration of penal cases have absorbed all the time that the Council can afford to give to its deliberations. In that case Parliament should grant a subsidy to the Council, for it is clear that other subjects remain for discussion and no less clear that there are abuses to be reformed.

I am, Sirs, yours faithfully,
M D CANTAB.
Dec. 28th, 1903.

*** Our correspondent will find his question dealt with in a leading article on p. 37.—ED. L.

THE UNIVERSITY OF LONDON AND MEDICAL EDUCATION.

To the Editors of THE LANCET.

SIRS,—Your leading article, which appeared under this title on Dec. 19th, 1903, sufficiently indicates the great educational work which lies before the reconstituted University of London as well as the extreme importance of that work to the medical profession.

While congratulating the University of London upon the substantial progress it is making towards improving the conditions under which its undergraduates will in the future study for degrees in medicine, medical men, whether members of the corporations or not, must all regret that there are no indications that the Royal College of Physicians of London and the Royal College of Surgeons of England are sufficiently alive to the necessity of keeping pace with educational progress. The attempt now about to be made to improve the courses of study and examinations in preliminary science for their conjoint diploma has been so long delayed that the Colleges will not get due credit for it. The antipathy of the Colleges to accede to any outside influence or to modify any of their existing regulations causes almost despair as to any ultimate agreement between these bodies and the University with the object of lessening the number of examinations to which the unfortunate London student of medicine has now to submit. It is much to be hoped, however, that a further attempt in this direction may still be made. It is true that the Colleges have reported adversely to the proposal to endeavour to secure concerted action with the University in the conduct of examinations. This decision was arrived at, however, before the Faculty of Medicine had resolved to advise the Senate to endeavour to enter into negotiations with the Colleges for this specific purpose. The Colleges I should hope may be relied on to consider favourably a definite proposal emanating from the Senate. Every forward step taken by the University makes it more evident that if the Colleges hold aloof from the University they must surely and steadily lose ground as a controlling influence upon medical education in London. The Colleges have in the past done their best to compensate the London student of medicine for the absence of a teaching university in this city. It should not be beyond the power of senators and councillors to arrange for these ancient corporations and the modern university to work shoulder to shoulder to their mutual honour and to the advancement of London as a centre of medical education and research.

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[1] Medical Press and Circular, vol. i., 1902, p. 773.

[1] Transactions of the International Medical Congress, 1881, vol. ii., p. 578.

The removal to a central institution of facilities for instruction in preliminary or ancillary sciences will not deprive our hospital schools of their prestige. It will rather give them opportunities for using to the advantage of their students the unrivalled clinical material provided by their crowded wards. The medical schools proper of the metropolis will be the gainers if the scheme of concentration advanced by Lord Rosebery and his colleagues receives support. The fact that King's College Hospital proposes to move to a site a long way distant from the College where its prospective students will study anatomy and physiology, is an object lesson which should prove to the governors of other hospitals that dissecting rooms and physiological laboratories are not necessary adjuncts to the wards of a hospital in which medical education is conducted.

I am, Sirs, yours faithfully,
Dec. 30th, 1903. PHYSICIAN AND TEACHER.

THE ASSURANCE OF UNDER-AVERAGE LIVES.

To the Editors of THE LANCET.

SIRS,—I will try to meet Dr. R. L. Guthrie's suggestion in his letter in THE LANCET of Dec. 19th, 1903, p. 1758, and throw some little light on the question of extra premiums as affected by the different scales on which the normal whole life assurance premiums may be paid. Extra risks have already been roughly classified under three types: (1) those of a *decreasing* or *immediate* nature, such as, e.g., arise from a consumptive family history or a past illness the complete recovery from which may be doubtful; (2) those which operate more or less *uniformly* throughout life, e g., the risk of death by accident in the course of a hazardous occupation; and (3) the category of *increasing* or *deferred* risks, under which I suppose would be classed those of a gouty or cancerous nature mentioned by Dr Guthrie.

In the absence of statistics showing the actual incidence and distribution of the several types of extra risk one has to fall back on hypotheses more or less arbitrary. I have taken the Institute of Actuaries (Hm) Table and increased the annual death rates as follows: firstly, by an addition of 1 per cent. per annum for the first ten years of assurance with normal rates thereafter to correspond roughly with type (1); secondly, by a uniform addition of ½ per cent. throughout life, giving a whole-of-life extra practically equa in amount to that in the first case; and thirdly, by an addition of 1 per cent. at the ages between 40 and 50 years with normal rates between 30 and 40 and after 50 years, by way of a rough approximation to type (3). The resulting extras for three different scales of premiums are as follows:—

AGE AT DATE OF ASSURANCE 30 YEARS.

	Whole life. £ s d	20 payments. £ s. d.	10 payments. £ s. d.
Type (1), Decreasing Extra Risk.			
Sub normal	2 5 2	3 5 9	5 7 6
Normal	1 17 8	2 15 3	4 12 6
Extra	0 7 6	0 10 6	0 15 0
Type (2), Uniform Extra Risk.			
Sub-normal	2 5 2	3 4 3	5 5 0
Normal	1 17 8	2 15 3	4 12 6
Extra	0 7 6	0 9 0	0 12 6
Type (3), Increasing Extra Risk.			
Sub-normal	2 1 8	3 0 0	4 18 6
Normal	1 17 8	2 15 3	4 12 6
Extra	0 4 0	0 4 9	0 6 0

These results bear out my remarks that in general th whole of life extra requires to be increased for a limite payment scale—that is if my arbitrary modifications from which the results are derived are admitted to correspon roughly with the recognised types of extra risk. Type (3 requires the smallest surcharge for an extra risk of simila aggregate amount to the others, and the deferment of th risk has a decided tendency to reduce the 20 payments extra to the level of the whole life extra. This does not hol good, however, in the case of a less number of payments in other words, such a rule as "the higher the rate o premium the lower the extra" would not seem to be theoretically sound. The principle is rather the reverse unde each type.

I must point out, however, that these results are not new They were brought out in a valuable paper read in 1884 b Mr. F. W. White, F I.A., and Mr. J. H. Whittall, F.I.A. before the Institute of Actuaries.[1] My own hypothetica tables are constructed on the same lines as those followed much more elaborately, by those actuaries. They dra attention, I think for the first time, to the increased extra required on the higher scales and add: "We attach considerable importance to this fact, as the enhanced amoun of the premium payable for a limited number of years no infrequently has the effect we believe of rendering the tru bearing of the extra risk very obscure and, in some minds of even hiding it altogether."

Of course, such discussions must be more or less academi until authoritative statistics of extra risk are compiled Surely the time is not far distant when, as suggested by Mr N. B. Gunn, the president of the Faculty of Actuaries, in hi recent inaugural address, the life offices might extract the results of their experience of under-average lives, with a view to their being classified according to some well-considered system devised by actuarial in conjunction with medical skill. The difficulties in the way are undoubtedly great, but I hardly think they would prove insuperable And any attempt to lighten the dark in which we stand at present in this matter of extra risks is to be desiderated.

I am, Sirs, yours faithfully,
Dec. 22nd, 1903. ACTUARY.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The System of Rapid Filtration of Water.—The Plague Mortality.—Original Research on the Origin of Plague. —The New Plague Policy in the Punjab.—The Insanitary Condition of Madras.

THE American method for the rapid filtration of water known as the Jewell system has been recently installed at the Kolar goldfields. It requires a subsidence basin, filter, mechanical washer, coagulant feed pump, and clear water basin. The water-supply for these fields is from the surface and the water is collected in a tank. Where there is available room it is difficult to see what advantage this system possesses over the slower ordinary process of sand filtration. It has not, I believe, been previously tried on any scale in

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[1] Journal of the Institute of Actuaries, vol. xxiv.

India. The preliminary addition of alum to the water in the subsidence basin to the extent of at least two grains per gallon is generally considered a disadvantage. In Calcutta or Bombay, for example, something like two and a half tons of alum would have to be used daily.

The plague mortality for the week ending Nov. 28th amounted to 17,617—a slight decrease as compared with the previous seven days. For the corresponding week last year there were only 8915 deaths. The details are: Bombay city, 47[illegible]; Bombay Presidency, 9791; Karachi, 8; Madras Presidency, 264; Calcutta, 22; Bengal, 685; United Provinces, 1819; Punjab, 1154; Central Provinces, 2051; Mysore, 673; Hyderabad, 792; and Central India, 975. The disease is rapidly developing again in Bengal, more particularly in the Patna district, but there are at present no signs of a recrudescence either in Calcutta or Bombay city.

After the existence of plague in the Bombay Presidency for seven years the Government has deputed two officers to devote themselves to the discovery of the relation of plague outside the body to the organism associated with the disease in its clinical aspect. Dr. J. A. Turner of Bombay has joined the ranks of those few who have recognised the inefficacy of the disinfecting measures hitherto adopted but he has also clearly pointed out that neither all the commissions nor other investigators have thrown light on the origin of the disease or on its control. The Government still keep silent [illegible] unjab also recognises the [illegible] It is for the future to be but sparingly employed and then only when the people ask for it. The people are to use it themselves in their own [illegible] ves are to be made available. [illegible] the movements of the people [illegible] e no road or rail inspections and as it is thought that the religious feelings of the people are opposed to the destruction of rats no expense will be incurred on this head. We may safely say that for this large province plague measures are to be abandoned and the disease will be permitted to follow its course absolutely unchecked.

The insanitary condition of Madras is again attracting the attention of Government. The conservancy of the city is put out to contract instead of being directly managed by the corporation. The Tinnevelly settlement of the city is particularly bad. It is here that paddy boiling is largely carried on, the liquid of which is no better than sewage Government also calls attention to the water and the need for a pure and adequate supply. The drainage scheme is not yet completed.

Dec. 10th, 1903.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Musical Festival.

THE results of this triennial affair can now be estimated, as the final meeting of the general committee has recently been held, Earl Howe, the President of the festival, occupying the chair. From the musical point of view the critics seem to be agreed that it was a more successful performance than that of 1900, Elgar's *Apostles* having proved a very attractive piece of work. On the other hand, from the pecuniary point of view, the General Hospital comes off worse than usual and the sum handed over to it compares especially unfavourably with that of the last festival, when there was a larger surplus than at any other festival held under modern conditions. The falling off in revenue on this occasion is due to the smaller number of serial tickets subscribed for. The donations, on the other hand, have considerably increased; indeed, as will be seen from the statement, had it not been for this source of income there would have been but a very trivial sum to be handed over to the hospital. The total sum derived from the sale of tickets was £9786 5*s.* The donations and collections during and after the festival realised £3851 19*s.* 4*d.* and some minor items brought the entire receipts up to £14,007 11*s.* 1*d.* This amount is £1275 5*s.* less than the amount received in 1900. On the other hand, the expenses, which amounted to £9486 7*s.* 6*d.*, were £212 17*s.* in excess of those of the previous occasion. The amount of the cheque handed over to the treasurer of the General Hospital was £4521 3*s.* 7*d.*, from which it will be seen that the net profit to the hospital, apart from the donations and subscriptions, was under £1000.

Hospital Sunday.

The proceeds of this collection have recently been handed over to the representatives of the different hospitals benefiting by it. The General Hospital, the Queen's Hospital, and the amalgamated charities each have a year in turn and this year the last-named group has been the recipient of the sums subscribed. The total amount of the church subscription was £4493 1*s.* 11*d.*, which is a record for the amalgamated charities; in fact, since 1859 this sum has only four times been exceeded, twice on the occasion of collections for the General Hospital and twice for the Queen's Hospital. The largest sum allotted to any single institution was £557 5*s.* 9*d.* which went to the Eye Hospital, and the smallest was £61 13*s.* 4*d.* which was the contribution to the Lying-in Charity.

Mentally Defective Children.

Mrs. Pinsent, chairman of the special schools subcommittee of the Birmingham education committee, has recently read a paper on the above subject before the Birmingham Branch of the British Child Study Association. Mrs Pinsent called attention to the alarming amount of mental deficiency which existed and to the fact that it was increasing. This increase not merely affected the easily recognised cases of lunacy and imbecility but also a class of persons who could not be described as lunatics but who were yet mentally, and very frequently also morally, deficient. These persons were allowed to live in complete freedom, and so far as the law was concerned were supposed to be responsible for their own actions. Many of them were to be found in prisons and many of them in the wards of workhouse infirmaries. At present there were 335 persons described as feeble-minded and epileptic in the Winston Green Workhouse Infirmary. The problem that the lecturer wished the meeting to consider was that of the most humane and economical method of dealing with this class of persons. The first school for children of this class was opened in Germany in 1863. The results attained there were good, for a large percentage of the children turned out were capable of subsequently supporting themselves. In 1893 a class of a similar character was formed in Leicester, that being the first in the United Kingdom. Shortly afterwards work of the same kind was taken up in London and now a number of towns were provided with classes for mentally deficient children. One of the first difficulties met with in the organisation of such classes was the accurate definition of the kind of child who might reasonably be considered to be admissible to them. This question as to the standard of admission must always remain one of considerable difficulty, but the Act under which these classes were constituted was one which permitted of a fairly wide interpretation. According to the lecturer, all children for whom there was any hope at all were given a fair trial in these classes, while some who after admission to them had proved themselves to be very nearly normal children were drafted back again to ordinary schools. The work in the special classes was carefully planned to draw out and to develop any little intelligence which the children might possess. Very few accurate statistics had yet been recorded, but, so far as could at present be judged, the work of the special classes, though excellent as a beginning, did not go far enough It failed in two important particulars. In the first place, when they left school the vast majority of the pupils were quite unable to support themselves, and in the next at the age of 16 years such children were allowed complete liberty of action and freedom from school or other constraint, although mentally they were not above, if equal to, the level of most children six or seven years of age. In Birmingham an "after-care" committee had been formed to, keep a record of every case that left the special classes, with a view of ascertaining (1) how many became wholly or partially self-supporting; (2) how many became morally responsible; and (3) how many had children. The analysis of the cases showed results which were not very encouraging and seemed to point to the conclusion that further and permanent provision was necessary for this class of persons. Out of 46 on the committee's books 18 were at work and earning an average weekly wage of 7*s.* 1*d.* and only eight were thought to have any chance of becoming self supporting. This amounted to 17 per cent. and showed that so far as the remaining 83 per cent. were concerned the work done in the special classes was not sufficient, in fact, did not go far enough. Those who were concerned with the after-care of these children had come to the conclusion (1) that boarding schools should be provided for certain mentally deficient children; (2) that the city councils and boards of guardians should be asked to establish colonies to which these children could be drafted at the age of 16 years; and (3) that as in Birmingham there was no proper accommodation for idiot and imbecile children, it was necessary for the question of providing such accommodation to be placed before the proper authorities.

Staffordshire Consumptive Sanatorium.

This scheme, which has already been mentioned by me in a former letter, seems to be meeting with a good deal of opposition throughout the county. Lord Lichfield, who is chairman of the sanatorium subcommittee of the Staffordshire county council, has found it necessary to write to the chairmen of the different bodies who were called into conference and to point out that the county council has not at present any detailed scheme before it and that the object of the conference was to find out whether the various sanitary authorities would be willing for the council to prepare a scheme and to submit it to them. In the same letter he informs those to whom he writes that Colonel Wilkinson, who so generously offered a site near Lichfield for the sanatorium, has now withdrawn his offer and placed a sum of £2400 at the disposal of the county council in lieu thereof The West Bromwich board of guardians has adopted a report in opposition to the scheme on the grounds that the erection and maintenance of the sanatorium would cost much more than was estimated. It also objects that the open-air treatment is at present largely experimental and that further developments might render it necessary to erect buildings quite different from those now contemplated. There were at present a number of excellent institutions near the sea and in other more favourable situations than could be found in Staffordshire where patients could be sent and skilfully treated for £1 7*s.* per week. Further, it points out that the board has recently provided wards for the special treatment of phthisis. And finally it states that a sanatorium has been provided for Worcestershire by voluntary efforts and that there does not appear to be any reason why Staffordshire should not provide one in a similar manner, since it is a much richer county than Worcestershire. At a meeting of the Stafford board of guardians a certain Major Johnson seems to have delivered himself of adverse sentiments with a more than martial boldness He told the board that Dr. G. Reid the county medical officer of health, was a mere theorist and knew nothing at all about the practice that had been adopted in various sanatoriums for the prevention or cure of consumption. Even in localities which were suitable sanatoriums had been failures and the idea of setting up open air treatment in a climate like that of Staffordshire was absurd. As to teaching persons anything about the treatment of the disease the patients would have a period of six weeks of discomfort and cold, and when they got home the first thing they would do, instead of carrying out the new system, would be to shut the doors and windows and to make themselves comfortable by warmth. Mr. Peach challenged Major Johnson's statements and in the end the whole question, together with the West Bromwich board's report, was sent to a special committee to report upon the same.

Dec. 29th, 1903.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Royal Infirmary.

AT the meeting of the infirmary board yesterday, it appeared that the chairman, Mr. John Thomson, had had a letter from Judge Parry "in reference to the practice of inquiring into the circumstances of patients." A committee has been appointed to go into the whole question of voluntary payments from in-patients and of investigating the circumstances of patients. The use and abuse of hospital charity is a very large and difficult question, so that the committee has plenty of matter to deal with.

Free Meals for School Children.

Whatever view may be taken of the free-meal question as a matter of political and social economy, there is not much doubt that thousands of poor children cordially welcome these "free imports" and are the better for them. During last year the Manchester school board supplied 140,000 free dinners, the cost of which has been met by subscriptions and by the proceeds from school concerts, jumble sales, and social parties organised by the teachers. Under feeding is one of the factors in the production of the stunted, weakly young men and girls characteristic of the working classes of our manufacturing towns, and these meals are good so far as they go It is said that there is not much abuse of this charity, as all the cases are examined by the teachers and officers, and, moreover, it has always been found "that when distress diminished and the unskilled labourer found work again the demand for dinners diminished." Just now the city is pervaded by the Christmas spirit and though there is plenty of merry-making and social enjoyment among the well-to-do the abundant and widespread charitable work carried on with method and energy must do much to mitigate, for a time at all events, the increase of misery and privation that accompanies winter weather.

A Batch of Inquests.

Yesterday week five somewhat remarkable cases were inquired into by Mr. E. A. Gibson, the city coroner. The first was that of a soldier on furlough suffering from "a lump in the neck," apparently caused by a bad tooth, and an operation was necessary. Ether was used as an anæsthetic but he took it badly and before the operation was completed "he stopped breathing and artificial respiration was tried without avail." The next case was that of a girl, four years old, whose mother gave her a dose of saffron and whisky as she had been unwell. A tumbler half full of whisky was left on the table and the child got hold of it and drank the contents, dying the next day. The third case was one of hanging. In the fourth case a man bought "enough laudanum to kill five men" in the middle of the week and on the Saturday was found dead. It was supposed that he had taken it as the bottle was found empty, but no traces of the drug could be discovered post mortem and the medical attendant attributed the death to alcoholic poisoning. The next was that of a labourer who went into the engine room of some works "presumably" to dip a piece of cotton waste in some oil that had dropped from the engine. He became entangled in the machinery and was so terribly injured that he died after being taken to the Ancoats Hospital. A wire guard fenced the engine and he must have opened the door of it, though such action is forbidden by the rules.

Danger of Unprotected Fires.

We do not realise as we should the danger to child life, more especially among the poor, from the absence of fire-guards to the open grates almost always to be found in cottages. About a fortnight since Mr. Brighouse, the coroner for South-west Lancashire, spoke strongly on the subject at an inquest at Warrington on the case of a little girl, aged four years, who was burnt to death during the temporary absence of her mother. He stated that in the last three months he had had 11 similar cases and said it was useless talking to parents—that the only remedy was legislation. This was endorsed by the jury who added a rider to their verdict "that legislative action was necessary to make fire-guards compulsory."

Cremation in Manchester.

Although the prejudice against cremation is gradually breaking down and the mention of it does not now excite the horror often expressed in the early days of its revival, the Manchester Crematorium Company do not find their business increasing very rapidly. According to the report which was adopted at the recent annual meeting the crematorium pays its way but not very much more. The chairman expressed disappointment that they could not record any material increase notwithstanding the interest taken in the institution as evidenced by the income received from curious visitors, and he seemed to think it strange that "the gloomy impression created by the appearance of city churchyards" should not cause a "desire to have the remains of their dead reduced in a little over an hour into a pure white ash instead of leaving them to moulder for years in the ground, a source of danger to the living" They hope to transfer the crematorium to the corporation when public opinion has sufficiently ripened to make it possible. Cremation, with reason on its side, will have a hard fight before it vanquishes custom and sentiment.

Disused Mining Shafts.

The tragedy occurring recently at Hanley where a man walking along the street suddenly disappeared down the shaft of a disused mine from the rotten cover breaking through has given food for thought over wide districts in Lancashire There can be no doubt that in many of the villages, now grown into towns, there are forgotten shafts, covered with wooden beams over which earth has been thrown, that are dangerous death traps The stoutest timber under such conditions gradually becomes rotten In some places in Lancashire steps are already being taken to learn the position of these old shafts and to make them safe The Potteries are said to be honeycombed with old workings and the same applies to some districts in Lancashire

Dec 29th, 1903

IRELAND

(FROM OUR OWN CORRESPONDENTS)

The Tenement Houses of Dublin

THE special correspondent of THE LANCET who came over here some years ago to report on the public health of Dublin furnished a startling and very unfavourable story of the condition of the tenement houses and slums of the city of Dublin It has not been forgotten, for his Excellency the Lord Lieutenant recently expressed a wish to visit those houses and to see for himself how things really are He was accompanied by the President of the Royal College of Surgeons in Ireland, who is chairman of the Association for the Housing of the Very Poor, and his first tour began on the afternoon of Dec 18th, when he commenced to traverse the streets and to visit the houses in the poorest parts of the south side of the city He went about incognito—in a cab—and left presents in the shape of Christmas hampers for those who seemed most destitute of food suitable for the festive season The Countess Dudley did the same thing in the northern poverty stricken districts and the Christmas presents which she distributed were kindly given by her own hands The Irish poor—dirty as they are—can still appreciate such delicate acts of kindness

The New Royal College of Science for Dublin

Mr Chenevix Trench, the arbitrator appointed under the Public Offices (Ireland) Act of last session, commenced to sit in the Four Courts, Dublin on Dec. 14th to hear the claims for compensation in respect of lands and premises on the west side of Upper Merrion street, which it is proposed to acquire by the Commissioner of Public Works under the compulsory powers of the above Act as a site for the new College of Science and extension of the offices of the Department of Agriculture and Technical Instruction The persons whose claims for compensation are now being dealt with are all medical men in practice in Dublin and the result of the arbitration is naturally a subject of interest to the profession here The claims which they make for compensation vary from £7000 to £3000 and the court has been occupied in hearing evidence as to the value of their houses and premises since it began to sit Each of them was represented by senior counsel, while the Attorney-General M P, and Solicitor General, M P, instructed by the solicitor of the Board of Works, appeared for the Crown The gardens connected with those premises in Merrion street are unusually long each house including a ground area of 100 yards from back to front. The space of ground which the Government is about to acquire by Act of Parliament measures therefore about 100 yards square and is situated in the best and most healthy part of Dublin

Dr Steevens' Hospital, Dublin

At a meeting of the governors of Dr Steevens Hospital held on Dec 21st Dr Robert L Swan was coopted a governor, Dr T Percy Kirkpatrick was appointed physician, and Dr Henry Jellett was appointed gynæcologist

Medical Events in 1903

The past year will mainly be memorable for the great growth of the Irish Medical Association and for the determined stand made by the Poor law medical officers to improve their present wretched position. The Irish Medical Association has not only greatly increased in numbers but new branches have been established all over the country and it has also converted it [illegible] so that medical men [illegible] of some of the exist [illegible] very likely resign their connexion with such organisations as the Irish association will do all in this direction—medical defence—that may be required The other special event in the medical history of Ireland in 1903 was the King's visit and the opening of the new Royal Victoria Hospital, Belfast, an institution which is constructed on lines altogether unique and peculiar and which will probably form the forerunner of future types of hospitals The working of the hospital is in every respect admirable The Royal Commission on Irish University Education has led to nothing

The New Maternity Hospital, Belfast

The governors of the old Lying in Charity have purchased a new site in a populous part of the city—namely, at the corner of Townsend street—where they propose shortly to begin the erection of a new thoroughly up to date maternity hospital which will be of the utmost advantage to the students of the Belfast medical school

The Treatment of Tuberculosis

On Dec 28th two of the Local Government Board inspectors (Mr R Agnew and Dr E C Bigger) held an inquiry in the union workhouse, Belfast, as to the proposed establishment of a sanatorium by the guardians at Whiteabbey, on the north west side of Belfast Lough The senior medical officer (Mr Robert Hall) of the Belfast workhouse gave evidence, as did the master, showing the congested state of that institution Four years ago they had 85 tuberculous patients, now (Dec 28th) they had 255 The air space in the union hospital was utterly insufficient The total space available was 586 800 cubic feet, of this 192 800 cubic feet were required for surgical cases which left 394,000 for the remaining patients, which was 48 600 cubic feet short of the required accommodation, calculated at the lowest scale of 600 cubic feet per head, and of these patients 255 were tuberculous The accommodation was altogether inefficient, being below what was known in any recognised hospital for such patients Apart from the fact that tuberculous cases needed special treatment they were dangerous to other patients and their removal would give accommodation as per scale for twice their number of the healthy The union hospital was at present overcrowded, and the premises known as the Abbey—Whiteabbey—capable of accommodating 60 patients six nurses, a resident medical officer, and superintendent—which he had inspected, were considered by Mr Hall to be suitable He believed the statement that there were 4000 consumptives in Belfast was a low estimate Further evidence having been given in support of the scheme some opposition was offered by local residents and Mr H C Manley dispensary medical officer of the district in which the proposed sanatorium is to be located in his evidence objected to the place selected as not being suitable on the grounds that the soil was cold and damp, the site was too low and too close to the village of Whiteabbey, it was exposed to east winds the air was relaxing, and there was local prevalence of pulmonary tuberculosis (of the total number of deaths registered in his district this year—96—there were 50 from chest diseases) The inquiry stands adjourned until Jan 18th

Dec 29th 1903

PARIS

(FROM OUR OWN CORRESPONDENT)

Renal Opotherapy in Albuminuria

At the meeting of the Academy of Medicine which was held on Dec 22nd a sensational communication was made by Professor Renaut of Lyons which affords grounds for thinking that many cases of albuminuria will in future be curable The following are the conclusions which Professor Renaut has drawn from his researches Extract of macerated kidney administered to patients suffering from renal insufficiency is one of the most active and most efficacious methods of medication hitherto employed It restores the function of a waterlogged kidney more than does any other [illegible] even in cases [illegible] s by the appli- [illegible] tit has been tried The extract has a powerful diuretic action and when employed for a reasonable space of time it brings up the urinary output to the normal and maintains it at that level Further, it has no harmful influence upon the affected kidney. Among other advantages of this method of treatment it rapidly reduces the output of albumin by the kidney owing to its renewing the activity of the gland. It will even cause a disappearance of the albumin for a long period and so there is every chance that, the tubules of the kidney being given functional rest, the renal epithelium will be renewed, at least in those cases, which are fairly frequent, in which such renewal is histologically possible. It is therefore, as Raphael Dubois discovered and demonstrated at one stroke, an antitoxic method of the first class. The antitoxin consists of the "preproducts" of the glandular secretion of the epithelial cells of the convoluted tubules and the important point ascertained by Dubois was that this antitoxin is not destroyed by the gastric juice. It is this fact which allows of the application of renal opotherapy. The kidney extract introduced into the organism per os exercises a real antitoxic effect On the other hand, signs of slight poisoning may arise from its use such as pruritus, urticaria, miliary rashes, sweats, or, after it has been administered for a few days, slight gastric disturbance. Apart from these complications, however, Professor Renaut and his assistants have never seen any unpleasant effects due to the use of the extract. It produces its antidotal effect in a regular and progressive fashion, and under its use the arterial hypertension, Traube's "gallop rhythm," and the tendency of the heart towards a fatal passive dilatation successively diminish, provided that the extract be given for a sufficient period of time. This method of treatment should be begun at as early a stage of the disease as possible and it should not be substituted for other therapeutic measures but used as an adjunct to them. Its only inconvenience is the necessity of preparing the extract fresh every day. But this difficulty can be easily surmounted if it be considered that the object of the treatment is to save human life.

Total or Partial Hysterectomy for Uterine Fibroids.

At a recent meeting of the Society of Surgery M Monprofit read a paper on the above subject. For himself he said that he was an advocate for total hysterectomy, as this operation had always been more successful in his hands than a partial operation and in the great majority of cases it offered no difficulty. He allowed, however, that when the patient was very feeble a partial operation was preferable for it took a much shorter time to perform. Myomectomy or simple removal of the ovaries also affects fibroids favourably. M. Pozzi was of a contrary opinion and considered that the partial operation was the operation of election, for it was more rapid and far less severe than a total removal He said that total hysterectomy gave a mortality of 9 per 1000, while for partial hysterectomy the proportion fell to 4 per 1000 He also drew the attention of the society to his method of operating. Instead of dividing the neck of the uterus transversely, destroying what was left of the mucous membrane with the thermo cautery and then closing the peritoneum over the stump, he prefers to make a wedge-shaped cut in the pedicle. The two sides are then brought together and the mucous membrane is thus inclosed by thick tissues. The peritoneal cavity is then accurately closed and is protected from all infection M. Rouvier did not approve of this modification but preferred a simple transverse section. The mucous membrane was then buried by sutures in the stump and the peritoneum was closed. Three other surgeons—M. Quénu, M. Schwartz, and M. Ricard—said that they considered that the question as to whether partial or total hysterectomy were the better might be considered as closed. In their opinion the total operation was no more *risky than the partial.*

A Healthy Parish.

During the week Nov. 29th–Dec. 5th of 1903 the parish (*quartier*) of St. Thomas Aquinas with a population of 26,116 persons had not a single death. During the same period the parish of Père Lachaise with a population of 51,832 had 31 deaths. In the latter parish there are only 15 medical men, or 1 to every 3000 inhabitants, while the former parish has 125 medical men, being about 1 for every 200 inhabitants. It must be remembered that the parish of St. Thomas Aquinas is a rich one and is nearly empty during the summer and autumn, all its inhabitants being at the seaside or in the country. It is therefore obvious that its 125 medical men have much less work than they would like.

A New Hospital.

M. Ambroise Rendu has just laid before the municipal council of Paris a plan for a new hospital for Parisians at Montmorency. Last year the municipal council decided on great schemes of hospital improvement and extension towards which it allocated a sum of some 40,000,000 francs. The chief object was to free the Paris hospitals from a crush of patients and to provide for those suffering from tuberculosis. In many of the hospitals tuberculous patients make up half the whole number treated and even at the Hôtel Dieu they form more than a third of the total number of patients. If, then, these tuberculous patients could be treated elsewhere the hospitals would have ample room for other patients. M. Rendu proposes that they should be treated at Montmorency on a site of 126,000 square metres which belongs to the Duc de Talleyrand-Périgord. On this site could be built a hospital containing 1000 beds, the patients being housed in separate blocks. The duke asks 825,000 francs for the site. The hospital will be reserved exclusively for Parisians and no clinical teaching will be given.

Dec. 28th, 1903.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Koch's Birthday.

ON the occasion of the sixtieth anniversary of the birthday of Professor Koch the *Deutsche Medicinische Wochenschrift* has issued a Festival Number to which the leading bacteriologists of Europe have contributed. It commences with an article on Professor Koch's Life and Work by Professor Löffler of Greifswald, dealing especially with his researches on tuberculosis, cholera, malaria, rinderpest, and other diseases of microbic origin. Professor Metchnikoff and Professor Roux of Paris contribute an article on the Experimental Production of Syphilis in Anthropoid Apes. They have succeeded in infecting a female chimpanzee with syphilitic virus, a chancre developing about 25 days after the inoculation. A month later a squamous exanthema appeared on the thigh, the back, and the abdomen and disappeared after four weeks. The animal unfortunately died about 14 weeks after the infection from general pneumococcic invasion. Some of the discharge from the chancre having been inoculated into the penis and the thigh of another chimpanzee, the result was that chancres appeared in both places, together with a general swelling of the lymphatic glands. No secondary symptoms ensued; the chancre on the thigh healed but that on the penis persisted till the death of the animal which happened about 45 days after the development of the syphilitic symptoms. No symptoms of syphilis were found at the necropsy; the death was attributable to infection by a kind of influenza bacillus which was found in the internal organs. The next article of the series is written by Professor Ronald Ross, of the Liverpool School of Tropical Medicine, and deals with Professor Koch's work on malaria, with especial reference to his determination of the frequency of malaria in children and his proposals to immunise the entire population of a malaria district by the systematic administration of quinine. Professor Ross does not hesitate to claim for Professor Koch a high degree of merit in this question, especially against the pretensions of certain Italian *savants*. Professor A. Celli and Dr. de Blasi of the Hygienic Institute of Rome contribute a paper on the possibility of separating the toxic principle of rabies by filtration. A diluted extract of the brain and spinal cord of affected animals was passed through a Berkefeld filter with the help of an exhaust pump at the temperature of the room and from 0·25 to 0 5 cubic centimetre of the filtrate was injected into the dura mater of dogs and rabbits. Of 23 rabbits only three survived and of four dogs all died. Of the 20 rabbits five died in from 14 to 40 days with symptoms of emaciation and paralysis. An emulsion of the medulla of these rabbits was accordingly injected into another series of rabbits, the results being that of 12 animals 10 died; of a third series of 12, 10 died, but only a few had symptoms of paralytic rabies. The four dogs died in from 19 to 88 days, showing general emaciation and depression. The necropsy of the deceased animals gave a negative result. Professor Paltauf of Vienna has written on agglutinins and precipitins and Professor Tavel of Berne on polyvalent antistreptococcic serum. Dr. Friedmann of the Anatomical and Biological Institute of Berlin University reports that the tubercle bacillus of the tortoise is very like the tubercle bacillus of the human species; by injections of the former bacillus he has succeeded in immunising guinea-pigs against tuberculosis. Other contributions to the Festival Number relate to the use of antidiphtheritic serum in general practice and to the cure of a case of puerperal septicæmia by injections of antistreptococcic serum. Lord Lister, who was also asked to contribute, has written the following letter to the editor: "I greatly regret that in consequence of the state of my health at present it is impossible for me to comply with your request that I should contribute to your Festival Number an expression of my high appreciation of the important labours of Robert Koch. No one, perhaps, has a greater admiration of his work than myself." Professor Koch happens to be spending his birthday at a great distance from Berlin—namely, at Buluwayo, in South Africa, where for the second time he has been asked to advise the Colonial Government in its measures against rinderpest. He is not expected to arrive home before the month of March and the celebration of his birthday must thus be postponed till that date. His bust will be unveiled in the Institution for Infectious Diseases and a museum, showing the development of the study of bacteriology, will be opened after his return. As Professor Koch is firmly opposed to a public celebration, only his present and former assistants will take part in the proceedings.

Dec. 28th, 1903.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Character of Present Immigration.

THE total number of immigrants last year was 857,046, the largest number in one year in the history of the country. In a recent report the United States Commissioner of Immigration states that the great bulk of the present immigration proceeds from Italy, Austria, and Russia, and from some of the most undesirable sources of population of those countries. Immigration from such countries as Germany and the British Isles has fallen to a very low figure. The great bulk of the present immigration settles in four of [illegible] he large cities of those [illegible] pouring into our cities, [illegible] o wanted because they are neither physically nor mentally fitted to go to these undeveloped parts of the country and to do as did early settlers from northern Europe. The number of immigrants from northern and western Europe last year was 203,008, or 28·8 per cent., and from southern and eastern Europe 610,813, or 71·3 per cent. These figures show that while there has been some increase in the immigration from northern and western Europe the greater proportion of immigrants has come from the less desirable races of southern and eastern Europe. The illiteracy of races as shown by the tests applied to immigrants over 14 years of age was as follows: western Europe 3·9 per cent., and for eastern Europe, including Spain and Portugal, 39·7 per cent. The Commissioner at New York states that there is a large body of immigrants who are not reached by our restrictive laws and who are undesirable because unintelligent, of low vitality, of poor physique, able to perform only the cheapest kind of manual labour, desirous of settling almost exclusively in the cities, and by their competition tending to reduce the standard of living of the American wage-worker and unfitted, mentally and morally, for good citizenship. He believes that at least 200,000, and probably more, aliens come here who will prove a detriment. It is misleading to assert that because immigration in the past has been a source of greatness to the country it should not be further restricted; past immigration was good, because most of it was of the right kind and went to the right place.

Pure Food Standard.

The Secretary of the Interior has approved and proclaimed the official food standards which have been formulated by the United States Food Standard Commission and the executive committee of the National Association of Pure Food Commissions. The object of the law is to establish standards corresponding to American food materials, whether raw or manufactured, and in accordance with the results of American processes of manufacture. The standards consist of definitions and chemical limits and embrace meat and its products, milk and its products, sugar and related substances, spices, and cocoa and cocoa products. No chemical limits are named for the meat products, the standard being fixed by definition only, which gives this description: sound, dressed, and properly prepared edible parts of animals in good health at the time of slaughter. The standard of milk is fixed at not less than 12 per cent. of total solids, not less than 8½ per cent. of solids not fat, and not less than 3½ per cent. of milk fat. The standard of condensed milk contains not less than 28 per cent. of milk solids, of which one-fourth must be milk fat. The standard of butter contains not less than 82½ per cent. of butter fat and may contain additional colouring matter. For cheese a minimum of 50 per cent. of butter fat in the water-free substance is prescribed. Ice-cream, to be standard, must have a minimum of 6 per cent. milk fat. Refinery syrups as ordinarily made are classified as molasses and syrups; the standard of the former requires not over 25 per cent. of water and of the latter not over 30 per cent. of water or 2½ per cent. of ash. These are examples of the work of the commission as far as it has fixed standards. The work is to be continued until the list of foods is completed. An exhibit of the work of the State Food Department is to be made at the World's Fair at St. Louis and an exposition of the methods of adulteration in foods and beverages is to be given in order to show the public how to protect itself in the purchase of food commodities.

A National Hygienic Laboratory.

The creation of this laboratory by an Act of Congress is a striking proof of the great advance of State medicine in the United States. The building, which is now nearly completed, is a model of its kind. It is located on grounds formerly belonging to the Naval Museum of Hygiene at Washington and will be under the direction of the Department of the United States Public Health and Marine Hospital Service. The building is constructed so as to give ample accommodation to the several branches of work, as chemistry, pharmacology, pathology, and bacteriology. The Act of Congress provided that there should be an advisory board for the hygienic laboratory, consisting of three competent experts detailed from the army, the navy, and the Bureau of Animal Industry, together with the director of the laboratory and five additional members appointed by the Surgeon-General of the Public Health and Marine Hospital Service, who shall be skilled in laboratory work in its relation to the public health. The chiefs of divisions are to be skilled in their respective lines of scientific research work, especially in its relation to the public health. The results of the researches of the laboratory are to be published in bulletins. The laboratory will be ready for occupation about the 1st of the new year and plans are now under way for the production of a standard diphtheritic antitoxin for distribution to manufacturers, those engaged in research work, and others. The Act of Congress referred to also placed the supervision of plants manufacturing these products under the Public Health and Marine Hospital Service. The examination of these products will be conducted in the hygienic laboratory. The result of this supervision will, it is believed, relieve the market of the spurious antitoxins.

Tuberculosis Congresses.

The number of congresses for the suppression of tuberculosis which have been, and are being, arranged to take place during the coming season is surprising. There is to be the Baltimore Tuberculosis Exhibition, to be held in January under the combined auspices of the Tuberculosis Commission, the Maryland Board of Health, and the Maryland Public Health Association. Another tuberculosis exhibition will be held in St. Louis in connexion with the exhibition of Social Economy and under the subsection of Hygiene. It is announced that a congress on tuberculosis, under the name of "International Congress on Tuberculosis," will be held in St. Louis in October. Again, there is the American Congress on Tuberculosis for the Prevention of Consumption, which proposes an international convention at Washington in April, 1905. These instances of proposed meetings for the consideration of the single subject of tuberculosis are but few of the occasions on which this all-absorbing theme is discussed. Unfortunately many of these congresses in this country are not of a character to command the sympathy and support of the leading men of the profession. While they do not specially do harm to the great movement now taking place all over the world against the great "white plague" they do not result in any very material advance in the adoption of radical measures for the extermination of this disease.

State Regulation of Marriage.

The Iowa Society for the Suppression of Disease and Degeneracy has prepared a Bill to be submitted to the legislature of that State providing that before a marriage licence can be issued to any person in that State a physician's certificate of examination must be obtained showing that the said person is physically and mentally qualified to enter into the married state under the laws of that State. The State of Iowa has long been in the front rank as regards sanitary, social, and political reforms and this new departure will be watched with great interest.

The Administrative Control of Tuberculosis.

The health authorities of New York passed an ordinance in 1897 requiring the registration of every person suffering from pulmonary tuberculosis by the physicians, managers of institutions, hospitals, and dispensaries of the city. Stringent regulations were made in regard to the management of all reported cases and being printed on cards were furnished to patients, friends, and guardians. The report of the results has just been issued and forms an interesting chapter on the value of the administrative control of contagious and infectious diseases. The death-rate from pulmonary tuberculosis had steadily fallen during the period.

Dec. 20th, 1903.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the first professional examination for the diploma of Fellow at the half-yearly meeting of the examiners :—

Oswald Lacy Addison, M.B. Lond., M.R.C.S. Eng., L.R.C.P. Lond., University College and K [illegible] ames Alford Andrews, M.R.C.S. Eng., I [illegible] Camb., Cambridge University and Guy' [illegible] Ball, George Norton Bartlett, Thomas Henry Barton, and George Cockcroft, Guy's Hospital; Robert Tullis Baillie, M.B., Ch.B. Edin., Edinburgh [illegible]ey Blundell Bankart, B.A. Camb., Cam- [illegible] College, and Guy's Hospital; Robert [illegible] Cambridge University and Guy's Hos- [illegible]ring Cross Hospital; Bertram Thomas Johnson Glover, Liverpool University; Paul Leon Guiseppi, St. Bartholomew's Hospital; William Hackney, M.R.C.S. Eng., L.R.C.P. Lond., M.D. Toronto, Toronto University and King's College, London; Arthur Herbert Hart, M.R.C.S. Eng., L.R.C.P. Lond., M.S., M.D. Durh., Durham University and the London Hospital; James Willie Heslop, M.R.C.S. Eng., L.R.C.P. Lond., M.B., B.S. Durh., Durham University; Montague Leonard Hine, Middlesex Hospital; Arthur Cyril Hudson, M.A., M.B., B.C. Camb., Cambridge University and St. Thomas's Hospital; Thomas Bramley Layton, Guy's Hospital; James Edlington McDougall, M.R.C.S. Eng., M.B. Vict., D.P.H. Camb., Liverpool University; George Percival Mills, Birmingham University; James Eu [illegible]gh, Robert Foster Moore, B.A. Camb., Al [illegible] Samuel Shuttleworth Rendall, St. [illegible] Gerald Charles Frederick Robinson, Guy's Hospital; Henry Charles Samuel, King's College London; Charles Harold Smith and Clare Oswald Stallybrass, Liverpool University; Claude Edward Tangye, B.A. Lond., Birmingham University; Walter Welchman, B.A., Cape of Good Hope, Guy's Hospital; Harold Beckwith Whitehouse, St. Thomas's Hospital; and Courtenay Yorke, Liverpool University.

96 gentlemen presented themselves for this examination of whom 32 passed and 64 were referred.

The following gentlemen having passed the final examination for the diploma of Fellow and having conformed to the by-laws and regulations have been admitted Fellows of the College :—

John George Ogilby Hugh Lane, M.B., B.S. Durh., L.R.C.P. Lond., Guy's and St. Thomas's Hospitals and Durham University, Member May 9th, 1895; John William Myler, M.D. Brux., L.R.C.P. Lond., Middlesex Hospital, Member July 29th, 1895; Theodore Henderson Molesworth, B.A., M.B., B.C. Camb., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital, Member Nov. 12th, 1895; Frank Edward Taylor, M.A., M.B., B.Ch., M.Sc. Vict., L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds, and King's College Hospital, Member Feb. 11th, 1897; Frank Atcherley Rose, M.A., M.B., B.C. Camb., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital, Member Feb. 9th, 1899; Benjamin Holroyd Slater, B.A., M.B. Camb., L.R.C.P. Lond., Cambridge University and Middlesex Hospital, Member May 11th, 1899; George Grey Turner, M.B., B.S. Durh., L.R.C.P. Lond., Durham University, Member Oct. 12th, 1899; Harry Ellis Brawn, L.R.C.P. Lond., Birmingham University, Member Nov. 2nd, 1899; William Henry Maxwell, M.A., M.B. Camb., L.R.C.P. Lond., Cambridge University and London Hospital, Member Nov. 2nd, 1899; John Frederick Jennings, M.B. Lond., L.R.C.P. Lond., St. Bartholomew's Hospital, Member July 25th, 1900; James Cole Marshall, M.B. Lond., L.R.C.P. Lond., St. Bartholomew's Hospital, Member Nov. 8th, 1900; Miles Harris Phillips, M.B. Lond., L.R.C.P. Lond., University College, Bristol, and London Hospital, Member Nov. 8th, 1900; Charles Seymour Parker, M.B. Lond., L.R.C.P. Lond. (I.M.S.), University College Hospital, Member August 1st, 1901; Henry Tugellas Dobble, L.R.C.P. Lond., St. Mary's Hospital, Member Feb. 13th, 1902; Frederick William Forbes Ross, M.D., C.M. Edin., D.P.H. Eng., L.R.C.P. Lond., Edinburgh University and Middlesex Hospital, Member April 2nd, 1903; George Coats, M.D., Ch.B. Glasg., Glasgow University and St. Bartholomew's Hospital, not a Member; Cyril Arthur Bennett Horsford, M.D., Ch.B. Edin., Edinburgh University and St. Bartholomew's Hospital, not a Member; William Carlyle Wilson, M.B., Ch.B. Edin., Edinburgh University and St. Bartholomew's Hospital, not a Member; and David Storer Wylie, M.B., Ch.B. Vict., Owens College, Victoria University, and King's College Hospital, not a Member.

[illegible] presented themselves for this examination, 22 of whom [illegible] who have not yet attained the legal [illegible] ed, nine for one year and 33 for six months.

UNIVERSITY OF CAMBRIDGE.—At the examinations for medical and surgical degrees held in Michaelmas term the following candidates were successful :—

SECOND EXAMINATION.

Human Anatomy and Physiology.—J. B. Banister, B.A., Jesus; F. A. Barker, B.A., Emmanuel; R. L. Barwick, B.A., Christ's; T. R. H. Blake, B.A., Pembroke; L. B. Cane, B.A., King's; S. P. Chan, Caius; S. Churchill, B.A., Trinity; H. N. Coleman, Christ's; H. B. Corry, B.A., Caius; R. Crawford, Jesus; W. F. Denning, B.A., Trinity; A. W. C. Drake, B.A., Pembroke; A. C. J. Elwin, Corpus Christi; E. G. Fearnsides, Trinity Hall; N. M. Fergusson, Magdalene; W. J. Fison, Sidney Sussex; R. L. Gamlen, B.A., Caius; B. C. Ghosh, M.A., St. John's; G. W. Goodhart, B.A., and G. Graham, Trinity; G. F. Greenwood, B.A., Sidney Sussex; F. W. W. Griffin, B.A., King's; H. S. Hall, B.A., Pembroke; R. A. Hill, Caius; E. B. Hinde, B.A., Emmanuel; W. H. Hodgson, B.A., Christ's; R. S. Jenkins, B.A., St. John's; A. R. Jordan, Clare; R. B. Lloyd, B.A., Emmanuel; R. G. Markham, Caius; J. H. B. Martin, B.A., Emmanuel; D. C. Master, B.A., Caius; J. B. Mennell, B.A., Pembroke; E. V. Oulton, B.A., Christ's; D. G. Pearson, B.A., Pembroke; R. C. Priest, Caius; R. L. Rawlinson, B.A., Trinity; E. F. Skinner, Corpus Christi; A. C. H. Suhr, B.A., Caius; W. H. R. Sutton, B.A., Downing; B. S. Taylor, M.A., Clare; C. B. Ticehurst, B.A., St. John's; C. Tylor, B.A., and K. M. Walker, Caius; S. L. Walker, B.A., Sidney Sussex; B. Wallis, B.A., H. P. Weaver, B.A., and H. B. Weir, B.A., Trinity; C. E. Whitehead, Caius; and F. P. Young, B.A., and R. F. Young, B.A., Christ's.

At the Congregation on Dec. 17th Dr. N. I. C. Tirard was appointed an examiner in pharmacology for the Third M.B. Examination Part I., in the place of Sir Thomas R. Fraser who is unable to examine.—At the same Congregation the following degrees were conferred :—

Master of Surgery.—C. E. Marriott, Clare.

Bachelor of Medicine.—G. B. Norman, St. John's; and G. F. Loveday, Gonville and Caius.

TRINITY COLLEGE, DUBLIN.—At examinations for the Diploma in Public Health, held in Michaelmas term, the following candidates were successful :—

Part I.—John H. Brunskill, John T. Bouchier-Hayes, and John W. H. Houghton.

Part II.—John H. Brunskill, John T. Bouchier-Hayes, William F. Erskine, John W. H. Houghton, and James H. Douglass.

FOREIGN UNIVERSITY INTELLIGENCE. — *Basle:* Dr. Friedrich Siebenmann, Extraordinary Professor, has been promoted to the position of Ordinary Professor of Diseases of the Throat, Nose, and Ear.—*Berne:* Dr. August Siegrist of Basle has been appointed to the chair of Ophthalmology.—*Breslau:* Dr. Georg Wetzel has been recognised as *privat docent* of Anatomy.—*Brussels:* Professor Depage has been appointed Director of the Surgical Clinic in the Hospital Saint Jean.—*Giessen:* Dr. K. H. Kisskalt has been recognised as *privat docent* of Hygiene.—*Göttingen:* Dr. Jacobsthal has been recognised as *privat-docent* of Surgery.—*Heidelberg:* Dr. Hugo Starck has been promoted to an Extraordinary Professorship of Internal Medicine Dr. Karl Bonhoeffer of Breslau has been offered the chair of Mental Diseases as successor to Dr. Kraepelin who goes to Munich.—*Kharkoff:* Dr. Mikhin has been appointed Extraordinary Professor of Midwifery, Gynæcology, and Children's Diseases.—*Padua:* Dr. G. Velo of Naples has been recognised as *privat docent* of Operative Medicine.—*Prague (Bohemian University):* Dr. Ludwig Rydygien of Lemberg has been appointed to the chair of Surgery in succession to the late Dr. Mayde.—*Rome:* Dr. R. Dalla Vedova has been recognised as *privat docent* of External Pathology.—*Vienna:* Dr. Garré of Königsberg has been appointed to succeed Dr. Gussenbauer as Professor of Surgery. He is 47 years of age and of Swiss nationality.

LITERARY INTELLIGENCE.—Next week Messrs J and A Churchill will publish a second edition of 'A Manual of General or Experimental Pathology' by Dr W S Lazarus Barlow The interval that has elapsed since the first edition was published has necessitated the alteration of much of the matter As a new feature illustrations are now introduced The same publishers are also about to issue the third edition of Vol I of 'A Manual of Botany,' by Professor J Reynolds Green, F R S The subjects treated are Morphology and Anatomy

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced —Dr Augusto Ferreira dos Santos, professor of medical chemistry in Rio de Janeiro —Dr Angelo Mafucci professor of pathological anatomy in Pisa.—Dr Duflocq medical officer of the Paris hospitals —Dr Aguilar, professor of clinical surgery in Buenos Ayres —Dr A. T Almén Principal of the Swedish Medical Department, at the age of 71 years He was for many years professor of medical and physiological chemistry in the University of Upsala

BRITISH ELECTRO-THERAPEUTIC SOCIETY.—The annual exhibition of this society was held at 11 Chandos street London, W, on Dec 18th 1903 The exhibition which was very well attended, consisted of electro medical apparatus by Mr K. Schall, Mr A E Dean, the Sanitas Electrical Co, Messrs Isenthal and Co, Mr H W Cox, and the Medical Supply Association There was a fine display of radium by Mr A E Cossor who also showed some therapeutic x ray tubes Mr W Martindale exhibited specimens of radium and pitch blende, &c During the evening an ordinary business meeting was held at which eight new members were elected A conversazione followed when Sir Isambard Owen delivered an address to the society which we propose to publish at an early date

THE PORT SANITARY AUTHORITY OF MANCHESTER.—At a recent meeting of the Manchester port sanitary authority Dr A M N Pringle reported that during the month of November 253 vessels were inspected in the Ship Canal of which 220 were British Defective or insanitary conditions were found in 110 of which 104 were British In one vessel with a Lascar crew the starboard forecastle certified for 14 men, was occupied by 22 and the port forecastle certified for 14 was occupied by 19 Lascars of course, require and are entitled to as much space as English seamen He afterwards asked for permission to act if any vessel infected with [illegible] port At Liverpool it se[illegible] hich vermin and rats can [illegible] The matter is so import[illegible] his request would be at once granted but, strange to say, it was put off to a more convenient season and is to be considered at the next meeting of the authority It is to be hoped that in the meantime the plague stricken rats will postpone their visit till the authority is better prepared for their reception

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Leçons de Clinique Chirurgicale. (Hotel-Dieu, 1902–1903). Par l Professeur Jaboulay, Professeur de Clinique Chirurgicale à l Faculté de Médecine de l'Université de Lyon, Ex-Chirurgien e Chef de l'Hôtel Dieu. Publiées par M. P. Cavaillon, Interne de Hôpitaux. Price Fr. 9.

"TIMES OF INDIA" PRESS, Bombay.

Materia Medica of India and their Therapeutics. By Rustomje Naserwanjee Khory, M.R.C.P. Lond., M.D. Brux., Fellow an Licentiate of Medicine of the University of Bombay, Honorar Physician, Sir J. J. Hospital, and attached to Bai Motlibai an Sir Dinsha Petit Hospitals, and Nanabhai Navrosji Katrak Licentiate of Medicine and Surgery, Bombay, J.P. for the Ci of Bombay. Two vols. Price not stated.

VIGOT FRÈRES, 23, Place de l'École-de-Médecine, Paris.

Traité des Variations des Os du Crâne de l'Homme et de le Signification au point de vue de l'Anthropologie zoologique Par M. le Dr. A. F. Le Double, Professeur d'Anatomie à l'Éco de Médecine de Tours. Préface de M. le Professeur Edmon Perrier. Price Fr. 20.

WHITAKER, J., AND SONS, Limited, 12, Warwick-lane, Paternoster row, E.C.

Whitaker's Peerage. For the year 1904, being a Directory of Titl Persons. Price 2s. 6d.

An Almanack for the Year of our Lord 1904. By Joseph Whitake F.S.A. (Whitaker's Almanack.) Price 2s. 6d.

WILLIAMS AND WILKINS COMPANY, Baltimore.

The Medical Annals of Maryland. 1799–1899. Prepared for th Centennial of the Medical and Chirurgical Faculty. By Euge Fauntleroy Cordell, M.D. Price not stated.

WRIGHT, JOHN, AND CO., Bristol. (SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.)

A Pocket-Book of Clinical Methods. By Chas. H. Melland M.D. Lond., M.R.C.P., Physician to the Ancoats Hospital Manchester. Price 1s. 6d. net.

The Physiognomy of Mental Diseases and Degeneracy. By Jame Shaw, M.D., Member of the Medico-Psychological Association Price 3s. net.

Appointments.

[illegible] Vacancies, Secretaries of Public Institutions [illegible] information suitable for this column, [illegible] THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

BLAYNEY, J. H., L.F.P.S.G., has been appointed Certifying Surgeon under the Factory Act for the Middleton District of the county of Lancaster.

BUSH, JAMES PAUL, M.R.C.S., L.S.A., C.M. Glasg., has been appointed Medical Officer to the Bristol Post-Office.

CORFIELD, CHARLES, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Bristol Dispensary.

FOLKER, H. H., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Hanley District of the county of Stafford.

GILFORD, SIDNEY, M.B., Ch.B. Edin., has been appointed House Surgeon to the Paddington Green Children's Hospital.

HOLLAND, EARDLEY, M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the Paddington Green Children's Hospital.

HOUSEMAN, EDWARD A., B.A., M.B., B.C. Cantab., has been appointed Medical Officer to the East Indian Railway.

ISHERWOOD, F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed [illegible] under the Factory Act for the Cockermouth [illegible] of Cumberland.

LAMPORT, ETHEL [illegible] L.S.A., has been appointed Public Vaccinator for the Isle of Dogs district of Poplar.

LLOYD, G. TYNDALE, M.B., B.C. Cantab., has been appointed Medical Officer of Health of Mackay, Queensland.

McNABB, H. HORSMAN, M.D. Vict., has been appointed Assistant Honorary Surgeon to the Manchester Royal Eye Hospital.

MOORE, LEONARD A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Bristol Dispensary.

STANLEY, JOHN DOUGLAS, M.D. Edin., M.R.C.P. Lond., has been appointed Honorary Physician to the Birmingham Children's Hospital.

THOMPSON, WILLIAM FOOKES, M.D., C.M. Edin., has been appointed Medical Officer for the Northpetherwin District by the Launceston (Cornwall) Board of Guardians.

TURNER, H. N., M.B., B.S. Glasg., has been appointed Certifying Surgeon under the Factory Act for the Castle Bytham District of the county of Lincoln.

WADE, HENRY, M.B., F.R.C.S. Edin., has been appointed Conservator of the Museum of the Royal College of Surgeons, Edinburgh.

WALKER, J. D., M.B., M.S.Aberd., has been appointed Certifying Surgeon under the Factory Act for the Shaftesbury District of the county of Dorset.

WILLIAMS, S. R., M.R.C.S., L.R.C.P., has been appointed Clinical [illegible] Women.

WI[illegible] .Lond., has been appointed [illegible] ctory Act for the Ludgershall [illegible]

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident House Surgeon. Salary £100 per annum, with board, residence, &c.

CITY OF LONDON LYING-IN HOSPITAL, City-road, E.C.—Surgeon-Accoucheur. Salary £100 per annum and fees.

CROYDON GENERAL HOSPITAL.—Honorary Member of the Junior Staff. [illegible] House Surgeon. Salary £40 per [illegible]

[illegible] **EAST SUSSEX HOSPITAL**.—Two [illegible] House Surgeon. Salary £50, with board and apartments.

[illegible] amination for not [illegible] Medical Service.

[illegible] SPITAL.—Resident [illegible] &c.

[illegible] rgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

LONDON THROAT HOSPITAL, 204, Great Portland-street, W.—House Surgeon (non-resident) for six months. Honorarium at rate of £50 per annum.

METROPOLITAN ASYLUMS BOARD ASYLUM, Leavesden, near Watford, Herts.—Male Assistant Medical Officer, unmarried. Salary £150 per annum, rising to £170, with rations, lodging, attendance, and washing.

METROPOLITAN HOS[illegible]

NORTH-EASTERN H[illegible] Bethnal Green, E.—Surg[illegible] lectrical Department S[illegible] Pathologist and Bacteriologist. Salary £50 per annum, with lunch.

ROYAL VICTORIA HOSPITAL, Bournemouth.—House Surgeon. Salary £100 per annum, with board and lodging.

ST. GILES CAMBERWELL, INFIRMARY, WORKHOUSE, &c.—Assistant Medical Superintendent. Salary £130 per annum, increasing to £160, with apartments, board, and washing.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, E.C.—Honorary Surgeon. Also Honorary Assistant Surgeon.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Demonstrator of Physiology. Salary £150 per annum.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Clinical Assistants.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Salary at rate of £40 per annum, with board, washing, and residence.

SUSSEX COUNTY HOSPITAL, Brighton.—Third House Surgeon, unmarried. Salary £60 per annum, with board and residence.

TIVERTON, [illegible] urgeon and Dis[illegible]

UNIVERSITY [illegible] n Surgery, T[illegible] harmaceutics [illegible]

WESTERN [illegible] Surgeon.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon. Terms £70 per annum, [illegible]

YORKSHIRE [illegible] eeds.—Junior Demonst[illegible]

Births, Marriages, and Deaths.

BIRTHS.

ANDERSON.—On Dec. 26th, 1903, at Newholme, Pitlochrie, Perthshire, the [illegible]

FLETT.—[illegible] of J[illegible]

LYLE.—[illegible] H. [illegible]

MURRAY.—[illegible] the [illegible] of a daughter.

DEATHS.

[illegible] ry-place, Edin[illegible] man.

[illegible] e, S.E., Mary, [illegible] ars.

[illegible] Smythe Fox, [illegible]

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE RESIGNATIONS OF MEDICAL MEN AT OLDBURY ALKALI WORKS.

ONE of the medical men concerned sends us the following account of an extraordinary situation at Oldbury:—

> Seven medical men residing at Oldbury, Langley, &c., about five miles from Birmingham, have ceased their connexion with the Oldbury alkali works in the following circumstances. The works employ about 700 hands and for many years past it has been the custom to deduct from each employé the sum of 3*d.* a week for the medical man. The employé could select which medical man he liked from among the seven medical officers for a year, the medical man being paid according to the number of hands on his list. For this 3*d.* a week, or 13*s.* a year, he had to attend anyone at the works, from the highest salaried officials down to the navvy and their families, infants and adults, to conduct confinements, perform vaccinations, and make visits at their homes, whether he resided six yards away or six miles, whenever required, day or night. The medical man had also to find drugs and surgical appliances and, it is alleged, as will be seen, to provide the money for donations to benevolent institutions in addition. The medical men met together and asked that the whole of the money paid for their services by the men should be handed to them in its entirety, the reason for this being that from the 13*s.* per man the authorities have been in the habit of deducting 1*s.* 6*d.* to form a "Dispensary Fund," from which the cost of trusses, eye shades, crutches, &c., could be defrayed for the benefit of the men. 700 times 1*s.* 6*d.* make £52 10*s.*, and this substantial sum was deducted every year. It is, the medical men contend, absurd to suppose that anything like £52 10*s.* could be required for such purposes. It is alleged that from the surplus all donations to charitable institutions were made on behalf of the men. The request of the medical men was *refused.* A meeting was held consisting of Mr. A. M. Chance, a gentleman noted for his public benefactions, and his committee. The petitioners were informed that the medical men were sufficiently well paid and that no alteration in their present rate of payment would be considered. They were further informed (presumably as a punishment for daring to ask that they should not be robbed of one-eighth of their just dues) that three of them would be dismissed and that only the four who were at the top of [illegible] men would be allowed to act [illegible] *of them would be dismissed* [illegible] ed from elsewhere to do the work. The medical men refused to allow any of their number to be dismissed for the benefit of the rest, so the following notice was posted up in the works on Dec. 24th:—
>
> Dec. 24th, 1903.
>
> OLDBURY ALKALI WORKS PROVIDENT SOCIETY.
> DISPENSARY BRANCH.
>
> In consequence of the doctors having declined the offer and terms of the committee for their services next year this branch of the society will cease on Thursday next and after that date the deduction from the wages will cease.
>
> (Signed) A. M. CHANCE, Chairman.
> G. A. COTTERILL, Secretary.
>
> Then follow the names of the committee.

Our correspondent concludes by expressing a hope that the attempt to fill the vacant posts by importation from outside of any medical man will fail, and *we endorse this view on the strength of his* statement. We do not pretend to have tested it in detail, but he tells his story categorically, and no medical man should accept work under the Oldbury Alkali Works Provident Society until he has [illegible] Union, 610, Coventry-[illegible] ame of Chance is an [illegible] honoura[illegible] annot think the firm intend to treat professional gentlemen either with meanness or with discourtesy. Possibly neither side understands the arguments of the other.

FAILING TO NOTIFY CASES OF SMALL-POX.

AN unfortunate case in which a medical man was summoned for failing to notify cases of small-pox was dealt with recently at the Manchester police-court. On Sept. 30th the defendant notified that his servant had small-pox and she was taken to the hospital. He could not explain its origin and said that he had no suspicious cases passing through his hands at the time. In the course of a fortnight several cases occurred in the neighbourhood "and it appeared that [illegible] had been treated for more than a month" by [illegible] r. J. McR. Cowie, and [illegible] me cases of small-pox and chicken-pox had points of resemblance [illegible] experienced medical man should have any difficulty in diagnosing them. Mr. Brierley, the stipendiary, said that a person was only liable if he was aware that the cases were small-pox. The defendant said he had only been in practice 12 months and had not attended a case of small-pox, and in the case in question "he never dreamt of small-pox." He was summoned for four cases but only fined for one, the others being dismissed. A fine of £5 and costs was inflicted, the stipendiary remarking "that he could not believe that the doctor was unaware that his patients were suffering from small-pox." This case does not reflect much credit on the teaching which can allow so important a point as the diagnosis of small-pox and chicken-pox to be passed over without special attention. For some time before the recent recrudescence of small-pox set in the supply of cases for clinical teaching was scanty and it might well happen that a young practitioner had never seen a case. In the future, thanks to the conscientious objectors or passive resisters and the *laissez-faire* policy of our rulers, it is probable that the supply of small-pox cases will be quite sufficient for clinical purposes and no practitioner of 12 months' standing will be able to say that he has never seen a case.

A DUELLIST'S PRECAUTION.

A QUAINT recognition of one of the common causes of septic conditions in gunshot wounds occurs in the entertaining "breezy papers" recently edited by Sir Herbert Maxwell and published by Mr. John Murray. Nearly a century ago, in July, 1806, Mr. Creevy wrote to his friend, Dr. Currie: "You see, my friend, Mr. Howorth, has been adding to the amusements of Brighton races by fighting a duel with Lord Barrymore. His lordship was his adversary at whist and chose to tell him that something he said about the cards was 'false,' upon which Howorth gave him such a blow as makes the lord walk about at this moment with a black eye. Of course, a duel could not be prevented. When they got to the ground Howorth very coolly pulled off his coat and said, 'My lord, having been a surgeon I know that the most dangerous thing in a wound is having a piece of cloth shot into it, so I advise you to follow my example.' The peer, I believe, despised such low professional care and no harm happened to either of them." It might be suggested that "low professional care" carried to its logical conclusion would have recommended the angry card-players to fight naked; they adopted, however, a more effective precaution in not getting hit.

CIVIL WAR.

WE received last week, just as we were going to press, a long letter from a gentleman who signed himself, "Chairman of the National Canine Defence League." Somebody seems to have accused him of being inaccurate. As, however, we have made no allusion to him or to his work or his society's work we do not think his defence of his previous statements, which was not made in our columns, need appear in THE LANCET. Somebody else has sent us a notice of a statue that is being raised to a brown dog. This seems to us a very reasonable movement in spite of the inconceivable silliness of its promoters. It may do good that the public should be reminded of the amusing failure of the National Antivivisection Society in its efforts to blacken the character of physiologists. We cannot, however, arbitrate in the quarrels of rival antivivisection societies.

THE TREATMENT OF PEDICULI CAPITIS.

To the Editors of THE LANCET.

SIRS,—If your correspondent "E" will sponge the hair with dilute acetic acid, or even simple vinegar, I think he will attain his object. It will be wiser, however, to combine some parasiticide with it to ensure the destruction of any young brood and thus prevent the renewing of the nits.

I am, Sirs, yours faithfully,

Ryde, Dec. 30th, 1903. J. MILLER.

*** We have received several other replies advocating different preparations of turpentine or paraffin; notably one from from Messrs. Arthur and Co. recommending the steady use of paraffin, the head to be combed regularly, shampooed, and dried in the air.—ED. L.

THE KEARTON PHOTOGRAPHIC EXHIBITION.

Messrs. Richard and Cherry Kearton will show their collection of enlarged photographs, taken direct from nature, of birds, beasts, reptiles, insects, &c., at the Modern Gallery, 175, Bond-street, W. A private view will be held on Jan. 1st, 3 P.M. to 6 P.M., at the close of which Mr. Richard Kearton will deliver a lecture. The exhibition will be open from 10 A.M. to 9 30 P.M. from Jan. 2nd to Jan. 12th inclusive, except on the evenings of the 6th and 8th, when the exhibition will be closed at 6 P.M. We recommend every student of natural history to make an opportunity of seeing these photographs.

"THE DOCTOR."

WE have been asked to warn medical men, chemists, and others against buying, or in any way dealing with, pirated copies of the well-known picture called "The Doctor" by Mr. Luke Fildes, R.A., of which Messrs. Thomas Agnew and Sons, of 39B, Old Bond-street, publish an engraving. The picture has been extensively reproduced in America and from time to time pirated copies have been imported into the United Kingdom either as engravings or for use as advertisements, mainly in connexion with American chemical preparations. Large numbers of these copies have been seized and injunctions obtained against the importers. Electrotypes of the picture have also been offered to printers and chemists in the United Kingdom by several American electrotype manufacturing firms. It is desirable in the public interest that it should be as widely known as possible that the importation, exhibition, or use of any of these unlawful copies or electrotypes constitutes a breach of the Copyright Acts and that the owners of the copyright are compelled for their own protection to take proceedings against all persons whom they may find committing such breaches.

DIABETES.

To the Editors of THE LANCET.

SIRS,—Is it permissible to give maltine and its preparations to a patient suffering from diabetes mellitus, also glycerine? I have a patient attacked by this disease; since it came on he has lost his vision for near objects and cannot read or recognise faces a yard or two from him. Is there any special treatment for this loss of vision which I see mentioned in some works on diabetes? I shall be glad if any brother practitioner can advise me on the matter.

I am, Sirs, yours faithfully,

Dec. 22nd, 1903. TROUT.

IODIDE OF POTASSIUM AND SNEEZING.

To the Editors of THE LANCET.

SIRS,—The "excessive sneezing attended by severe nasal and conjunctival irritation" caused by small doses of iodide of potassium as described by "Cyclops" would probably disappear if larger doses of the iodide were given, say 10 or 15 grains. The action of the drug is also greatly improved by making the patient sip a tumblerful of hot water about an hour before meals. I am, Sirs, yours faithfully,

London Lock Hospital, Dec. 24th, 1903. J. S. PURDY, M.B. Aberd.

THE VAGINAL DOUCHE.

To the Editors of THE LANCET.

SIRS,—We must apologise to Dr. G. Crichton and acknowledge that he has much justification for his conclusions. Our catalogue shows 24 illustrations of vaginal pipes; of these, 18 are intended to show no hole at the apex; the remaining six are old illustrations, and we must admit misleading, but the pipes themselves are supplied without holes at the ends.

We are, Sirs, yours faithfully,

Dec. 29th, 1903. DOWN BROS., LTD.

◆

Dr. A. C. Ingle (Downing Grove, Cambridge) will be obliged if any of our readers can refer him to a firm who will prepare diagrams for lectures.

M. O. H. has omitted to furnish us with his name and address.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.).

WEDNESDAY (6th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (7th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat, (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (8th).—London [illegible] (1 30 P.M.), St. Thomas's (3.30 P.M.), [illegible] Cross (3 P.M.), St. Geo[illegible] (2 P.M.), Ophthalmic [illegible]

Northern Central (2 30 P M), West London (2.30 P M), London Throat (9 30 A M) Samaritan (9 30 A M and 2.30 P M) Throat Golden-square (9 30 A M), City Orthopædic (2 30 P M) Soho-square (2 P M)

SATURDAY (9th).—Royal Free (9 A M), London (2 P M), Middlesex (1.30 P M), St. Thomas's (2 P M), University College (9 15 A M) Charing Cross (2 P M), St George's (1 P M) St Mary's (10 P M) Throat, Golden-square (9 30 A M), Guy's (1 30 P M)

[illegible]

SOCIETIES.

TUESDAY (5th) —PATHOLOGICAL SOCIETY OF LONDON (20 Hanover-square W) 8 30 P M Dr F J Poynton and Dr W A Shaw: The Staphylococcus Aureus and Rheumatic Fever Dr H M Stewart: Dermoid Tumour of Brain Dr F Buzzard Dermoid Tumour of Brain —Dr J H Drysdale: Racemose Aneurysm of Brain —Mr H L Barnard and Mr H M Rigby Pulsating Exophthalmos with Aneurysms of the Internal Carotid

WE[illegible] pox (20 Hanover-[illegible] Dr R H Bell [illegible] —Dr A Bonney: Pyometra in [illegible] Dr A W W Lea: Abscess of the Uterus Paper:—Dr H R Spencer: Fibro myoma of the Intra abdominal Portion of the Round Ligament of the Uterus

FRI[illegible] SOCIETY OF MEDICAL OFFICERS [illegible] 30 P M Council [illegible] The Sophistica[illegible]

CLINICAL SOCIETY OF LONDON (2[illegible] Papers:—Sir Dyce Duckworth [illegible]

LECTURES, ADDRESSES, DEMONSTRATIONS, &c

MONDAY (4th) —MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C) —College opens

TUESDAY (5th) —MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies-street, W C) —4 P M Dr H Campbell: Clinique (Medical)

WEDNESDAY (6th) —MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22 Chenies street, W C) —4 P M Mr P J Freyer: Clinique (Surgical)

LONDON TEMPERANCE HOSPITAL (Hampstead road N W) —4 P M Lecture —Diseases of the Stomach Gastric Ulcer (Post-Graduate Course)

THURSDAY (7th) —MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies street W C) —4 P M Mr Hutchinson Clinique (Surgical)

SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone road N W) — 3 P M Mr A Doran: Abdominal Tumours and Swellings in Women

CHARING CROSS HOSPITAL.—4 P M Dr Bruce: Demonstration of Medical Cases (Post-Graduate Course)

FRIDAY (8th) —MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22 Chenies street, W C) —4 P M Mr A Lawson: Clinique (Eye)

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff It is urgently necessary that attention be given to this notice

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub Editor"

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager"*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

THE INDEX TO THE LANCET

THE Index and Title page to Vol II of 1903 which was completed with the issue of Dec 26th, are given in this number of THE LANCET

VOLUMES AND CASES.

VOLUMES for the second half of the year 1903 will be ready shortly Bound in cloth, gilt lettered, price 18*s*, carriage extra.

Cases for binding the half year's numbers are now ready Cloth, gilt lettered, price 2*s*, by post 2*s* 3*d*

To be obtained on application to the Manager, accompanied by remittance

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C , are dealt with by them ? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect

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(Taken daily at 8.30 a m by Steward's Instruments)

THE LANCET Office Dec 31st, 1903

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain fall	Solar Radia in Vacuo	Maximum Temp Shade.	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M
Dec 25	29 99	W		45	42	40	40	41	Overcast
„ 26	29 91	N E		49	41	37	37	38	Cloudy
„ 27	30 09	E		61	40	38	39	40	Raining
„ 28	30 15	N E	0 04	39	39	36	37	38	Cloudy
„ 29	30 05	E	0 02	48	35	35	31	33	Cloudy
„ 30	30 07	E.		48	36	31	Fzn	32	Fine
„ 31	29 83	S E		35	33	30	Fzn.	31	Overcast

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An Address

ON

HE FUTURE OF ELECTRO-THERAPEUSIS.

Delivered at the Annual Conversazione of the British Electro-Therapeutic Society on Dec. 18th, 1903,

Y SIR ISAMBARD OWEN, M A., M.D.CANTAB., F.R.C.P. LOND,
PHYSICIAN TO, AND LECTURER ON THE PRINCIPLES AND PRACTICE OF PHYSIC AT, ST. GEORGE'S HOSPITAL, ETC.

MR. PRESIDENT AND GENTLEMEN,—I have first to thank ou for the compliment you have paid me in inviting me to ddress you this evening. Next I have the pleasant task to erform of congratulating you upon the success that has ttended your efforts to establish this society and to place it n a substantial basis. I learned of its foundation with much nterest and satisfaction. It is in my opinion a society that vas greatly needed and one that has in its power to render mportant service to the cause of scientific medicine. The reatment of disease by physical methods, and in particular [illegible] liscovered forms of physical [illegible] n pushed forward of late years [illegible] remarkable claims have been nade in its behalf that the profession at large is greatly in eed of sober guidance and of a source of authoritative nformation in the matter. In the face of the eager xpectation and extravagant promise that certain of the nost recent developments of physical therapeutics have in nany quarters evoked it is very desirable that those nembers of our profession who are in a position to under- [illegible] investigation of the value of the new [illegible] together both to assert their position [illegible] professional brethren and by union of effort to strengthen the cause of serious and critical inquiry nto the matter. May I take it as an earnest of the critical pirit in which the association is approaching its task that you have invited to this desk to-night, not a professed specialist in electro-therapeutics or neural pathology, but a general physician whose field of work obliges him to take a [illegible] h a matter and whose personal [illegible] that of being somewhat unduly [illegible] therapeutic results.

Your society will, I think, need an ample measure of the critical—may I say even of the sceptical—spirit in its self- mposed task of dealing with some of the physico-therapeutic questions that are now agitating the medical world, for the atmosphere in which your work will have to be done is one that may best be described as oppositely charged. The many unexpected revelations which physical science has yielded [illegible] years have prepared the public mind [illegible] f physical marvels and whetted its [illegible] The report of each new departure [illegible] falls nowadays on eager ears, both within and without the medical profession. As each fresh discovery in the realm of pure physics is followed by its [illegible] treatment the news is speedily flashed [illegible] atever region it reaches it is sure to [illegible] body of adventurous spirits eager to [illegible] working the new field of therapeutic [illegible] em. Our therapeutic pioneers for the most part, let me frankly grant, are genuine and honest enthusiasts; but a large element among them is none the less, if one may judge from its published utterances, as little fitted to deal with a question of scientific therapeutics as the followers of Walter the Penniless were to undertake the siege of Jerusalem. To complicate the situation further, these questions are not always left entirely in the hands of members of our own profession. The movements of the regular troops are perturbed by those of the camp followers who are claiming to take a place in the fighting line. Members of various occupations remotely connected with medicine, ignorant alike of pathology and diagnosis, affect to take an active share in directing medical treatment and find their pretension admitted seemingly on the paradoxical ground that their sole armamentarium is a piece of powerful physical apparatus, wielding forces as yet but imperfectly measured or understood. Need we be surprised in the circumstances at the premature tales of wonder that occasionally reach our ears or at the roseate hues in which we find the future of terrestrial medicine painted? "*Redeunt Saturnia regna*." The age of miracles is to be restored. Cancer is to be reft of its sting, gout and rheumatism to cease from troubling, the tuberculous are to be healed, the osteo-arthritic to rise up and walk; all that is needed is for the sufferers to place themselves, like Rider Haggard's "She," in the path of the latest discovered form of radiant energy. The art of medicine is reduced to a degree of simplicity that Sangrado himself could scarce have improved on. To sift in such cases the grains of sober fact from the chaff in which they are buried is, I understand, a part of the work which your society has proposed to itself, and all honour to you for undertaking it. Difficult and even invidious as the task must needs be it is one of urgent necessity, for unless the two are separated a wind threatens ere long to arise that will carry both wheat and chaff indiscriminately away. To a period of exaggerated expectations one of equally groundless distrust must inevitably succeed. The popular idol whose day of unmerited favour is past is liable to become the victim of equally needless opprobrium, and it may be long before a hearing can be obtained for a calm and impartial judgment. It is to your society and to societies of like aim that we shall have to look to save the solid work that is being done in these matters from discredit and to incorporate it finally in the growing fabric of accepted medicine.

No philosopher, as far as I know, has ever yet thought of making inquiry into that most suggestive subject, the psychology of therapeutic belief and therapeutic error. Few philosophers, it is true, have the necessary experience of medical practice and few practising medical men have the necessary leisure for philosophic meditation. Were a philosopher with the requisite experience of medicine to arise I should incontinently urge him to render his profession this service. The results, I feel sure, would be of practical no less than of theoretical value. Generation after generation we find ourselves, or perhaps I ought to say we find our neighbours, straying into the same fallacies of observation and reasoning on therapeutic questions without taking heed of the warning that the admitted mistakes of our forefathers should give us. How else can we explain the meteoric series of new remedies and improved modes of treatment that whirl periodically into the therapeutic sky and blaze for a term of years in the lustre of a reputation that seems to be amply guaranteed only in the end to sink silently into oblivion and to be heard of no more? One by one, it is true, genuine advances in therapeutics are being made; one by one remedies for disease of unquestioned efficacy are added permanently to our store, but their volume compares ill with the mass of once popular specifics that now lie as discarded litter along the path that scientific medicine has laboriously travelled.

In view of this ordinary phenomenon of medical history I do not think you will regard me as displaying an unconscionable degree of scepticism in surmising that a large part of the recent literature of certain electro-therapeutic methods will eventually share the common fate and be left derelict on the roadside in its turn. While awaiting the advent of our imaginary teacher may I so far usurp his rôle as to [illegible] suggest that while [illegible] we have recently [illegible] sophic successors [illegible] will be ascribed by them to imperfect calculation of prognosis in the individual case? May I venture to surmise that our medical Socrates will claim to have reduced a part of our alleged curative results to the mere natural termination of transitory functional disorders, a part to the psychical relief of symptoms mainly of psychical origin, and yet another part to the natural pauses or fluctuations in the march of organic diseases which, like most forms of pulmonary tubercle for example, normally tend to run a remittent or intermittent course—that, in fine, he will find a large number of plausible therapeutic conclusions to have been arrived at either by the common error of neglecting comparative methods of investigation or by the equally fatal habit of drawing deductions from minor premisses without taking the trouble to verify the accuracy or even to define the terms of the major?

But when destructive criticism has done its worst and all that it can reasonably challenge is left out of the account, the body of established fact which recent electro-therapeusis can claim as her own will not, I undertake to say, appear either small or unimportant. If we limited our gaze to one department of electro-therapeutical work alone; if we even contended it had done nothing for certain outside this department; if it could be said to have shown no more than this: that in the various forms which radiant energy assumes we have a manageable means of modifying profoundly the vital processes of the individual cells; that in these modes of force we have, further, the power of checking, or of attenuating, or of rendering the tissues resistant to the invasion of certain parasitic organisms; and that these forces can be practically utilised for the effectual checking of such terrible maladies as lupus, epithelioma, and rodent ulcer;—putting the matter thus, I say, at its lowest conceivable estimate, we should have to allow that electro-therapeusis must be credited with one of the most remarkable steps in therapeutic knowledge that the present generation has seen.

But though we may single out this branch of electro-therapeutical work as being that in which its most assured successes have been won, solid advance has beyond doubt been made in many directions besides. Less conclusive, perhaps, we must admit the results in some other departments as yet to be, but therein is no ground for discouragement. Electro therapeutic methods, we must remember, are still in their infancy and though in other branches of work it may not as yet be possible to adduce equally complete chains of proof we may well be satisfied for the present to see a body of presumptive evidence steadily growing and to recognise hopeful signs of what future years may bring forth. Hardly though we may credit the effects, at times alleged to have been obtained, of radiant energy on deeply seated growths our knowledge of its penetrating powers justifies the conjecture that future improvements in apparatus may bring that, too, within the range of therapeutic possibilities. Though we must as yet suspend judgment on the curative effects claimed for induced vibrations in so suspiciously long a list of constitutional maladies the knowledge we already possess of their influence on the metabolic processes of the body forbids us altogether to dismiss the expectation that here, too, we may be really upon the track of therapeutic methods of the greatest value.

Nor can anyone fail to recognise, though fortunately it has so far eluded the eye of the sensation-monger, the extreme interest and promise of the important work that has already been done upon the subject of phoresis. Phoresis as a means of treatment is as yet in its earliest experimental stage but the possibilities that lie hidden in it seem great. It is no unjustifiable hope that one day it will enable us to solve the standing difficulty of ordinary therapeutics and place in our possession the means of accumulating effective doses of powerful chemical or physiological remedies in those parts of the organism in which their action may be beneficial without the present necessity of diffusing them more or less equally through the fluid contents of the body and thereby inducing their effects on organs which they influence injuriously. How far these and many other tempting possibilities are likely to be fulfilled we shall look to your society from time to time to tell us.

Let us, moreover, not underestimate the value of electro-therapeutic work by omitting to take into account the unconscious influence it has exerted upon the course of contemporary physiological and pathological thought. If there have been times when the tendency of physiology and pathology has been too strongly towards a purely chemical explanation of their problems, recent electro-therapeutic work must be counted among the causes which have made for a fuller consideration of the part which physical forces play in the intimate life of the cell. By the patient, reserved, and critical study of your fascinating specialty, gentlemen, by the discountenance which a strong association such as this can show towards the elements of sensationalism and extravagance with which some parts of the subject have unfortunately been associated, you will, I feel sure, be able ere long to rescue the practice of it from the hands of pretenders and to place it in its desired position as an essential branch of medical therapeutics. It is time, I think, that the public learned to recognise the danger it is running in playing with the powerful physical agencies that are the subject of your investigations. That electric applications should, like the Turkish bath, be occasionally taken in harmless forms and degrees by healthy people, avowedly as luxuries, is natural and need not perhaps call for medical animadversion, but the public should be fully advised that if these physical agencies are used for serious therapeutic purposes they must be used in a serious manner and under serious responsibility by persons trained to understand the nature and the possibilities of the maladies they are treating as well as the mere construction of the apparatus employed, and that, like other serious remedies, these agencies may be sources of danger if administered by uninstructed or half-instructed persons.

The prospective importance of physical methods in treatment, as well as the importance of physical considerations in physiology and pathology, suggest one further question which I will venture, in conclusion, to commend to the attention of the association. Is the place at present assigned to the study of physics in the medical curriculum commensurate with the anticipated requirements of future medical practice? For myself I should unhesitatingly say no. Medicine has been so habituated to regard chemistry as its especial handmaid among the pure sciences that I think it has been a little blind to the rapid advance of physical investigations and to the bearing they have on its own field of work. The tendency has been, I fear, to treat physics rather as an appendage to chemistry than as the fundamental science on which chemical conceptions themselves are largely based. I am not, I admit, raising this question on purely utilitarian grounds. In the educational world I have repeatedly urged, and not always to unwilling ears, that any scientific education, to be worthy of the name, must needs begin with the study of mathematical physics. Difficult, we all know, it must be to find room for any fresh extension of scientific training in the crowded years of the student's career; but is there no unnecessary lumber yet included in the curriculum that could be jettisoned without practical loss to meet so important a claim? In the search for a countervailing remission of requirement I for one would be hardy enough to lay a sacrilegious hand on the sacred ark of anatomy itself. In the vast mass of minute anatomical detail that the ordinary student is caused to commit to memory, could there not be found, say, a poor ten per cent. of matter that the average medical practitioner would be none the worse off for never having been obliged to learn? But this, I fear, is too large a subject to discuss at the close of a brief address. I will merely add that for my own part I should esteem the average man neither the worse educated nor the less fitted for the treatment of ordinary disease if in his early days he had given a little more attention to the undulations of ether and a little less to the details of the sphenoid bone.

A Lecture

ON

STERILITY.

Delivered at the Medical Graduates' College and Polyclinic on Oct. 26th, 1903,

BY PETER HORROCKS, M.D., F.R.C P LOND.,

SENIOR OBSTETRIC PHYSICIAN TO GUY'S HOSPITAL.

GENTLEMEN,—When two people marry it is natural and healthy that they should desire to have children. Anything that militates against this consummation, if it be at all widespread in its operation, would lead to a diminution in the rate of progress in population and if continued for a few generations might result in the decadence of a nation. Fortunately, in this country at all events, there is no falling off in fertility and we are so numerous that we can afford to spare many thousands who emigrate every year. Still, it is a fact that, speaking broadly, about one marriage in ten remains childless.[1] Almost every practitioner is consulted sooner or later on account of sterility and therefore it is important that he should have as clear a knowledge as possible of the causes that may exist and of the remedies that are available. Now in the human species it is necessary for the successful production of a child that there should be: (1) a living ovum; (2) one or more living spermatozoa; (3) that these two should meet and coalesce; (4) that the meeting place should be a suitable one; (5) that the ovum after impregnation should anchor inside the uterine cavity; (6) that the human nest (endometrium) should be healthy; and (7) that there should be nothing to prevent the uterus from developing to term or at all events to such a time that the child is viable.

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[1] Duncan: Sterility.

1. A Living Ovum.

The woman produces the egg. She begins to do this at puberty and she ceases at the climacteric. She produces an egg before she menstruates, as is evidenced by the fact that in India girls not seldom become pregnant before ever they have menstruated. Menstruation is looked upon by most physiologists as the parturition of an unimpregnated ovum. The human ovum has rarely, if ever, been seen in the unimpregnated state as it passes out of the uterus. For it is so microscopic, being not much larger than a white blood corpuscle. Hence one kno[illegible] movements, if any, when [illegible] has amœboid movements or [illegible] one may fairly say that an [illegible] dead spermatozoon, the lack of movements of which can be easily detected. I have seen patients where apparently no other conclusion could be come to than that they had only dead ova, although one could not prove it. That it is so sometimes is strongly supported by the fact that you may have certain seeds which are incapable of germinating in any soil, although indistinguishable from other seeds which will grow. When a woman menstruates regularly and moderately, when she has no discoverable defect or disease, when married life is carried out perfectly, and the spermatozoa are known to be potent, then should such a woman remain sterile during the years of greatest productivity—namely, from 25 to 37—one can say that it may have been that the ova or eggs were dead. Of course, they might be alive and yet could not be fertilised by that particular seed, for there are cases on record where a sterile marriage has been dissolved and each party has subsequently had children by a different wife and husband respectively.[2] Darwin proves this also in regard to certain animals. It would appear that the ova produced by a female during the first and last 12 years of menstrual life are not nearly so fertilisable as those produced during the middle period. Thus, a girl marrying any time between 13 and 25 years is not so likely to have children, or at all events as many children, as if married between 25 and 37 years; and between 37 and 49 years she is still less likely to have children. Not only so, but a woman who bears children, say, up to 37 years of age often remains sterile after that, although living under the same conditions of married life.

When the ovaries are not acting well the woman is apt to get fat. The relation between obesity and ovarian function is one of great interest. You know that after the climacteric a woman as a rule puts on flesh—she gets fat especially in the abdomen, so that she is what is called matronly. Many ladies strongly object to this natural obesity and will try to remedy it by various means, such as tight corsets, belts, and the like, but they are so uncomfortable that they are obliged to leave them off. If the ovaries are removed by operation the same increase in adipose tissue is noticed. Eunuchs are sleek and fat for a similar reason. Remove the testicles and a man gets fat. A capon is a cock chicken made fat by castration. Hence obesity, although not a cause of sterility, is often associated with it. The ovaries are not acting or are acting badly, no ova are being produced, or only few or only bad ones, and the sterility and obesity are due to the same cause. Hence, speaking generally, a fat girl is less likely to conceive than a thin one. No doubt you all know instances of fat women who are fertile. Probably in such cases the obesity has no relation to ovarian inactivity. Food seems to have a good deal to do with the fertilisability of the ova. It is a well-established fact that poor folks have more children as a rule than rich folks When a woman has rich food and as much of it as she likes, when she lives well every day of her life and perhaps takes wine, when she does no work and perhaps but little play in the way of physical exercise, her chances of motherhood are less and the average number of children she produces is less than in the case of a hard-working woman who perhaps not seldom has barely enough to eat and what she does get is simple plain fare which her richer sister could not eat.

The same is true of animals, and it is an interesting point in this connexion that many wild animals, especially of the nobler species, never breed whilst in captivity, as if in their wild state they were able to obtain certain food which they never get in captivity and which enables them to breed. They may lose all sexual desire and refuse to cohabit or they may cohabit freely and yet remain sterile. Anæmia or plethora, nerve conditions [illegible] choly), alcoholism, and dr[illegible] probably through interfer[illegible] proper maturation of the ova Interbreeding, too, may act in the same way. Certainly it is a well-known cause of sterility. An heiress is often sterile, particularly when she inherits her wealth through being an only child. The race is dying out through some factor acting on generation after generation. And interbreeding is one such factor. Hybridity causes sterility for the same reason, though the male is more frequently affected than the female, in animals at least.

2. One or More Living Spermatozoa.

It [illegible] For [illegible] by [illegible] always the case and certainly no one would assert that more than two or three ever penetrate a particular ovum. And yet when you consider how many thousands exist in the semen ejaculated in one emission you will realise how bountifully nature provides. It is the same throughout the animal and vegetable kingdoms.

When marriage proves sterile the husband generally assumes that it is his wife's fault. And as a rule she meekly accepts this spoken or tacit verdict and will frequently weep in secret and will sometimes get depressed and melancholy, feeling that she is not able to satisfy her husband's wish and that there is something lacking in her that other women possess. But as a fact the male is at fault in about one in ten cases, so that if you find after careful investigation that there is no discoverable cause for sterility in the wife you must then turn your attention to the husband. You may discover that his semen contains no spermatozoa at all or only a few feeble ones or only dead ones. Very likely in such a case he may not know that there is anything at all the matter with him. In some cases, however, you will find a cause of absolute sterility in the male, for example a congenital defect, and as a rule the husband knows in such a case that he is at fault. Sometimes he refuses to be examined and when he does so you may be pretty sure that he has a reason for it.

3 That these Two should Meet and Coalesce.

Probably 99 per cent of all cases of sterility are due to something which prevents the ovum and spermatozoon from meeting. In a healthy condition the ovum maturates in the [illegible] makes its way down the Fallopian tube and into the uterine cavity, where it sojourns for a time and if not impregnated it passes out with the menses and is lost. If impregnated it is thought by some that in a normal condition the fertilisation—that is, the penetration of the ovum by the spermatozoon—takes place within the Fallopian tube, and that may be the case; but in all probability normal fertilisation takes place also within the uterine cavity. Certainly we know from pathological conditions that fertilisation may take place with the ovum still in the Graafian follicle (ovarian ectopic gestation), or in the peritoneal cavity (abdominal gestation), or within the Fallopian tube (tubal gestation). All these facts prove that the spermatozoa can and do travel up the uterine cavity and along the Fallopian tubes and into the peritoneal cavity and on to the ovaries and this fact is of the highest importance. There might be some condition which prevented the ova from reaching the uterine cavity, as, for example, a double salpingitis, leading to blocking of, say, the ostium abdominale of the Fallopian tube. The fimbriæ or tentacles get inflamed, swollen, shortened, and spoiled so that the ovum is no longer caught but falls into the peritoneal cavity or into the meshwork of inflammatory lymph thrown around the tube end. Nearly always both tubes are affected and the patient remains sterile for years. But in a few instances after this period of sterility some spermatozoa manage to work their way past the obstacle and to get at, and to fertilise, the ovum where it grows in this abnormal position, constituting one of the varieties of [illegible] great danger to the [illegible] through gonorrhœal

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[2] Duncan, op. cit.

This power of travelling on the part of the spermatozoa is of great importance. Some years ago I was consulted by a young woman who was unmarried but who was four months pregnant. The hymen was not only intact but I could not pass my finger through the orifice it was so small. Obviously there had been no penetration and she was, so far as the law considers it, a *virgo intacta*. But she admitted to me that four months previously a married man had taken liberties with her and had actually spent and deposited his seed on to her vulva. But there had been no coitus in the ordinary sense and this was borne out by the condition of the parts. Nevertheless the spermatozoa had worked their way into the vagina from the vulva and had finally reached the ovum and impregnated it. When the semen is deposited within reach of the ovum obviously out of the thousands upon thousands of spermatozoa the liveliest and strongest is pretty sure to win the race and to reach the ovum first, and apparently when the spermatozoon has buried its head into the ovum changes begin at once which prevent any other spermatozoa arriving later from being able to penetrate also.

Again, you must remember that coitus is by no means synonymous with conception. Coitus is an act whereby the semen is deposited within the female. In a normal condition it is deposited in the vagina, generally in the posterior fornix. Sometimes no doubt it is ejaculated directly into the cervical canal and possibly directly into the uterine cavity and hence the occasional failure of thorough vaginal syringing immediately after coitus in preventing impregnation.

How long it takes for the spermatozoa after being deposited in the vagina to reach the ovum we do not know, but that it sometimes takes many days is extremely probable. You can imagine that if coitus took place just after a monthly period was over it would take longer than if it took place just before an expected period; for in the former case the ovum has only just started from the ovary and hence the spermatozoa would have to travel along the uterus and into the Fallopian tube before meeting with it; whereas in the latter case the ovum has already reached the uterine cavity where, in the human nest, the spermatozoa reach it without having far to travel. Hence many believe that the best time for coitus to take place, in order that pregnancy may follow, is just before an expected period; others think that the best time is just after a period is over. The Jews, who are just as prolific as other people, have strict laws on the subject. A certain number of days must elapse after a period is over, I think it is seven, and then the woman must take a bath in running water of a certain depth, width, and length, after which she is considered to be clean and coitus can be renewed. In the East-end of London rich Jews provide these baths for the poor people. In the West-end there are numerous baths of this kind for rich Jewesses. I believe the best time for a successful coitus to take place is a day or two before the "menstrual aura"[3]—i.e., the sensations which a woman has before the actual flow begins—generally more or less pain in the region of the ovaries for from a few hours to a day or two before the flow.

Some women will tell you that they know which particular coitus caused the pregnancy, because they had a different sensation at the time. But if you inquire carefully you will find that they are wrong so often that this supposed peculiar sensation is of no practical value. As a rule it is merely the orgasm. It is a prevalent idea that the orgasm is necessary. I believe myself that it is helpful, in that it is possible that it causes a better, more complete, and more copious emission on the part of the male, that it may perhaps cause some of the seed to be driven or drawn into the uterine cavity, and that it may help in bursting the Graafian follicle and setting the ovum free, or if already free, may assist it in its passage along to the normal goal—that is, the uterine cavity. But for impregnation neither pleasure nor desire is essential. I have known mothers of large families who have assured me that they have never had the least desire for coitus and have never derived the least pleasure from it. Nay, more, sometimes they positively loathe it and submit to it simply as a duty, but a duty which to them is abhorrent. And yet they have fallen pregnant and have reared large families. In other cases there has been some cause for agonising pain during coitus—pain which has destroyed all possibility of pleasure—and yet pregnancy has followed. Again there are many cases of pregnancy following rape. This may take place where the woman is unconscious, either from a blow, or during anæsthesia, or when she has fainted, or advantage may be taken of her when she is undergoing what she imagines is legitimate treatment; in which case she is quite innocent and, so far as she is concerned, the conception is immaculate. The fact is that desire and pleasure are merely nature's means for obtaining the deposition of the semen within reach of the ovum. If this is accomplished it does not matter much whether the desire or the pleasure is present or not, or whether the woman dislikes it, or suffers pain, or is unconscious or ignorant of what is being done, and therefore innocent; pregnancy can and does follow at times under each one of these conditions.

Anything that effectually prevents the ovum from reaching the cavity of the uterus will produce sterility or at best will only permit of an extra-uterine gestation. Beginning at the starting place you sometimes find the surface of the ovary so abnormally thick that the ova are unable to burst through; you may also get inflammatory products thrown out round about the ovary, so that even if the ovum does escape from the Graafian follicle it gets caught in the meshes of the more or less organised lymph and there perishes; or the ovary itself gets separated from the abdominal end of the Fallopian tube so far that the ova are not caught by the fimbriæ; or the fimbriæ become inflamed and are swollen and thickened and shortened and utterly spoiled as unerring egg-catchers. You may find them bent and twisted so that it is impossible to discover the ostium abdominale. You get peri-oöphoritis which binds the fimbriæ to the ovary so that any ovum that maturates has no chance of getting into the tube at all unless it happens to burst within the tiny area embraced by these adherent fimbriæ, and even then it is often unable to get far owing to the accumulation of a fluid which is the beginning of a tubo-ovarian cyst and which causes blocking of the ostium abdominale of the tube or of the canal of the tube not far from that opening. Again you may find the tubes bent, or stenosed, or, what is more frequent, distended with fluid through being blocked at both ends. The fluid may be purulent, watery, or sanguineous—pyosalpinx, hydrosalpinx, or hæmatosalpinx. There may be disease in the tube such as salpingitis, simple, gonorrhœal, or tuberculous. The tubes may be congenitally long or short or even absent, or stenosed or kinked. Sometimes the ostium uterinum is blocked and there are cases where an ovum has become impregnated whilst lying in that part of the tube which runs through the uterine wall. If when the ovum reaches the cavity there is anything there which will kill it, such as a gonorrhœal endometritis, sterility will ensue or if the uterus be absent then the ovum cannot enter it.

Anything which will prevent the spermatozoa from reaching the ovum will likewise cause sterility. The more vigorous the spermatozoa the greater the obstacles they can overcome. Mention has already been made of pregnancy following the deposition of semen on the vulva only. In imperforate hymen, in congenital absence of the vagina, in occlusion of a portion of the vagina, and in some congenital defects of the cervix uteri the spermatozoa are effectually prevented from reaching the ovum.

A very common experience amongst women is that the semen comes out after withdrawal, either at once or soon after or perhaps not until the erect posture is assumed. In this last case it may be a mere mechanical flowing out and not due to spasmodic contraction. Sometimes you get what is known as vaginismus, which is a painful contraction of the vaginal walls due to many causes such as urethral caruncle, lupus minimus about the hymen, small ulcers, vaginitis, pelvic inflammations, and the like, but the worst form of all is of nervous origin. Such cases, however, give rise more frequently to absolute dyspareunia, whereas in the cases I allude to, where the patient says the semen comes out directly or soon after coitus is over, you will often find a sensitive vagina which contracts on slight stimulation, but also one which contracts powerfully with both the muscle of the vaginal wall proper and with the levatores ani and other neighbouring muscular fibres which can diminish the vaginal capacity by contraction. Or you may find a disproportion in the relative parts; the vagina may be too short or too narrow; in other words, its capacity may be too small or the penis may be too big. In either case the vagina is stretched to an unusual degree during coitus and hence there is considerable elastic recoil post coitum. You will find, however, many women who are not sterile who experience this expulsion. Obviously the vagina could not expel every drop. Its walls would be at least wet with the semen after it had all apparently been expelled and therefore there would still be myriads of spermatozoa on the mucous membrane. Nevertheless it is better to remedy this if you can so that all the seed shall be retained. The vagina may be inflamed and there may be pus in it which kills the spermatozoa. Chronic vaginitis is a prolific cause of sterility. It may be simple but is mostly of gonorrhœal origin. If you see a recent case of gonorrhœal vaginitis—I mean one recently acquired—you will practically always find urethritis as well; hence the scalding micturition. In chronic cases there is a yellow discharge which is fatal to spermatozoa whether the gonococcus is present or not. Unfortunately gonorrhœal vaginitis is apt to spread upwards into the uterus and along the tubes to the peritoneum and so to set up mischief which produces a sterility which is incurable, besides leading to conditions dangerous to life. Hence the importance of dealing radically with gonorrhœa in women from the very first, attacking it especially in the urethra and cervical canals where the gonococci often lie hidden and escape from the germicidal lotions injected into the vagina. Green discharges in the vagina are often of an aggravated or more chronic form than the yellow. They are deadly to spermatozoa. There may be a watery discharge as from a vesico-vaginal fistula, or from a growth in the cervix, or from a fibroid tumour, or from some condition of the vagina. A watery discharge washes the semen away but it may not be so inimical to the life of the spermatozoa as the yellow or green discharges. If there be a recto-vaginal fistula the woman's complaint is not so much of sterility as that the fæces come through the front passage.

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[3] The term "menstrual aura" is one which I coined when I left the National Hospital for the Paralysed and Epileptic in 1884 as it seemed useful to connote the subjective sensations which a woman has before her menstrual flow.

I remember operating on a woman who had a very severe labour in India. The perineum was torn right through the sphincter ani and for an inch or more up the rectum, so that the lower part of the rectum and vagina were converted into a common cavity or cloaca. Incontinence of fæces rendered her very wretched and miserable, but for several reasons she was unable to come to England for about three years after this accident and during those three years she had two more children. If a woman has had one child she has not been absolutely sterile. But she may have a very bad confinement and she may be greatly injured, so that you find a badly torn perineum and scars along the vagina and a deeply cleft cervix, with cicatricial bands running in various directions or even a tiny cervix, the bulk of it having been torn or having sloughed away. Hence the woman remains sterile afterwards and you find the cause in this scarred condition which prevents the spermatozoa reaching the ovum.

Routine vaginal syringing is a prolific source of sterility. Many women syringe knowingly to prevent conception, but some women who want children often syringe the vagina without thinking that it is spoiling their chances. You can readily understand that the fluid used in syringing is often fatal to spermatozoa, apart from washing them away mechanically. For example, a woman uses the douche in the morning and coitus takes place at night. No matter what fluid she has used—astringents, antiseptics, even plain water—all are inimical to the life of the spermatozoa and, of course, some of the fluid remains in the vagina. Moreover, constant syringing washes away the natural secretions which are obviously the proper fluid for the spermatozoa to live in. You may find the vagina dry and hot and leathery and the secretions coagulated from astringent injections. Similarly the various measures used to prevent conception damage the vaginal walls, making them harsh to the touch and often resulting in such tenderness that dyspareunia is the result.

4. That the Meeting Place should be a Suitable One.

The best place for them to meet is probably inside the uterine cavity—in fact, in the human nest. Perhaps in the Fallopian tube, where some think they most often meet, is equally good, only the ovum must quickly pass into the uterus or it would become attached to the tubal mucous membrane. For the meeting place to be in the ovary, or in inflammatory adhesions near it, or in the peritoneal cavity would obviously be bad. Again, if the ovum gets low down in the uterus it may result in an early miscarriage or in a placenta prævia. If it escapes into the cervical canal or into the vagina it is hopeless. There is no known case of an ovum taking anchorage and developing even to a slight extent within the cervical canal or vagina. The mucous membrane of these tubes seems to be incapable of giving attachment to an ovum.

5. That the Ovum after Impregnation should anchor inside the Uterine Cavity.

Possibly an ovum might be reached by the spermatozoa *whilst still in the Graafian follicle*; or it may be whilst still passing along the tube. But in any case it must, within a very short time of penetration by the spermatozoa, make its way into the uterine cavity and fix itself on to the mucous membrane in order that it may develop normally into a child.

6. *That the Human Nest (Endometrium) should be Healthy.*

Endometritis is another prolific source of sterility, more especially of relative sterility. A woman has one or more miscarriages, accidental, pathological, or artificial, during the first year or two of married life and then becomes sterile because the mucous lining of the uterus is chronically inflamed or otherwise spoilt as a nest. Curetting with a sharp curette may so destroy the endometrium as to render it incapable of carrying out its function. Similarly the application of too strong a caustic may irremediably damage it. The uterus may be tiny, undeveloped, immature, atrophied, or hyperinvoluted.

7. That there should be Nothing to prevent the Uterus from developing to Term or at all events to such a Time that the Child is Viable.

The presence of a fibroid in the wall of the uterus is a common cause of sterility. Often enough there is an accompanying endometritis. Moreover, the canal becomes tortuous and there is frequently a watery discharge which is apt to wash away the ovum. If conception takes place the uterus is unable to grow properly and miscarriage is the rule. The uterus may be obstructed in its growth by other tumours, or it may be bound down by adhesions, or it may be displaced. Curiously enough anteflexion is more commonly associated with sterility than retroflexion, though perhaps it is not in the nature of a cause but rather that it is found associated with sterility. Such women nearly always have scanty and painful menstruation and on examination you find a crescentic-shaped uterus with a conical cervix and an angle between it and the fundus more acute than usual. Probably the endometrium is largely to blame for the sterility. Retroflexion is more a cause of miscarriage than of sterility proper. Of course an inverted uterus could not sustain a child and in severe degrees of prolapse, partial and complete procidentia, there is often sterility for obvious reasons.

Sterility is divided into absolute and relative.[4] By absolute is meant where a woman never conceives at all—for example, in cases of congenital absence of the ovaries, or tubes, or uterus, or vagina. By relative is meant where a woman becomes pregnant but who either miscarries or if she goes to viability yet she only has one or two children and then she ceases to conceive.

Sometimes a woman consults you who has been married for some years and has never been pregnant at all. At other times a patient has had a miscarriage or more than one, or even a child living or dead, but she wishes for more children and yet none come. Now, in any given case that comes before you it will be necessary for you to find out the cause, if possible, in order that you may be able to remedy it. Assuming in the first place that it is the fault of the wife, you must find out her age and how long she has been married. If she is between 20 and 30 years and has only been married two years her chances are still very good supposing you discover no bar to conception. For it has been proved[5] that the number of first pregnancies during the second and third years of married life is very considerable, whereas there is a very big drop during the fourth year. That is to say, if a woman has been married more than three years without ever becoming pregnant her chances are much less than if she is only in her third year of married life. As already mentioned, a woman's best time for conceiving and bearing an average number of children is from 25 to 37 years.

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[4] Matthews Duncan, op. cit.

[5] Matthews Duncan, op. cit.

The relative ages of husband and wife must be inquired into. An old man may in law be looked upon as capable of procreating, but after 50 years his powers are apt to wane and after 60 years his chances of getting children are poor. Where there is a great discrepancy in age it is as a rule the husband who is much older than the wife. A man, say 50 years of age or more, marries a girl 20 years of age. Such a marriage may be fruitful but it is not so likely as when the husband is only one or two years older than the wife and both are between 20 and 30 years of age. When the wife is very much older than the husband the chances of fruitfulness are very much less than under the converse conditions.

Sometimes you are told that during the first years of married life precautions have been taken to prevent conception, or if conception took place it has been got rid of by drugs or instruments. Perhaps this aversion to child-bearing was due to the idea that they could not afford. Sometimes it is pure selfishness, as the lady does not wish her pleasures, balls, parties, and the like, to be interfered with by pregnancy, parturition, and lactation. Later, when they are better off or when she sees some friend happy with her children, she feels she would like to have some herself. And so the precautions they have been using are omitted but to their chagrin and dismay no pregnancy follows. The precautions they have been using have damaged her. The vagina may be harsh and congested or inflamed. The os uteri may be eroded and the cervical mucous membrane inflamed and pouring out a copious white discharge. The uterine mucous membrane may be shaggy and pulpy, due to its fruit being untimely torn away. These are some of the ways in which sterility is caused by using precautions.

Again you may find that the patient has a yellow discharge and you may strongly suspect gonorrhœa. The woman may not have the least suspicion that she has that disease. I have seen cases where there was no doubt at all about it and yet where the husband denied ever having had it. As a rule, he will admit it to his medical attendant, especially if you tell him the importance of your knowing the truth. Notice any signs of masculinity: moustache or beard, hairs about the areolæ or over the sternum or along the front of the abdomen. Such women are often sterile. You will notice if the person is well developed—whether she has good breasts and nipples, whether her pelvis is well proportioned. It is best to measure the distances between the anterior superior spines and between the crests of the ilia. These should be about ten and 11 inches respectively. If they are less than this you may find an infantile pelvis and this may be due to want of development and, in fact, she may not have attained puberty, which would be found by eliciting other facts. The vulva, the development of the labia and mons veneris, and pubic hair should be noted and the condition of the hymen, imperforate, intact, lacerated, narrow opening, &c., or hermaphroditism. The presence of any cause of dyspareunia, such as urethral caruncle, kraurosis, lupus minimus, sores, venereal and other kinds, enlargement of glands in the groins, vulvitis, congenital defects in the vulva, hymen, vagina, uterus, or ovaries; vaginitis, urethritis, ruptured perineum from a past parturition, stenosis of the vagina or cervix uteri, congenital or acquired; cicatrices, pelvic cellulitis, pelvic peritonitis, hæmatocele, retro uterine effusions, uterine displacements, conical cervix, the length and width and general capacity of the vagina, and the condition of its mucous membrane as to rugæ, moisture, sensitiveness (vaginismus), and secretions. With a speculum note any tears or ulcers on the vagina or on the cervix uteri, also erosions and what kind of discharge there is, whether white, yellow, green, or red; or if there is any watery discharge or any growth in the vagina, the cervix, or the uterus, or any tumour in the pelvis or the abdomen. Note any fistulous communications with the bladder, rectum, cysts, abscess cavities, &c. Use a uterine sound and find out the length and direction and mobility of the uterus, also any stenosis of its canal, and the sensitiveness and vascularity of the mucous membrane. Make a bimanual examination and try to feel if the uterus is in its normal position and if you can feel anything in Douglas's pouch or above any of the fornices of the vagina. In Douglas's pouch you very often find the fundus uteri (retroflexion) or a prolapsed ovary, causing dyspareunia, or a distended tube, or some lymph from perimetritis or organised clot (hæmatocele).

Cases have been known where a woman has conceived after the climacteric; ovulation has apparently gone on for a short time after the change of life I have never come across such a case. My friend, Mr. W. Cock of Peckham, tells me he has had a case. At all events it must never be forgotten that ovulation may take place without menstruation and that therefore a woman may possibly conceive although she does not menstruate. If a woman did not ovulate she could not conceive. But in such a case she would not menstruate, for menstruation is absolutely dependent upon ovulation.

The normal healthy menses should be fluid, not clotted; they should be dark in colour and with an odour peculiar to themselves. Frequently in cases of sterility you find they are clotted or offensive, or like coffee-grounds, or that they contain fleshy pieces (membranes). These point to some morbid condition of the endometrium and may lead you to the cause and cure of the sterility. You should go fully into the menstrual history. Absolute amenorrhœa is generally associated with some congenital defect in the ovaries. Concealed menstruation is of course not amenorrhœa at all and as a rule is easily cured. Sometimes a girl ovulates but has never menstruated. In such a case you find she is well developed and very often she has monthly molimina. You may find a congenital absence of, or a rudimentary condition of, the uterus. The ovaries are present and acting well. In other cases she has a temporary amenorrhœa and she may conceive before menstruation is resumed. Hence women sometimes conceive during the amenorrhœa of lactation.

It will often be necessary for you to inquire regarding coitus. Very likely you may find there is pain which varies from a mere uncomfortableness to such agony as to prevent any penetration whatsoever. Or you may discover that excessive coitus is carried on. The sterility in such a case is probably due to a weakening of the male element. You will be sometimes astonished to find absolute ignorance in regard to coitus on the part of both husband and wife. I have met with cases where marriage has never been consummated through ignorance. In two such cases that I know of when it was explained proper coitus took place and pregnancy followed. In several cases, however, where after several years of supposed married life I found the lady a *virgo intacta* it has proved to be owing to impotency on the part of the husband from congenital or acquired causes.

TREATMENT.

What has been already said in discussing the diagnosis will have suggested to a large extent the line of treatment to be adopted, but I will summarise it and put it before you as one carries it out in actual practice.

1. *No treatment* —Where a woman is healthy and so far as can be ascertained there is no discoverable cause for the sterility and she has not been married for a full three years she may be left alone and told that she can still hope for progeny, but that if she does not become pregnant after, say, four years of married life she can then be seen again. I may mention here that when one finds that a woman has been married for some years but that marriage has never been consummated then the three years of married life must date from the consummation.

2. *Food and exercise.*—Obviously a spare diet and plenty of work, or its equivalent in physical exercise, will assist in curing the sterility. By a spare diet I mean plain food and not too much and not too often, with no alcohol of any description unless the patient requires it for some other reason. For example, a glass of bitter beer with her dinner is sometimes as good a tonic as can be given but as a rule I recommend no alcoholic drinks of any kind. Similarly the patient must give up taking any drugs, such as opiates or other sedatives. Where the patient is fat from ovarian inactivity and especially when the periods are scanty or absent I generally prescribe permanganate of potash in compressed tablets, one or two grains immediately after food three times a day. Of course, the adiposity here is physiological in a sense and if the ovaries can be got to resume active function the patient will soon get thinner. Especially if she begins to have babies will she get thinner.

It is a curious thing that not only do the poor and hard-working have more children than the rich and leisured classes but also they have a much larger proportion of male infants. In the Hunterian Oration which I gave in 1898 I showed that amongst the poor classes round about Guy's Hospital the proportion was 100 males to 89 females whilst amongst the descendants of the Queen the proportion was 100 females to 80 males. It is a well-known fact that excess of female births indicates weakness of productive energy. Professor Schenk of Vienna obtained some notoriety a few years ago by suggesting the possibility of controlling the sex by means of a particular diet. What we know of animal life, especially amongst bees, all seems to point to this, that in order to have male children the reproductive activity should be good and that therefore the diet should be spare. But however much a woman might starve herself she could not always succeed in having a male infant. Frequently I find a complete change of food is successful and by that I mean change of cooking as well. For instance, you send your patient back to her old home, or on a visit to a relative or friend, or to some holiday resort in England or abroad where she obtains quite a different kind of diet, cooked differently and served differently, and she becomes fertile although perhaps you have been trying other means in vain.

3. *Tonics.*—If a woman is in bad general health you would try to improve that as far as possible by giving suitable tonics. Poor women who are thin and prolific are strong as a rule. But a woman might be thin and weak from some cause of ill-health. It is curious, however, that in some cases of even profound ill-health a woman will breed easily. For example, in pulmonary phthisis you often find great reproductive activity right up to the end of the patient's life. I have myself delivered more than one woman in the last stages of phthisis and you will find as a rule in such cases that the child is plump and fat.

4 *Change of environment or climate.*—One of the best methods of treating sterility where there is no apparent bar to conception is a change of environment. Possibly the good results are obtained by a complete alteration in diet as has been already referred to. But that is not all. There is a great deal in the climate. Speaking broadly one may say that as a rule it is best to send the patient to a warmer climate. The influence of heat and cold upon fertility is very considerable. The beneficial effects upon ovarian activity of a hot climate such as India and South Africa and similar places are well known. Malta, Madeira, the south of France, and Italy all act in a similar though to a less degree and where patients are unable to go abroad I generally recommend the coast of Cornwall or Devonshire. Falmouth and Torquay are distinctly warmer than most parts of England. I have known cases where pregnancy has resulted from a change of residence to a colder climate, but perhaps the result was not due to that altogether, though no doubt some natures would be more fruitful in a temperate than in a hot climate. At all events we know that plants put in hot-houses will frequently bloom and fructify, whilst exposed to the ordinary atmosphere they are barely alive and quite or nearly barren. Also menstruation is nearly always improved, sometimes too much so, by living in a hotter climate. Many ladies return yearly from India suffering from menorrhagia. Moreover, hot climates develop to a large extent the sexual instincts, and although, as I have pointed out, these are not essential to fertility still they are helpful. It is often useful to send patients to hydropathic establishments or to some of the spas here or abroad. Personally, I frequently recommend country life—some quiet village as far as possible from a town—that is, when the patient already lives in a town. Also, after other methods have failed I sometimes get a patient to remove from one part to another in the place where she lives; for example, from the north to the south of London. Especially if I find, as is sometimes the case, that a patient is habitually constipated when living in a certain part and not so when visiting friends in other places. Probably in most of these cases it is the water-supply that causes the constipation. But whatever it is you eliminate it by a change of residence.

5. *Specifics*—Where the husband has had syphilis and the wife has had one or more miscarriages, thought to be due to inherited paternal syphilis in the developing ova, we should put the woman on a course of mercury or iodide of potassium. I think the former is the best, at first at all events, and I generally give it before she becomes pregnant again, and of course should she conceive then give it all through the gestation. In this way you will frequently succeed. Where there is no history of syphilis in the husband, but where there is no other discoverable cause of repeated miscarriages, I also recommend specific treatment.

6 *Local treatment.*—This would depend, of course, upon what was found on examination. You would cure any excoriations, caruncles, pruritus, or eczema. Repair any bad rupture of the perineum. Remove hypertrophied nymphæ if they are so long as to be in the way. Remove any tumours of the vulva. The hymen may be too thick or extremely sensitive and it may be necessary to incise it, or to cut pieces away, or to burn the sensitive patches. Cure any vaginitis that is present and be careful to pay special attention to the urethral and cervical canals, because it is from neglect of these that so many cases are only partially cured, the patient finding when she omits using the lotion you have prescribed that she gradually gets the yellow discharge back again. I generally prescribe lotio nigra for the vaginal douching and myself apply to the urethral and cervical canals a solution of nitrate of silver, ten grains to the ounce, by means of a Playfair's probe. This should be done at least every other day until the patient is cured. If after apparent cure the discharge returns it will be necessary to repeat the treatment and to do it more thoroughly. Any bands or rings or cicatrices on the vagina must be cut through in a suitable way. In vaginismus Sims's dilators or bougies may be used, also cocaine pessaries. Where the vagina is too short or too small in its capacity and whenever there is relative disproportion you should advise incomplete penetration. Where [illegible]—for example, too acrid— [illegible] ost coitum you can let the patient wear a polished vulcanite pessary and advise incomplete penetration so as to avoid the elastic recoil. In these cases I never recommend rubber instruments. An ordinary Hodge's pessary may do but I prefer a small Galabin's anteversion pessary which prevents the walls of the vagina from coming together and at the same time does not interfere with married life. Discharges of various kinds—red, yellow, green, white, or watery—must be treated according to their respective causes. In deep lacerations of the cervix trachelorrhaphy is beneficial as it prevents miscarriages when the cervical canal is properly closed. When the cervix uteri is too long or is thickened by hypertrophy of split portions you can remove pieces of it. Also the cervix uteri may be dilated or split, especially in those cases where there is a conical cervix or a small os uteri I generally perform a modification of Sims's operation by cutting through the circular fibres twice. This prevents reunion and subsequent closure by the retraction of the cut fibres Of course, one does this operation chiefly for dysmenorrhœa, but it is sometimes successful in curing the sterility, although not nearly so often as in relieving the dysmenorrhœa.

In cases of chronic endocervicitis you may have to scrape the mucous membrane with a sharp spoon or to apply a strong caustic. You would remove any polypi or other tumours from the cervix and treat any erosions that might be present. In some instances I have found that the mere passing of a sound for the purpose of discovering the length, &c, of the uterus has been followed by successful impregnation as if the sound had removed some obstacle or other. You can pass the sound or you may dilate with Hegar's dilators or some other form of dilator. I prefer Hegar's because they have a definite meaning. Each number refers to the diameter in millimetres. You can often dilate up to a No. 9 without an anæsthetic but it is better in many cases to give an anæsthetic and to dilate up to a No. 12 or 14—certainly if your object is to relieve dysmenorrhœa as well as to try to cure the sterility. When there is endometritis you may curette with advantage. Avoid a sharp curette or you may damage the nest. Apply tincture of iodine or liniment of iodine, or phenol, or iodised phenol, by means of a Playfair's probe, according to the strength of caustic required and this depends as a rule on the chronicity of the case; the longer it has existed the stronger the caustic required. Curetting is also useful when the menses are foul or clotted or profuse, or a bad colour, or like coffee grounds. Some advise the wearing of an intra uterine stem pessary, but this has practically fallen into disuse. The use of electricity is at present rather empirical. You might pass a current through with the negative pole in the uterus at one time and if this failed with the positive pole in the uterus at another; but I have known ladies spend much money on quack specialists who buoyed them up with hopes resting on an imaginary mysterious influence which the application of electricity would bring to bear. Remove any polypi or other tumours when possible. Remedy any displacements by suitable appliances or by operation.

With regard to the Fallopian tubes they are difficult to treat as they are quite out of one's reach except by operation. Where a double salpingitis has supervened on a gonorrhœa one can only attend to the general health and cure the gonorrhœa so far as it is accessible in the vulva, urethra, vagina, and uterus, and so hope that perhaps the tubes will in the end become so far better as to contain only a sterile fluid which will permit an ovum to pass along intact. Beyond this it is a question whether it would be possible to treat the tubes by abdominal section—that is, opening the abdomen and, as far as possible, separating any adhesions about the fimbriæ and perhaps passing a small probe along the canals of the tubes and applying some caustic. Considering the risk to life of this procedure and the impossibility of promising success in regard to the cure of the sterility I should never recommend it myself. But I have done this—namely, when it has been necessary to perform an abdominal section for some condition such as an ovarian tumour, finding the tube of the opposite side matted down or kinked I have separated the adhesions and placed the fimbriæ in as normal a position as possible, at the same time unravelling the tube and freeing it from any kinking.

Where ovaritis is diagnosed this must be treated by counter irritation such as blisters and tincture of iodine and giving hot water vaginal douches and whilst these are being given let the patient have physiological rest. Bromides may be given. Amenorrhœa due to various causes must be treated. When due to ovarian sluggishness you can treat it in the way already mentioned. Very often amenorrhœa is due to what the late Sir Andrew Clark called "fæcal anæmia" and it is best cured, as is also chlorosis with scanty or absent periods, by means of some easily assimilated preparation of iron such as pilula ferri, ferri carbonas saccharata (in powder), mistura ferri composita, and some saline purge such as the white magnesia mixture. As the producers of the ova the ovaries are the most important sexual organs in a woman and hence everything that can be done to improve their function should be tried. I can only hint at this by again referring to food, climate, permanganate of potash, &c. Where an ovary or both ovaries are bound down by inflammatory adhesions one must try to get absorption of the lymph by means of hot douches and absorbents such as mercury. I have no experience of massage in such cases and I think it would probably do more harm than good. The question of abdominal section with the idea of separating and freeing the bound-down ovaries I should be inclined to discuss in the same way as in regard to the tubes—namely, that if the abdomen had to be opened for some other reason one might at the time of the operation look at the ovaries and, if practicable, free them from the adhesions. Pelvic inflammations and hæmatocele must be treated by rest, real and physiological, hot vaginal douches, hot external applications such as poultices and hot flannels, and absorbents such as unguentum hydrargyri perchloridi and potassii iodidum internally and a little unguentum hydrargyri oleatis rubbed into the skin above the groins externally.

7. *Regulation of coitus.*—If possible remove any source of pain. Advise as to any excess. Suggest a day or two before the aura as the best time. In some cases advise complete abstinence for a period of time varying in different cases according to circumstances from a week to a month or more. Certainly it ought not to take place at all when you are treating the wife for gonorrhœa or anything which requires vaginal syringing, inflammations and the like. But the idea of abstinence is rather that of increasing the power of reproductivity. The male element may be improved by it. And possibly if the husband waited until there was desire on the part of his wife the chances of success might be greater. Find out if coitus is performed properly and advise accordingly.

8. *Natural habits.*—Find out if the patient is using a vaginal douche for any reason whatever. If there is a good reason—as, for example, in vaginitis—cure the condition if possible and then let her leave off all syringing so that the parts may get into a natural healthy condition.

Should all measures fail then you must turn your attention to the husband as the possible cause of the sterility. But I have not time to deal with sterility from that source. Artificial insemination is a wide subject with which I cannot deal here. But if you succeed in removing the barriers to conception and your patient becomes pregnant and goes to term and is delivered of a living child you will be amply rewarded by seeing the happiness in the mother's eyes as she fondles that little bit of humanity that is her very own.

A Clinical Lecture

ON

SEVEN CASES OF CÆSAREAN SECTION.

Delivered in the Leeds General Infirmary on Nov. 27th, 1903,

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Gentlemen,—In July last a married woman with a contracted pelvis came to this hospital to ask for attendance in confinement in the out-patient maternity charity. She said that she had had three previous labours. The first was certainly a craniotomy; in the second the neck was dislocated in attempts to deliver; and the third also had proved fatal to the child and she was very anxious to have a living infant. Her age was 28 years; her stature was 55½ inches. She had a small flat pelvis with a true conjugate of about two and a half inches or a little less—say six centimetres. She was in good health and labour was expected about the second week in September. It was explained to her that if she would come into the hospital on Sept. 1st and undergo the operation of Cæsarean section in all probability her child would live and she would recover. Having understood the nature of the operation and having consulted her husband she consented and was admitted on Sept. 2nd. She was prepared for abdominal section in the usual way and no one was allowed to make a vaginal examination. Without waiting for labour to begin the operation was put down for performance in the general theatre on my usual Saturday morning list. She was anæsthetised with ether by Mr. D. Seaton. Our aseptic technique now includes the wearing of sterilised rubber gloves by all persons concerned, including dressers and nurses. To incise the abdomen and uterus and to deliver a living child occupied two and a quarter minutes. The uterus was then drawn forwards through the abdominal wound and all bleeding was controlled by an elastic cord while the placenta and membranes were removed and the uterus was very carefully stitched up. The uterus contracted and retracted well and after the elastic cord had been removed and the uterus returned there was no further hæmorrhage. The patient bore the operation exceedingly well and on the next day looked better than the average primipara on the morning after labour. The temperature reached 100° F. on the second night and then became normal. There were no complications and the wound healed by first intention. The child was put to the breast at intervals on and after the second day, a plentiful secretion of milk began on *the third* day, and on the twenty-second day the mother and child were discharged in excellent health. The child weighed 6 pounds 14 ounces at birth and 8 pounds 2 ounces on discharge. Thus the hopes which had been held out to the patient last July were fully justified.

Cases in which Cæsarean section is contemplated may be divided into those where operative conditions are perfectly satisfactory and under control and those where they are more or less unsatisfactory. The case just mentioned is an example of the former. It is a good example of modern Cæsarean section, an operation neither difficult nor very dangerous. We can not only perform it with confidence in those cases of extreme pelvic contraction where the indications for it are "absolute" but we can offer it to our patients as a fairly safe alternative to the termination of pregnancy by the destruction of the unborn child. To the mother such a proceeding is most miserable and depressing, especially when repeated again and again. To the obstetric surgeon it is essentially repugnant in its nature and ghastly in its details. It is, moreover, in all high degrees of pelvic contraction attended with very appreciable risk.

To you, gentlemen, the operation may seem to be so simple and straightforward that you may fail to realise how now a thing it is in the history of obstetrics that any degree of safety should be ascribed to the operation of Cæsarean section. When I was a *student* Dr. Robert Barnes described it as "occupying a doubtful place between conservative and sacrificial midwifery" and as being "resorted to with a feeling akin to despair for the fate of the mother which was scarcely tempered by the hope of saving the child" It will not be a waste of time if we take a brief glance at the past history of our subject.

Cæsarean section is the oldest of all abdominal sections, the oldest by many centuries. Most modern abdominal sections are the result of the safety of aseptic surgery, but Cæsarean section and later ovariotomy were formerly undertaken in ignorance of the most essential conditions of success. In fact, the development of modern abdominal surgery springs largely from experience gained in the performance of ovariotomy and the application thereto of aseptic principles. In early times Cæsarean section was performed simply to save the child. It may be that the house of the Cæsars derived its name from one born, as Pliny tells us, by *incision* of his mother's womb—*a cæso matris utero*[1]—just as Macduff is said to have been

> "From his mother's womb
> Untimely ripped."[2]

But this was not surgery and our interest begins with the day when the mother's life was put first. The first time the mother's life was saved is said to have been in the year 1500 A.D. and the account of this operation may be new to most of you. I take it from Herrgott's French translation of Siebold's "History of Obstetrics."[3] If it is true it is the story of a very brave deed. In the year 1500 Elizabeth Alespach, wife of Jacques Nufer, a pig-dealer in the village of Siegerhausen in Thurgovie (near the Lake of Constance in Switzerland), being pregnant with her first child and having felt labour pains for several days summoned 13 midwives in succession to her assistance as well as some *lithotomists*. They made many attempts to deliver her but all were futile. As her sufferings were acute and as she had abandoned all hope of relief her husband told her that if she could trust him he would undertake an operation which, by God's grace, might succeed. His wife answered that she would endure anything to get relief. As the matter was a delicate one the husband went to the Mayor of Frauenfelden, the capital of the canton, to ask permission to undertake the operation. The mayor made some difficulty at first but being satisfied as to the condition of the woman and the good faith of the husband he gave consent. The man returned home and told the midwives that those who had sufficient courage to assist him might remain in the room but those who were afraid had better go out as he was about to undertake something by which he hoped, with God's help, to save his wife. 11 of the midwives grasped and admired his purpose but retired. Two, more courageous, remained with the lithotomists to render help. After having prayed for Divine assistance and carefully fastened the door he laid his wife upon a table and made an abdominal incision as he would have done with a pig (the man being no doubt accustomed to spaying sows). At the first cut he opened the abdomen so successfully that the child was extracted uninjured. The midwives outside the door heard the child c[illegible] vain, for they were not admitt[illegible] ished and the wound had been [illegible] eterinary surgeons. The wound healed well and the woman recovered without any bad symptoms. As she subsequently bore six more children, two being twins, there cannot have been any serious degree of pelvic contraction. The child rescued by the operation died at the age of 77 years, leaving wife, children, and grandchildren. This story has the appearance of truth. Siebold thinks that some doubt is thrown on the question of this being a case of Cæsarean section by the fact that there is no mention of any incision in the womb in addition to the abdominal incision, and as she bore children naturally afterwards it is suggested that this was really an extra-uterine fœtus. There seems to me to be no weight in the first objection; a bold incision would be more likely than not to open the uterus simultaneously with the abdomen as anyone who has experience in the operation will realise. It is not difficult to imagine that a woman might be in bad pain for some days and that she and the midwives might be alarmed and in despair in the presence of some condition not incompatible with subsequent normal labours. Version was but little known in Europe till the time of Ambroise Paré, and midwives and "lithotomists" and barbers might easily be at the end of their limited resources. The question of the fate of the placenta in abdominal pregnancy is a very serious matter and the facts that the wound healed by first intention and that the woman recovered without a bad symptom and that the child was the reverse of puny and short-lived are considerations which incline me to accept the case as one of Cæsarean section. So much for Nufer.

This was 400 years ago and during the greater part of these four centuries attempts to practise the operation have resulted in a most appalling mortality, so that even during the greater part of the nineteenth century accoucheurs were largely occupied in inventing osteotomists, cephalotribes, cranioclasts, basylists, basiotribes, and other instruments for destroying the child in order to supersede as far as possible the performance of hysterotomy. If you will take from the library shelves a treatise on obstetric medicine published in 1836 by Dr. Davis in two most beautifully illustrated quarto volumes, you will find a figure of an "osteotomist" which he invented and which he thought would "have the effect of reducing almost to zero the necessity of having recourse to that last extremity of our art and the forlorn hope of the unhappy patient, the Cæsarean operation." Ramsbotham in 1841 gives the statistics for the British Isles as 30 cases with 27 deaths. I notice that he says that sutures are not needed for the uterine wound but that two or perhaps three will be required for the abdominal incision.[4]

I have already quoted Dr. Barnes's despairing utterance in 1871 and this was a time when ovariotomy was a well-established operation. The British mortality from Cæsarean section was at this period 84 per cent.[5] In a very valuable French treatise on obstetrics Budin tells us that in 1876 there had been no successful case in Paris since 1787.[6] It was from 1876 that we may date the beginning of better things. The method of removing myomatous uteri by supravaginal hysterectomy with an extraperitoneal pedicle secured by a serre-nœud and fixed in the abdominal wound had been successfully practised by Péan of Paris and by Koeberlé of Strasburg. Professor Porro of Pavia realised that such a treatment of the puerperal uterus after Cæsarean section would save the patient from some of the chief dangers of the operation as hitherto performed, and he introduced the operation known as Porro's operation which is described in every text-book of midwifery. The better results of this operation became obvious at once and the mortality continued to fall as aseptic principles were developed and applied to it. Eight years later Dr. C. Godson[7] collected the statistics of Porro's operation up to date and found that the mortality was 56·57 per cent. That is, about half the cases were being saved. It seemed likely that Porro's method would oust the old operation completely, but in 1882 Saenger of Leipsic designed the modern operation known as conservative Cæsarean section or Saenger's operation. He succeeded in convincing the profession that the principle of sacrificing the womb is wrong and his operation is in principle, if not in all its original details, now regarded as the best method of delivery by abdominal hysterotomy. The mortality of Saenger's operation to-day in 355 cases by the most experienced operators is under 7 per cent., while in cases not infected [illegible] 4 per cent. Zweifel has had [illegible] se figures are quoted from one [illegible] works on obstetrics, Professo[illegible] text-book. Saenger died in January, 1903, at the early age of 50 years, and the loss of this gifted, original, and many-sided man is much to be lamented In 1898 Leopold of Dresden had completed 100 cases with a mortality of 9·8 per cent. for the conservative operation and 10·3 per cent. for Porro's operation.[8] He is said to have performed more Cæsarean operations than any other man. The longest series of such cases will always, we expect, come from abroad. Contracted pelvis occurs in many parts of the continent with a frequency which is unknown in England. The Germans call rickets *die Englische Krankheit*. They see plenty of it themselves. We certainly may describe osteomalacia as a continental disease. There it is endemic and frequent, here it is sporadic and rare.

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[1] Pliny, Natural History.

[2] Macbeth Act v, Scene 8.

[3] Essai d'une Histoire de l'Obstétrice, Siebold. Traduit avec additions, figures, et un appendix par F. J. Herrgott, Paris, 1893. Tome ii., p. 96.

[4] F. H Ramsbotham: Principles and Practice of Obstetric Medicine and Surgery, London, 1841.

[5] Galabin: Midwifery, p. 697.

[6] Traité de l'Art des Accouchements, Tarnier, Chantreuil, et Budin, vol. iv., 1901.

[7] Brit. Med. Jour., 1885, vol. i., p. 120.

[8] Archiv für Gynäkologie, Band lvi., Heft 1

In the modern conservative operation success depends upon three things—viz.: 1. The most rigid asepsis. No operation owes more to aseptic surgery than this. I do not know whether Lord Lister ever performed a Cæsarean section, nor do I know how long it may be since he attended a confinement; but every successful case of Cæsarean operation owes her recovery largely to him, and every woman now attended in labour by a civilised practitioner has a debt to Lister. 2. Efficient suture of the uterine incision so as to prevent any leakage of lochial fluid into the peritoneal cavity. 3. Early operation. This means the performance of operation not as a last resource when other means have failed and when the patient is exhausted by protracted labour and the parts are infected by prolonged digital and other manipulations, but at the earliest suitable time when the strength of the patient is at the maximum and the parts are untouched.

The ideal conditions for operation are most perfectly realised when the pelvic contraction which necessitates the operation has been diagnosed beforehand, so that no vaginal operation needs to be made at the time. A day and hour can then be fixed, all requisite preparations can be completed, and the hysterotomy can be performed without waiting for labour to begin. It is a most interesting physiological fact that if the pregnant womb be thus incised and evacuated retraction and spontaneous arrest of hæmorrhage will take place as in an ordinary labour. The principle is not really new. It has been known for a long time that rapid delivery by *accouchement forcé* does not necessarily involve post partum hæmorrhage. Recent experience with Bossi's dilator has shown that retraction will follow evacuation of the womb by this process also. For example, in a recent case of eclampsia before labour had set in I dilated the cervix with Bossi's dilator and delivered the child with forceps within 45 minutes. The placenta came away soon after and there was no post-partum hæmorrhage. Ideal conditions for the operation cannot always be secured. This is obvious. The pelvic contraction may not be discovered till labour has commenced. Our cases here are often admitted in labour and may have been brought from some distance, but the earlier the operation the better the result. Cases unsatisfactory for this operation are such as have been subjected to fruitless attempts to deliver per vias naturales by forceps or turning; cases where the membranes have been long ruptured and repeated vaginal examinations have been made, where the pulse has become rapid, the temperature raised, the uterus tonically contracted, and the patient exhausted. In such cases if the indications are "relative" the best plan usually is to deliver by embryotomy and to perform Cæsarean section if a subsequent pregnancy should occur. If the indications are "absolute" then hysterotomy followed by hysterectomy is the best plan.

The objections to Porro's operation are that it is in most cases a needless mutilation and a greater shock. The fixing of the pedicle in the wound is an unsurgical procedure. It necroses, becomes more or less septic, and when it separates a large cavity is left to granulate and a weak place is left in the abdominal wall where ventral hernia is very apt to develop. If it is thought that hysterectomy is indicated it is better to carry out the operation of supravaginal amputation of the uterus with retroperitoneal pedicle. This is said to be an easy operation under these conditions of large abdominal incision and lax pelvic tissues and not to occupy more time than an ordinary Porro's operation[9]

Since my appointment to this hospital four years ago I have performed conservative Cæsarean section seven times with six consecutive recoveries.[10] For the general details of the operation I refer you to your text-books. I propose here to say a few words about certain points which have struck me and certain questions which arise in connexion with the subject. I give first a list of my cases.

CASE 1—The patient had been married nine years and had had five dead children. She had a flat pelvis with a conjugata vera of two and three-quarter inches. Cæsarean section was performed on May 20th, 1900, labour having commenced. Hæmorrhage was controlled manually. Salpingectomy was performed. The child lived but the mother died on the seventh day from broncho-pneumonia and suppuration in the uterine incision (see note on this case).

CASE 2.—The patient was married and a primipara, her age being 24 years. Her height was 4 feet 6 inches. The conjugata vera was two and a half inches. She was admitted in labour. Cæsarean section was performed on Nov. 21st, 1900. Hæmorrhage was controlled manually. Salpingectomy was also performed. The child lived. The wound healed by first intention and the mother made a good recovery.

CASE 3.—The patient was a primipara, married, and aged 25 years. She was the subject of rickets. Her height was 4 feet 7 inches and she had a conjugata vera of two and three-quarter inches. She was admitted in labour on Sept. 6th, 1901. The funis was prolapsing. Cæsarean section and salpingectomy were performed. An elastic tourniquet was used. The mother recovered without complication. The child was stillborn, having been killed by pressure on the cord.

CASE 4.—The patient was single and aged 33 years. She was a rachitic dwarf, her height being 3 feet 1 inch. Her limbs and pelvis were much deformed. The conjugata vera was two inches. She was admitted in labour Cæsarean section was performed on August 27th, 1902 Some ascitic fluid was present in the peritoneal cavity. Hæmorrhage was controlled manually. Salpingectomy was also performed. The child lived and the mother recovered without complication.

CASE 5.—The patient was married, a primipara, and aged 28 years. Her height was 4 feet 3 inches. She had a badly-contracted rickety pelvis. The conjugata vera was one and three quarter inches. She was admitted in labour. Cæsarean section was performed on Jan. 1st, 1903, the presentation being transverse. The cord was prolapsing. A little ascites was present. Hæmorrhage was controlled by elastic tourniquet. Salpingectomy was afterwards performed. The child was stillborn. The mother recovered without any complication.

CASE 6.—The patient was a primipara, single, aged 27 years. She was a rickety subject. Her height was 3 feet 8¼ inches. The conjugata vera was two inches She was admitted in labour. Cæsarean section was performed on June 21st, 1903 A little ascites was present. Salpingectomy was also carried out. The mother and child recovered. The child's head was deeply dented at the parietal bone by the sacral promontory on the attempt of the head to enter the pelvis. The head was normal in a few hours after birth. Some suppuration in the uterine wound took place, which was treated by draining (see note below). The mother recovered perfectly.

CASE 7.—The patient was aged 28 years. She had had three previous stillborn children. The conjugata vera was two and a half inches. Cæsarean section was performed on Sept. 5th, 1903, before labour had commenced. Hæmorrhage was controlled by elastic tourniquet. The mother and child recovered without complication. The mother suckled the child.

Abdominal incision.—In all my cases the abdominal wall has proved to be exceedingly thin. It has consisted in the middle line of skin and fasciæ aponeurosis, and peritoneum, no fat and no muscle. The first stroke of the knife may easily open the abdominal cavity and nick the uterus; the abdominal incision should not come too low down. Its centre may lie at the navel; this enables you to make the uterine incision sufficiently high, also it avoids the bladder. All who do abdominal surgery must bear in mind the possibility of a high bladder. In cases of myoma uteri and in pregnancy and other conditions the *reflexion* of the peritoneum from the abdominal wall to the bladder may be seated as high as the mid-point between the navel and the pubes. Hence, if an incision extend too near the pubes the bladder might be opened instead of the peritoneum. I have seen this only just avoided by experienced surgeons. Open the peritoneum first at the upper end of an abdominal incision. The point is mentioned in some text-books but needs emphasising.

Ascitic fluid —In Cases 4, 5, and 6 a little free ascitic fluid was found in the peritoneal cavity. No special importance needs to be attached to this and perhaps it may be *not* uncommon in pregnancy.

The uterine incision.—This must not be too short otherwise it will tear during the extraction of the child and it will probably tear downwards where the wall is thinnest. The incision, which should be six inches long, should be well above the retraction ring Suturing is more efficiently carried out in the thicker wall of the fundus. Probably also a wound here is somewhat more secure from stitch abscess

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[9] W. Williams loc cit.

[10] Details of Cases 2, 3 4 and 5 have been published in the Brit. Med. Jour., Jan. 6th and Nov. 2nd, 1901, and Jan. 3rd and March 14th, 1902.

than one in the thinner wall of the lower segment near the vagina. The incision is easily made. Cut an aperture with a scalpel to admit the index finger and then use a large pair of scissors with finger as director. Never mind the placenta If you come upon the centre cut boldly through it or if upon [illegible] seems to give [illegible] ion. As soon as the child is born your assistant presses the cut edges of the uterus together and draws the fundus forwards out of the abdomen. The abdominal cavity is then carefully packed off with large sterile swabs. By compressing the broad ligaments the hæmorrhage can be controlled manually or an elastic cord can be placed round the cervix. This sets your assistant's hands at liberty to help you. Some operators use the cord regularly; some avoid it for fear of causing uterine inertia. I do not think the risk of this is great. When the sutures are tied the bleeding from the uterine incision ceases. If you are using the tourniquet you take this off when the last silk stitch is tied. If there is bleeding at any point of the wound you may decide to pass another suture there. I have always followed the book, passing deep silk sutures through all the wall except the mucosa with intermediate stitches half-way through. Finally, a continuous catgut suture, passed Lembert-wise, is carried down the wound, closing the peritoneum over the other sutures and burying them out of sight.

How to secure uterine contraction.—Before returning the uterus into the abdomen you may squeeze it between your hands to empty it of blood and to make it contract If at this point you pour hot water at from 110° to 115° F. over the peritoneal surface of the womb it will contract promptly and firmly. Hot intra-uterine injection has long been used for post-partum hæmorrhage, but it is very pretty to see from the outside the effect of hot water on uterine contraction and retraction. I would advise anyone to try this who may have difficulty with uterine inertia at this stage.

The question of sterilisation.—Porro's operation made subsequent utero-gestation impossible. In the conservative operation sterility can be almost certainly secured by excising a considerable segment from each oviduct. This I have done in six of the seven cases here mentioned. It is quickly done and adds practically nothing to the risk of the operation. To-day some practitioners question the propriety of this step, saying that it is no part of the duty of the profession to [illegible] ures, even if the woman and [illegible] to me that if a woman be [illegible] for her to be delivered of a living child except by abdominal section, so deformed, that is to say, that parturition cannot take place physiologically; then the operator does right to take steps to protect the woman against further pregnancy and parturition if this is the wish of the parties concerned.

The closure of the abdominal wound and the after-treatment follow the lines of ordinary abdominal section.

Lactation after Cæsarean section.—In the last case the mother was allowed to suckle her own child with the best results. I shall adopt this plan in future when the mammæ are secreting well and the mother's condition is satisfactory It is best for her and best for the child.

Suppuration in the uterine wound.—We all know that from time to time one sees a stitch abscess or a limited area of suppuration in the wound after abdominal section. This is not usually a very serious matter. It sends the temperature up on the fourth or fifth day and when the pus is let out things become normal again. The perfecting of aseptic precautions has greatly diminished the frequency of such an occurrence, but I know no one in whose practice it *never* happens. Now a stitch abscess may occur in the uterine wound, where it is a more serious matter, for it may lead to suppurative peritonitis. You can guard against this by having (1) aseptic hands, (2) aseptic instruments, and (3) aseptic sutures. But there is a fourth requisite, an aseptic uterine cavity. This is the great reason why those cases do best when there has been least vaginal examination. Yet the fact that we have not touched the patient does not necessarily secure the absence of infection. For example, I may remind you that children are sometimes infected in the genital canal by maternal secretions and so develop ophthalmia neonatorum. Supposing that for any reason a uterine stitch abscess should occur it would cause a rise of temperature about the same time as a similar condition in the abdominal wound. It does not follow that the local signs would be very pronounced, especially at first. There might be little pain or distension and no great tenderness. But if you had any reason to be uneasy about your patient you ought to take out the lowest stitch in the abdominal wound and to insert a small drainage-tube into the utero-vesical pouch. You shall hear how this lesson was learned. The patient in Case 1 died on the seventh day. After operation she had broncho pneumonia which was ascribed to ether. On the second day onwards there was some rise of temperature. The abdominal signs were trivial or almost *nil*. The constitutional symptoms seemed to be fully accounted for by the obvious lung conditions. On the seventh day she grew worse and died somewhat suddenly. At the post-mortem examination there was purulent peritonitis which seemed to have started from the lowest uterine stitch or stitches. There was a considerable local collection of pus. I determined that if ever a case gave me similar anxiety I would explore and drain. In Case 6 this lesson was put to use. On the second day there was some rise of temperature for which I could not account. The abdominal signs were almost *nil*. No distension was present but just a little tenderness above the pubes. The lowest abdominal stitch was taken out and a small drainage tube was put in the utero-vesical pouch. No discharge escaped at the time. Next day there was a discharge of pus, the temperature fell, and though the sinus continued to discharge for some time the woman made a good recovery. Probably Case 1 might have been saved in the same way.

Absolute and relative indication.—The limit of absolute indication should not be less than 2·5 inches, or six centimetres. In 1871 Dr. Barnes put it at 1 5 inches. In Vienna to-day it is 6 5 centimetres; in Germany 5 5 to 6 centimetres The tendency is to extend it to seven centimetres.[11] As to symphysiotomy, it is being discarded in favour of Cæsarean section and you are not likely to see it performed here. In cases where the indications are "relative" Cæsarean section will certainly be performed more frequently in this country than in the past as an alternative to craniotomy as the safety of the operation when performed under favourable conditions becomes generally recognised. The country practitioner called to the primipara in some one-roomed cottage on the hill side far away from any other practitioner's help may be still obliged to destroy the child. But such a case in the event of a second pregnancy may be sent to a hospital for treatment when term approaches. And the number of hospitals, larger or smaller, where thoroughly aseptic surgery can be carried out is constantly increasing and there are comparatively few who are beyond reach of such. The days when embryotomy was expected to supersede Cæsarean section are over. To-day this expectation is reversed.

Here then, gentlemen, is an operation which at one time seemed almost hopelessly fatal and which a quarter of a century ago had a mortality in Great Britain of four cases in five. To day it is undertaken, not with despair, but with confidence. The mortality has been reduced to one twelfth of what it was then. Given early operation and favourable conditions the mother and child will probably be saved. This is a great triumph and we who record successes to day may well bear in mind how large a proportion of the credit belongs to those who have gone before us. We walk in a plain path which they have made easy for us by their patient investigation, their scientific enterprise, and, we may add, by their honest records of their failures.

KELLY'S METHOD OF CYSTOSCOPY IN THE FEMALE.[1]

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AMONG the women who apply for treatment for affections of the organs peculiar to their sex are many who complain of symptoms arising from the urinary tract. In many of these cases the symptoms are due to some condition that primarily or chiefly affects the urinary organs, while in a very much larger number they arise from a disturbance of function set up by some affection of the neighbouring uterus or its appendages. The recognition of some disease of the latter organs and the prompt subsidence of urinary symptoms when this disease is treated often appear to prove the dependence of one upon the other. Not uncommonly, however, it happens that some organic affection of the bladder, urethra, or other part of the urinary tract co-exists with some affection of the generative organs, such as a retroversion of the uterus or an inflammation of the ovary or Fallopian tube. In such cases the measures which relieve the symptoms due to one affection may entirely fail to relieve those due to the other. Take, for example, a nulliparous married woman, aged 32 years, who was first seen in an acute attack of pelvic peritonitis; a month later there was left salpingo-ovaritis with retro-position and anteflexion of the uterus. Nine months later, on Oct 13th, 1898, urinary symptoms, especially frequency of micturition, persisted, although the condition of the ovary and tube appeared to have recovered. Cystoscopic examination disclosed on the posterior part of the floor and on the posterior wall of the bladder small areas of dark redness, from the size of a pin's head to that of half a split pea, with areolæ of a brighter red gradually shading off into the normal mucous membrane [2]

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[11] Encyclopädie der Geburtshülfe und Gynäkologie, Saenger und von Herff. Art. Kaiserschnitt.

[1] A paper read before the Midland Medical Society on Dec. 2nd, 1903.

The methods by which we endeavour to decide whether the functions of the bladder are disturbed by some disease that may be present in the neighbouring organs or tissues, or whether these symptoms really depend on some affection of the urinary tract itself, include in the first place examination of the urine, to ascertain whether this secretion is normal or presents any of the well-known changes set up by disease, such, for instance, as alkaline reaction or the presence of mucus, pus, or blood. Palpation of the lower abdomen, inspection of the meatus of the urethra, palpation of the urethra, and bimanual examination of the bladder may in some cases throw light on the causation of any urinary symptoms that may be present. The use of the sound enables us to detect certain gross conditions within the urethra or bladder, such as the presence of a stone or foreign body or occasionally of a firm tumour.

In doubtful cases where the symptoms are severe Simon's method of dilatation of the urethra and examination of it and of the interior of the bladder by the finger may enable us to determine alterations in the walls or contents of the bladder. It may still, however, happen that small ulcers or even soft papillary outgrowths may be present in the bladder and that they may be unrecognisable by any of the methods of treatment hitherto mentioned and in such cases it is only possible to make the diagnosis by means which will enable us to make a visual inspection of the interior of the bladder. There are two methods of making this inspection. The first depends upon the injection of water into the bladder and the employment of Nitze's electric cystoscope or some of its modifications. The second more direct method depends upon the passive distension of the bladder with air and was placed upon a firm basis by Howard Kelly who gave a full description of his method in the *American Journal of Obstetrics* for January, 1894 Since October, 1898, I have used the latter method on nearly 250 occasions and have satisfied myself that it is a scientific method of great practical value. It depends for its success upon the important fact that when the pelvis is raised above the level of the rest of the trunk the intestines gravitate towards the diaphragm and then if the urethra is opened air rushes into the bladder and distends it. The influence of Sims's position, and still more of the knee-elbow position, in causing negative pressure in the vagina was long recognised and an occasional ballooning of the bladder had also been observed and is mentioned, for instance, by Winckel.[3] Pawlik appears also to have been conversant with this phenomenon, but it remained for Kelly to make a systematic use of the fact and to apply it as a means of enabling a direct and thorough inspection of the interior of the bladder to be made The necessary instruments for Kelly's method are now well known. The specula employed are essentially cylindrical thin metal varying sizes, numbered according to the metres. They are provided with a handle an for convenience of manipulation and with an obturator facilitate introduction. The necessary light is obtained by means of a small lamp fixed on a forehead band reflected from an oil, electric, or other lamp by a mirror.

The method of carrying out the examination is as follows. The patient lies on the back with the knees drawn up and separated. The bladder is emptied catheter, then the urethra is measured by a calibrator, and the appropriate speculum, usually to ten millimetres in diameter, is chosen and passed. patient is now allowed to rest for a minute or and is assured that what remains to be done will not her. The sacrum is then raised from eight to 12 above the table by means of bran or sand pillows, the are flexed on the abdomen, and each is supported by a or assistant, one of whom holds the lamp or other source light to be employed. The observer adjusts his mirror so as to project the light into the speculum and by appropriate movements can then inspect the whole of the bladder. When this has been done, as the is withdrawn, the mucous membrane of the urethra examined. As the end of the speculum is withdrawn into the upper end of the urethra the patient complains of pain and during the examination of the bladder complaint of pain generally means that the speculum been withdrawn so far that its end has engaged in urethra; care should accordingly be taken to avoid The upper part of the urethra closes over the end of speculum as this is withdrawn in a flat funnel shape. the upper end the colour of the mucous membrane with radial brighter red bands converging to the closed lumen of the urethra, these bands representing folds in the mucous membrane. In the lower third, rather more, of the urethra the colour of the membrane becomes duller and more opaque red. the withdrawal of the speculum the sacrum is by removing the pillows and a catheter is passed to let out the air from the bladder. If this is not the woman is apt to experience severe collicky pains in the lower abdomen owing to the presence of the air in bladder. After the examination a short rest and a small dose of aromatic spirit of ammonia are desirable in some cases and the patient may be warned that for the time or two after the examination micturition may be accompanied by some smarting. With this exception examination causes no inconvenience.

Now let us consider briefly one or two practical points the first place, as regards the necessity or otherwise for anæsthesia. Occasionally where the bladder or urethra excessively tender it may be desirable to administer general anæsthetic; in other cases the use of a 10 per cent. solution of cocaine to the urethra is required, but in great majority of cases, at least 90 per cent in my own experience, neither local nor general anæsthesia has been required. In the next place, as regards the position of the patient it may be said at once that the knee-elbow is more efficacious than the raised sacral in giving rise to of the bladder and, indeed, Kelly appears to recommend the former as the routine position. It is, however, tionable not only on æsthetic grounds but because, also, very quickly tires the patient Moreover, I found that of 200 cases in my own experience, in 150 the raised position brought about satisfactory ballooning. In practice, therefore, the knee-elbow position has been reserved for those cases, much the least numerous, in which ballooning does not occur in the raised sacral position. when the bladder does not at first expand air enters freely as the examination proceeds, but the times happens Failure to balloon may be due to causes, of which the chief one is obesity; in fat ballooning does not take place in the raised sacral and is sometimes unsatisfactory even in the position. Occasionally, again, urine is left even after careful attempt has been made to empty the bladder by catheter or by the patient herself, or it may happen that a rapid secretion of pale nervous urine is taking place. If amount of urine thus present during the examination a few drachms it is apt to interfere with a proper view and requires to be withdrawn by means of the evacuator, simple elastic suction apparatus. It is hardly necessary to add that the greatest care must be taken in cleansing the vulva and in using only sterilised instruments and carefully prepared hands.

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[2] This bladder appearance was suspected to be tuberculous Lately my friend Dr H. P. Motteram has been good enough to inform me that he has been attending this patient and that when he was called in first two or three months ago the bladder trouble had been getting worse, there were emaciation and night-sweats; the kidneys were not enlarged or unduly tender. There were tenderness at the neck of the bladder and apparently thickening of the bladder wall. The patient improved much after rest in bed and washing out the bladder with sulphate of copper solution.

[3] Billroth and Luecke's Handbuch der Frauenkrankheiten, Band iii., p. 344, 1886.

If now we compare Kelly's method of cystoscopy with electric cystoscopy we shall agree that both require practice, but I think we shall also agree that Kelly's method can be acquired with greater ease than the other. In neither method is an anæsthetic necessary in an ordinary case. The employment of Kelly's method demands more assistance than the electric method; the latter can be carried out on a suitable table even without any help, whereas the former requires at least two nurses or assistants. Further, it is not always possible to obtain a view of the inside of the bladder by Kelly's method; thus, for instance, in a patient, aged 67 years, with profuse hæmaturia I failed on three patient attempts without anæsthesia to obtain a satisfactory view of the inside of the bladder. Mr. Gilbert Barling examined the patient under an anæsthetic with the electric cystoscope and pronounced the bladder to be normal. The patient died later and the necropsy revealed right pyonephrosis and a left calculous kidney.

On the other hand, electric cystoscopy depends for success on the injection of water under pressure, which is not devoid of danger; moreover, when bleeding is going on the fluid becomes opaque and does not allow the walls to be seen. In order that the fluid may be retained in the female bladder a functionally intact sphincter must be present. As against these, Kelly's method depends on a passive distension of the bladder with air, bleeding does not interfere, and an intact sphincter is not necessary. Kelly's apparatus, moreover, is simple, easily sterilised, easily kept in order, and comparatively inexpensive. By his method the parts are seen directly, while in the electric method they are magnified and distorted so that considerable experience is necessary to enable the observer to form a correct opinion as to the size, shape, and extent of the changes giving rise to the appearances which he is viewing. Finally, Kelly's method allows the ureters easily to be sounded or catheterised and permits the employment of many operative and other methods of treatment.

In comparison with the older methods of examination by the sound and of digital dilatation, either method of cystoscopy possesses great advantages; not only may certain changes, such as ulcers or soft tumours, be easily and fully recognised by visual inspection while they may completely elude detection by the sound or by direct touch, but even when these latter methods are successful cystoscopy gives much more extensive and accurate information as to the conditions present. Further, the method is not more dangerous than the examination by the sound and is much less so than that by the finger.

The normal mucous membrane of the bladder is pale yellowish-red in colour with numerous blood-vessels that form delicate arborescent figures, sometimes anastomosing, scattered irregularly over the surface. As a rule the surface is smooth; occasionally in patches or all over it a delicate network of trabeculæ is seen, due in some cases to temporary contraction, in others and much less commonly to permanent hypertrophy of the muscular bundles. In Kelly's method the posture of the patient and the distension of the organ with air cause anæmia of the vesical mucous membrane, so that the colour appears paler than when seen by the electric cystoscope. On the posterior wall of the bladder a red patch is frequently caused by contact with the end of the speculum and this suction or contact hyperæmia must not be mistaken for a sign of local inflammation.

The shape of the female bladder when passively distended by air is frequently like that of two saucers placed one within the other, the lower wall of the bladder viewed from the inside being concave and the upper forming a downward convexity. The upper and lower segments then appear to be hinged together in a line running across the back of the bladder at about the level of the isthmus of the uterus. Observers are not yet agreed as to the mechanism upon which this shape depends. In the floor of the bladder is seen the trigonum, a triangular area distinguished by its uniform deep red colour from the rest of the mucous membrane. Near each posterior angle of the trigonum is seen a ureteral orifice as a fine point or as a delicate transverse line, two millimetres or so in length, running backwards and outwards and surrounded by a paler area one millimetre broad. The position of these openings varies from eight to 35 millimetres behind the internal opening of the urethra and from 13 to 40 millimetres from each other; commonly a small swelling or papilla is present near each posterior angle of the trigonum and the ureter opens on the swelling, not as a rule on the apex, but on one of the sides, especially the outer. The recognition of the ureteral orifices is as important, and it may be added as easy, as is the examination of the optic discs in ophthalmoscopy. Joining the two ureteral eminences the posterior border of the trigonum frequently forms a well-marked low ridge, behind which the rest of the floor with paler lining extends as a slight hollow to the front of the cervix. At intervals of a few seconds to one and a half minutes the ureteral orifice shows peristaltic movements, the opening becomes wider and sometimes more prominent, and from it is discharged a small stream of clear urine, after which it again closes and remains quiescent. It is difficult to tell whether the two ureters normally excrete together or not; the probability, however, is that each acts independently of the other. In one patient I noted the intervals between the successive escape of jets of urine; from the left ureter two succeeding intervals measured 66 and 87 seconds respectively; from the right, which was noted immediately afterwards, two succeeding intervals measured 54 and 58 seconds. In this patient the orifices of the ureters could not be clearly seen by the unaided vision except when they were actively contracting.

The ureteral orifices vary greatly in appearance in different patients but as a rule are similar in the same patient. Sometimes one orifice is seen to be much larger than the other and this may be due, according to Viertel, to compensatory hypertrophy of the kidney and ureter; sometimes it is caused by the passage of a ureteral calculus. Thus, in one of my patients the right ureteral orifice formed a considerable slit with a grey lumen the lips of which were normal in appearance, the left ureteral orifice was normal in size and appearance, and the right kidney was not enlarged or tender. The patient, a unipara, aged 28 years, was admitted complaining of pelvic pain since her confinement 17 months before. There had been frequent attacks of right lumbar pain for 20 years; the attacks had lasted from a few minutes to several hours; they had never been accompanied by vomiting or dysuria and there had never been hæmaturia. The patient brought an oval calculus which she had passed seven months before. It was of about the size of a French bean and had an annular constriction near one end. On one side of the constriction the stone was fairly regularly rounded, on the other it was smaller and had a flattened end. It appeared to be formed of urates with some oxalates. Sometimes the ureteral orifice "lies dead," undergoing no peristaltic movements; at other times peristalsis may be seen to take place without any discharge of fluid; from this latter sign, according to Viertel, no conclusion can be drawn. In renal hæmaturia and in discharge of pus from the ureter peristalsis is said to be usually absent and the ureter excretes in a slow continuous stream. The passage of a sound or catheter into the ureter is a perfectly easy proceeding in Kelly's method and instruments have been passed as high as the pelvis of the kidney in the search for stones or for the purpose of washing out in certain cases of pyelitis.

My own experience in the use of the cystocope has been confined almost entirely to conditions of the bladder and urethra and the present paper is intended to deal with the bladder only. Among the most frequent indications for cystoscopy may be mentioned catarrhal conditions of the vesical mucous membrane. In acute cystitis the examination is unnecessary and possibly harmful even when it can be carried out. In long-continued and severe catarrh, on the other hand, especially when this is attended by great pain, it is often of great service to be able to see the characters of the changes in the bladder wall, more especially when there is any suspicion that the catarrh is secondary to tumour, stone, foreign body, or ulceration. The signs of catarrh are in the first place redness; this is usually, but not always, present and may depend either upon uniform injection of the capillaries or upon increase in number and size of the larger visible vessels. The redness may be diffused or may be limited to definite spots or patches; occasionally submucous hæmorrhages are seen. The normal smooth glistening appearance is not uncommonly lost, the surface of the mucous membrane becoming more or less roughened or velvety owing to the loss of the superficial layers of epithelium. In some cases swelling of the mucous membrane can be clearly made out and in others there are scattered shining transparent vesicles up to the size of a small pea. This condition has been described by Kolischer as bullous œdema and is not infrequently seen on the mucous membrane covering those parts of the female bladder wall which are adherent to purulent swellings and also in certain cases of cancer of the cervix with implication of the wall of the bladder. The excessive formation of mucus is another effect of inflammation, the secretion varying from a thin fluid that easily escapes to a thick tenacious layer which cannot be completely got rid of by washing. Where stone is present, catarrh of the mucous membrane is often seen in islands or patches, encrusted with phosphates. I was indebted to Mr. A. Lucas for the opportunity of seeing such a case. On August 28th, 1902, we examined a middle-aged woman in the knee-elbow position under anæsthesia. A phosphatic stone of the size of a small walnut had dropped to the apex of the bladder which in this position was the lowest part of the organ. There was patchy redness of the vesical mucous membrane, especially near the base, and on the left side of the posterior wall near its lower part was an irregular white patch of phosphatic deposit.

Sometimes in a severe cystitis a marked papillary inflammation may quickly develop, as in the case of a single girl, aged 23 years, from whom Mr. W. F. Haslam removed through a suprapubic incision a hairpin which had apparently been in the bladder for two months. The hairpin was thickly coated with phosphates and oxalates, and after its removal severe cystitis persisted. I saw the patient six weeks afterwards when the urine was alkaline, offensive, and contained much pus. The bladder did not balloon, but all parts of its mucous membrane that could be brought into view were bright red and granular. The urethra was normal in its upper half; in its lower half it was red and velvety. In this case culture gave a growth of five or six different kinds of organisms, including staphylococcus pyogenes albus and probably bacterium coli.

Ulcers of various kinds are frequently seen, especially about the base of the bladder; these may be catarrhal or due to injury caused by foreign bodies or calculi. Diphtheritic and gonorrhœal ulcers have also been described. Tuberculous affections of the bladder are not uncommon in the female and I have notes of ten cases of very varying degrees of severity. A single patient, aged 19 years, was sent to the General Hospital on Jan. 12th, 1899, as a case of menorrhagia. The supposed menstrual bleeding turned out to be a profuse hæmaturia. The urine drawn off by the catheter was at first clear but towards the end it contained much blood. The cystoscope showed all over the interior of the bladder reddish nodular swellings with soft-looking surfaces; at the base was a whitish, ragged-looking surface with a nodular border. The right ureter was seen as a small bright red pit in the midst of a mass of the growth. The urine from it was clear. The left ureter could not be found. Tubercle bacilli could not be demonstrated in the urine. There was a strong family history of tuberculous disease. The symptoms were said to have begun with pain in the sacrum and hips and the sudden loss of half a pint of blood in one night three months before being seen. This patient died five months later.

In another patient, a single woman, aged 38 years, the cystoscope was of great use in helping to clear up the diagnosis. The patient was complaining of her womb coming down and of dysuria which had existed more or less since the age of 18 years and had been much worse in the last three months. The patient was thin, not anæmic; there was a primary retroversion for the treatment of which the patient was referred to me. The urine, which was of specific gravity 1014 to 1020, contained pus and showed a thick cloud of albumin, probably more than corresponded to the amount of pus present. The bladder held six ounces of urine; on the left side of its floor, just inside the entrance of the urethra, was a small red raised patch. A second similar patch with two or three minute grey specks in it was seen on the trigonum; the right kidney could be felt but was not obviously enlarged. A probable diagnosis of tuberculous kidney was made. The above notes were taken in November, 1900; nearly three years later, on July 25th, 1903, the patient was seen at home; she had had to work hard after last being seen and subsequently was very ill for five or six months; for the last 12 months she had not been able to work but had got up for a part of each day. There was extreme emaciation but no obvious anæmia; a large tender mass filled up the right loin and extended downwards as far as the iliac crest. There was still pus in the urine but no frequency and rarely pain in micturition. There was occasional diarrhœa with mucus in the stools; moist sounds were scattered over both lungs and there was some cough. The patient was now suffering from a right perinephritic abscess and general tuberculosis.

Stone in the bladder is relatively uncommon in the female. When present it cannot always be detected by the use of the sound and in any case the cystoscope presents great advantages over this instrument; by it the presence of cystitis, of ulcers, or of patches encrusted with phosphates is readily seen, while its use is not a whit more painful or risky. Gynæcologists not infrequently meet with stones in the bladder due to perforation of the walls of that organ by ligatures in the process of extrusion. I have seen at least three of these cases, one of which occurred after an operation by myself. Two large pyosalpinges and a fibroid were removed from a woman, aged 47 years; two and a half years later severe pains in micturition began and gradually increased. On March 22nd, 1902, the cystoscope showed in the left lower posterior part of the bladder a small calculus not much larger than a pea imbedded in a depression of the mucous membrane; this was with a little difficulty removed by forceps through a Kelly's speculum and then a ligature encrusted with phosphates was removed from the same depression. Nine months later another calculus of the size of a French bean was removed from the right lower part of the posterior wall.

Foreign bodies as opposed to calculi are found with comparative frequency in the female bladder and Kelly's cystoscope forms a most convenient method of detecting and removing them. The only case of a foreign body that has come under my notice was one in which the end of a glass catheter was broken off and remained in the bladder; the pieces were removed by a lithotomy evacuator before the time when I became acquainted with the method of cystoscopy which we are now discussing.

In certain morbid conditions of the urine the use of the cystoscope is of the greatest service. Thus, for instance, where much pus is present we are enabled to determine whether it comes from one or both kidneys or from the bladder, or whether it is being discharged from a perforated abscess or pyosalpinx. Blood present in the urine may result from many different conditions, vesical, urethral, or renal. Except where the amount is slight in acute cystitis, or where it is due to hæmorrhagic nephritis, a cystoscopic examination is indicated and especially where the bleeding is of long duration or often repeated. Inspection of the bladder usually enables us with ease to determine whether the bladder is the source of the blood or not. It must not be forgotten, however, that occasionally two sources may coexist, one in the bladder and one in the kidney. In the examination of these cases Kelly's method presents a great advantage over the use of the electric cystoscope in that it is feasible even when actual bleeding is going on. Bleeding from the bladder may be due to a large number of different conditions; occasionally it is said to be due simply to diapedesis, as, for instance, in pre-menstrual hyperæmia (Viertel).[*] Sharper bleeding sometimes occurs in active congestion or in acute cystitis; catarrhal and other ulcers, especially tuberculous, foreign bodies and tumours, may all give rise to hæmaturia. Where from the history of the patient a stone or foreign body is suspected to be present the cystoscope should be used in preference to the sound. It is important to remember that in tubercle the passage of blood in the urine is often an early symptom and that an unexpected large hæmaturia is not infrequently the first indication that grave mischief is present; in such cases ulceration has always taken place and when present in the bladder or urethra the ulcer can always be seen.

In certain cases, which have been called bacteriuria, large numbers of organisms are found in the urine with no visible alteration in the vesical mucous membrane. A single girl, aged 19 years, had complained of pain on micturition and increased frequency, especially at night, for 27 weeks; there had been only one menstrual period in the last six months. The urine was cloudy and alkaline, contained a small number of pus cells and an enormous number of bacteria, chiefly motile. The generative tract showed no abnormal physical signs and the cystoscope on two occasions showed no abnormal change in the mucous membrane of the bladder or urethra, with the exception of slight tenderness of the trigonum unaccompanied by increased redness.

In female patients affected with incontinence of urine the use of the cystoscope may give important indications for treatment. In ordinary cases of incontinence in children and young women no abnormal physical signs can be made out about the urethra or the bladder, except that the mucous membranes frequently appear to be decidedly paler than usual. Cystoscopy in these patients is usually easy. The affection appears to depend on a late development of the [illegible] the higher nervous centres with the lumbar cord; clear cases of [illegible] ter 25 years of age. Several of my cases appeared to be markedly benefited by the use of the cystoscope. It is important to remember that nocturnal incontinence in young women may be due to epilepsy; in these cases, again, no abnormal physical signs are present. In another group of cases of incontinence in young women the bladder is found to be redder and more vascular than usual and the neck of the bladder and trigonum markedly tender. The vascularity may be generally diffused over the whole bladder or it may be limited to the trigonum and neck; here the cause of the incontinence is found in the local hyperæsthesia and is not chiefly due to defective control as in the other cases. Belladonna is therefore the indication in one group of cases, and strychnine with iron tonics in the other group. Occasionally a patient comes complaining of incontinence who is really the subject of a grave disease. A single woman, aged 23 years, was seen on August 31st, 1900. She had had constant dribbling of urine for five months, for which time also she had been unable to work. Seven years ago she had been ill in a similar way for two months. The present attack began suddenly while carrying a hod of coal. The urine was constantly dribbling and had given rise to much irritation of the skin of the vulva and neighbouring parts. The patient was examined by the cystoscope without an anæsthetic [illegible] The bladder was contracted; [illegible]eding patch with granular [illegible]; part of the upper wall of the bladder appeared in the form of two folds of mucous membrane of normal colour. The diagnosis in this case was chronic cystitis, probably tuberculous.

Irritability of the bladder in gynæcological patients is another common symptom in the elucidation of which the cystoscope is of great use. Where the irritability is marked the question as to whether it depends upon some condition of the urinary tract itself, or whether it is due to some affection of the generative organs that may also be present, is decided by the presence in the first case of some morbid change in the urine or of decided pain in micturition. In very many cases both pain and alterations in the urine are absent, the vesical and urethral mucous membranes are normal, and the vesical irritability depends upon some affection of the generative organs. Here the cystoscope helps us to understand the mechanism of production of the increased frequency of micturition. In some cases the vesical irritability appears to be caused reflexly, as, for instance, in certain diseases of the mucous membranes, vulvitis, vaginitis, mucous polypi, and sometimes endometritis; where the symptom is reflex the mucous membrane of the bladder and urethra is normal in colour and appearance. In other cases again the bladder and urethra participate in the hyperæmia and increased sensibility of the pelvic organs set up by acute inflammatory changes, such as metritis, pelvic peritonitis, cellulitis, or pyosalpinx. In several patients the bladder has been observed by me to become red almost suddenly during an examination, and it appears probable that increased frequency of micturition may sometimes depend upon vaso-motor disturbance giving rise to such a condition of morbid flushing of the mucous membrane.

While all the conditions just named may themselves suffice to cause vesical irritability, we can only conclude that they do so when the urine and urinary organs are themselves proved to be sound. Not uncommonly an apparently sufficient cause for dysuria is present in the genital tract and at the same time there coexists some morbid condition of the urinary mucous membranes, this latter being responsible for the symptom; thus, for instance, in a case of tuberculous cystitis above mentioned there was also present retroversion of the uterus; in another case of irritability due to chronic catarrh of the bladder in a woman, aged 62 years, there was a small quiescent fibroid in the fundus of the uterus.

One of the most important uses of the cystoscope to the gynæcologist is to enable him to ascertain the relation of the bladder to certain affections of the neighbouring generative organs. Purulent collections, such as pelvic cellulitis, pyosalpinx, or suppurating ovarian tumours, may merely press upon and alter the shape of the bladder without causing any change in the mucous membrane. When, however, adhesions form between them and the bladder the corresponding part of the vesical mucous membrane usually presents more or less thick folds, either normal in colour or swollen and œdematous, sometimes with the formation of scattered clear vesicles, the condition above referred to as bullous œdema. When the abscess has opened into the bladder the orifice may be seen surrounded as a rule by red granulations. After an inflammation adherent to the bladder has run its course cicatricial bands may persist, as in the case of a terti-para, aged 33 years, who had a deep laceration on the left side of the cervix, from which a cicatricial band ran outwards towards the side of the pelvis. There was much pelvic pain attended by frequency and scalding in micturition. The cystocope showed that the bladder and ureters were normal, except that there were several thin, pale bands running transversely on the left lower posterior wall of the bladder; the position of these corresponded with the cicatricial band at the base of the left broad ligament. The urine was normal; a small amount of opaque discharge could be squeezed from the lower end of the urethra.

In carcinoma of the cervix Winter describes progressive changes that take place. When the growth begins to lay hold of the bladder wall the mucous membrane first becomes raised into ridges or folds, usually running parallel to each other. These folds gradually become higher and then the mucous membrane becomes œdematous and small vesicles make their appearance. The changes thus far are just the same as those found in adherent suppurative conditions. Later may be seen small nodules or flat prominences which, by their opacity and the peculiar lustre of their surface, are easily to be recognised as cancer. Hitherto there may have been no trace of cystitis, but when these nodules ulcerate their surface becomes rough and covered with whitish, more or less firmly adherent shreds of tissue, and at this stage there is usually extensive cystitis. In the following case the malignant disease was seen to have already infiltrated the base of the bladder. A quintipara, aged 41 years, had a deep excavated ulcer of the cervix. Under anæsthesia it was found that the growth extended out to the right side of the pelvis and that there was a deep excavation of the anterior wall of the cervix. On the right side of the floor of the bladder was a distinct circular elevation with well-defined edges; the surface was greyish white and opaque in colour; the rest of the interior of the bladder was normal. The cervical ulcer was scraped and the cavity was packed with formalin. The changes above described are usually late and the first formation of folds on the mucous membrane indicates disease implicating the vesico-vaginal septum. The cystoscope may, of course, fail to disclose the fact that a growth has actually begun to invade the wall of the bladder, as was evidenced in the case of a single woman, aged 38 years, who had a diffuse cancer affecting practically the whole length of the vagina. Cystoscopy showed no sign of abnormality of the bladder, ureters, or urethra. The whole vagina with the uterus was removed by operation, but prompt recurrence took place on the left side of the bladder behind the trigonum and led to the death of the patient from suppurative nephritis seven months after the operation. In this patient a vesico-vaginal fistula, which formed ten days after the operation, appeared in the midst of a small patch, about one centimetre square, of red granulations on the left base of the bladder just behind the trigonum.

Thus far I have confined my remarks to the value of Kelly's method of cystoscopy in the diagnosis of certain conditions and symptoms belonging to the urinary system. The specula devised by Kelly have been found by me to be of much use also in the investigation of the condition of the vagina and cervix in young children and in patients of older growth in whom the vagina is narrow. In the treatment as well as in the investigation of many affections of the bladder and urethra Kelly's method is of the most conspicuous service. Various kinds of applications can be exactly made to any part of the mucous membrane that is desired, the curette or a snare may be applied with precision, and foreign bodies or small calculi may often be removed through a speculum of moderate size. Time allows only the bare mention in this place of the application of the method to the diagnosis and management of affections of the ureters and kidneys. In conclusion, I desire to emphasise my opinion that in cystoscopy, especially by Kelly's method, the gynæcologist has been presented with a most valuable addition to his resources. The cystoscope may sometimes enable him to avoid a diagnosis that is entirely erroneous; in very many cases its use amplifies or renders more definite a conclusion correctly formed up to a certain point. Thus, for instance, it enables him to determine the exact relation in which the bladder stands to some disease in its neighbourhood or to understand the precise mechanism by which in a given case increased frequency of micturition or some other urinary symptom is produced. Increase in the number and accuracy of observed facts renders inference more certain and treatment more precise.

References.—Von Winckel, in Billroth and Luecke's Handbuch der Frauenkrankheiten, vol. iii., 1886, Viertel, in Veit's Handbuch der Gynäkologie; Kelly's Operative Gynæcology; Kelly, in American Journal of Obstetrics, vol. xxix., 1894, p. 1; and Rubeska, Kelly, and Pawlik in Centralblatt fur Gynakologie, 1896.

Birmingham.

GLANDULAR FEVER.

By JOHN W. BYERS, M.A., M.D. M.A.O. (HON. CAUSÂ) R.U.I.,

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SINCE the middle of the month of November an epidemic has been prevailing in Belfast and in some parts of the north of Ireland, chiefly among children, of a kind which I have not observed before either in private practice or during the years that I was physician to the Belfast Hospital for Sick Children and which seems to me to correspond to the clinical entity described in 1889 by Pfeiffer and termed often by German writers Pfeiffer's Drüsenfieber. Heubner, Dawson Williams, Comby, Donkin, and J. P. West have also contributed largely to the literature of glandular fever. My knowledge is based on 33 cases, some of which occurred in two public institutions, while the others were seen in consultation.

In regard to age, the youngest case was 13 months and the oldest was a female servant, aged 25 years, in a family where the children were attacked; but with the exception of two cases (the one I have mentioned and another, aged 21 years) all were children or young people under 16 years of age. The onset, as a rule, was sudden and the incubation was from five to seven days. As regards the symptoms, in some of the cases the children went to bed in the evening complaining of slight sore-throat; on the next morning there were sharp fever (from 102° to 104° F.) and pain on one side of the neck which was tender on pressure and held stiffly; this was succeeded in another 12 hours by a distinct swelling of the glands beneath, and to the front of, the sterno-mastoid. In the majority of cases a similar enlargement appeared involving the corresponding deep glands of the opposite side of the neck. In the cases seen by me the right side was first affected as a rule. In another group of cases the children complained of little or nothing until the glands of the neck seemed suddenly to enlarge and such cases when seen for the first time in such a condition resembled somewhat aberrant forms of mumps. In the more severe cases headache was complained of as an initial symptom and in a few sickness and vomiting were present and some abdominal pain, but I failed to detect any objective signs of involvement of the mesenteric glands. In none of the cases was the throat in any way affected beyond some slight congestion and in the majority it was natural and showed no abnormal change to explain the slight dysphagia. As to the glands affected, as a rule they were the deep ones under, and in front of, the sterno-mastoid, but in others those in the posterior triangles of the neck were involved. No suppuration occurred in any of the cases and the enlargement of the glands subsided in most of the cases in a week or two from the onset of the attack. In one case the swellings remained longer, the temperature going up and down most of that time in an erratic manner. The majority of the children were convalescent within a week; in some of the severer cases, however, those attacked remained poorly and looked anæmic for a period of from three to four weeks. When the disease entered a house nearly all the children were attacked and in one place two of the female domestics—both adults. No rash appeared in any of the cases nor was there any kidney or other complication, and none suffered from depression except the very severe cases. None died. As to diagnosis, when a case was first seen the adenitis seemed secondary to some throat mischief but after careful examination no sufficient tonsillar or pharyngeal mischief to cause the glandular swellings could be detected; and the presence of other cases in the same house showed that what one had to deal with was an epidemic fever. In the *British Medical Journal* of Dec. 5th, 1903, p. 1492, there is described an "epidemic sore-throat and suppurative mammitis in cows," but in none of the cases seen by me were there any such conditions observed in the throat, and the cases were in groups widely separated and with no common milk-supply. The mild type of cases when seen for the first time with a well-marked unilateral swelling of the neck looked like a form of aberrant mumps, but careful examination showed that the parotid gland was not involved and the children had no pain in closing the jaws or in eating; besides some of the children had previously suffered from mumps. It has been suggested that the disease might be a peculiar form of influenza; but as a rule in recent years when abnormal types of that most protean disorder occurred we were able to diagnose them as being due to the influenza poison from the circumstance that in the same house or locality other ordinary forms of that disease occurred. None of these usual forms of influenza were met with among the cases which I have described or in the houses in which they occurred. I believe the cases I have tried to describe were true examples of that acute epidemic infectious fever in which there is primary enlargement of the lymphatic glands. The poison of glandular fever is probably microbial and the present extraordinary atmospheric phenomena may have provided precisely those conditions necessary for the growth of the infective germ which causes the disease. Some have suggested that infection is through the intestine; in the cases seen by me it looked more as if the invasion was by the throat.

Since writing this article I find that in a family where the children suffered from the ailment I have described two of the adults developed a follicular tonsilitis, but in them, although the glands of the neck were tender, there was no palpable enlargement.

Belfast.

PATHOGENESIS OF DEAFNESS DUE TO CHRONIC NON-SUPPURATIVE MIDDLE-EAR DISEASE.

(SYNONYMS: SCLEROSIS OF THE MIDDLE EAR, DRY MIDDLE-EAR CATARRH, OTOSCLEROSIS, FIXATION OF THE STAPES, OTITIS METIA INSIDIOSA, CHRONIC PROGRESSIVE DEAFNESS, &C.)

BY D. CHALMERS WATSON, M.B., F.R.C.P. EDIN.

IN March, 1902, I published[1] a preliminary note on a method of treatment of chronic non-suppurative middle-ear disease, the essentials of the treatment being the local use of a product of bone marrow combined with appropriate massage and attention to the Eustachian tube. It was pointed out that this treatment had been in many cases more beneficial to the patients than the ordinary treatment consisting in the occasional use of the catheter and various medications to the nose or nose-pharynx. A later record of results with a reference to the principles underlying this treatment and a statement of the limitations to its success were published in August, 1902.[2] Further experience of the treatment has confirmed the favourable impressions recorded in my original paper. This experience has at the same time led to two modifications. The first of them is the use of a clear fluid preparation of bone marrow obtained from the manufacturers and designated "myelocene fluid." The use of this preparation overcomes, at any rate in part, one of the difficulties of treatment reported in my earlier paper—viz., the use of a fatty substance with a high melting point. The second modification is the replacement of the digital vibration described in my first paper by the mechanical aids referred to in the second communication. The present paper is concerned with the pathogenesis of the disease. It is advisable in the first place to define clearly the present opinions of experts on this question. In a discussion on the Aims and Limitations of Intranasal Surgical Procedures in the treatment of Chronic Non suppurative Middle-ear Disease held at the annual meeting of the British Medical Association in 1902, the present position of our knowledge was thus defined by Dr. Urban Pritchard: "In the present state of our knowledge it will be most convenient to group them (cases of chronic non suppurative middle-ear disease) into the following classes: (1) chronic middle-ear catarrh and its results; (2) sclerosis; (3) intratympanic adhesions from acute and subacute non-suppurative inflammations; and (4) mixed cases of the above"—the foregoing classification being regarded as of practical importance from the point of view of treatment. In summing up the President of the Section (Dr. W. Milligan) "considered that the discussion had proved of value in that it had elicited what appeared to be the unanimous verdict of all the speakers, that in *genuine sclerotic catarrhal conditions of the middle ear* intranasal operations were useless and were even harmful, in *chronic non-sclerotic catarrhal conditions of the tympanic mucous membrane*, where inflation improved the patient's hearing power and where some genuine respiratory difficulty was complained of by the patient intranasal surgical procedures were of value and at times markedly so." Now, while these classifications leave some doubt in the mind as to the precise ideas which the writers entertain regarding the relationship of the pathological processes involved in the respective groups, they clearly indicate a belief that at least two distinct pathological processes are at work in the production of chronic non-suppurative middle-ear disease, and further, that the recognition of these two processes is of fundamental importance in treatment. In the latest edition of Politzer's classical work (1902) this differentiation is accentuated by the devotion of a special chapter to "otosclerosis," the synonym of this affection being stated as "proliferous inflammation of the middle ear" (Roosa), otite media iperplastica (De Rossi) and capsulitis labyrinthi, the disease being regarded as one which is in the majority of cases, in its pathology, etiology, clinical features, and treatment, perfectly distinct from, on the one hand, deafness due to "catarrhal adhesive processes" and on the other cases of "nerve deafness."

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[1] Brit. Med. Jour., March 22nd, 1902, p. 699.

[2] Ibid., August 30th, 1902, p. 612.

The objects of this communication are: (1) to indicate that the data available for the complete differentiation of more than one morbid process are by no means conclusive; (2) to record facts which lead me to form an opinion as to the unity of these various affections; (3) to point out the importance of settling the query from the point of view of treatment; and (4) to suggest that valuable evidence, and probably essential facts, can be obtained from a too much neglected field of study—comparative pathology. It will here be convenient to indicate briefly the grounds on which two morbid processes are generally differentiated. The clinical reasons may be summarised in the statement that there is met with in practice a not inconsiderable number of cases of deafness due to non-suppurative middle-ear disease in patients who are *not* subject to "colds in the head," the subjective testimony of the patient being supported by the fact that the Eustachian tubes are found unobstructed at the time of examination and the tympanic membrane normal or nearly so. The facts of morbid anatomy relied on are the following.

Many post-mortem examinations have been made—notably the Toynbee collection in the Museum of the Royal College of Surgeons of England—which have revealed as the result of examination with the unaided eye swelling and congestion of the lining membrane of the middle ear with a varying degree of adhesions, thickened tympanic membrane, and alterations in the articular structures. These constitute the group of cases designated hypertrophic catarrh. Other cases have shown a condition which is in great part the antithesis of the foregoing. "On removing the roof of the middle ear affected with the disease the first thing that strikes one is the wideness, whiteness, and dryness of the whole cavity, the contained structures being clearly defined. Fine membranous septa in various parts can be seen and are apparently the atrophied remains of the folds of the lining membrane. A well-marked membrane is sometimes seen running from the tendon of the tensor tympani to the roof. On microscopical examination the layers are atrophied and the distinctive characteristics cannot be made out. The base of the stapes is fixed to the oval window either by calcification, ossification of the ligamentous ring, or by deposit of new-formed osseous tissues upon the inner surface of the foot-plate, and a complete bony union of the wall of the oval window may exist" (Cheatle[3]). These constitute the cases clinically designated as atrophic catarrh. Further, as a result of about 20 post mortem examinations (Politzer, Katz, Habermann, Bezold, and others) there have been described cases which have shown to the unaided eye little or no change in the lining membrane of the tympanic cavity or in the tympanic membrane, the changes present being largely confined to the neighbourhood of the stapes articulation and consisting mainly in bony enlargement. In some cases the sclerosis involved the labyrinth—hence one of the synonyms, capsulitis labyrinthi. The first complete description of this condition was given by Politzer[4] and was based on a series of seven cases that had been observed during life. He has applied the term "otosclerosis" to this condition.

With reference to the foregoing I venture to offer a criticism and before entering into the necessary details I would summarise my position in the following statements. 1. A closer and more systematic study of cases of deafness due to chronic non-suppurative middle-ear disease will lead to a reversal of the opinion generally held as to the absence of clinical indications of catarrh in the group of cases variously described as sclerosis of the middle ear, atrophic catarrh, otosclerosis, &c. Further, the observations necessary to determine this point cannot be made by physicians who only see the cases at rare intervals. 2. If the known facts of morbid anatomy and pathology of cases of chronic non-suppurative middle-ear disease are brought into line with similar facts in the pathology of other mucous membrane and joint structures the impression is forced upon us that the different conditions described in the middle ear can be adequately explained as variants of one morbid process. The grounds for these opinions will be shortly stated.

In a series of over 200 cases that have been closely observed in the last two and a half years in my clinic or private practice I have not met with a single instance where there has not been either (1) a clear history of frequently recurring "colds in the head" of a slight or severe nature, or (2) in patients who definitely affirmed that they were not subject to colds, unequivocal evidence of an [illegible] catarrh in the course of the few [illegible] Further, [illegible] s drawn to [illegible] the point it was affirmed that the condition present was a frequently recurring one but had not ranked in their minds as a common cold. The clinical features referred to are evidence of obstruction to the passage of air into the tympanic cavity by means of a Eustachian catheter to an extent appreciably greater than existed before the onset of the said cold; this was frequently associated with a very slight alteration in the quality of the voice noticeable to the observer and also an alteration in the character of the breathing. It is advisable to draw particular attention to these cases because as many of them had previously been under the care of experts and no special treatment had been directed to the Eustachian tube one is justified in believing that these are cases regarded as "sclerosis of the middle ear" rather than "catarrhal deafness."

The record of clinical facts just stated naturally suggested a study of the known facts of the morbid anatomy of the cases in question with the view of determining how far they justified the recognition of two or more diseases, the practical importance of the inquiry being evident from the different prognosis and treatment of the various conditions. This investigation involved (1) a careful examination of the valuable series of pathological specimens in the well-known Toynbee collection in the Museum of the Royal College of Surgeons of England, the examination being as complete as possible short of actually handling the specimens.

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[3] Encyclopædia Medica, vol. iii.

[4] Zeitschrift für Ohrenheilkunde, vol. xxv.

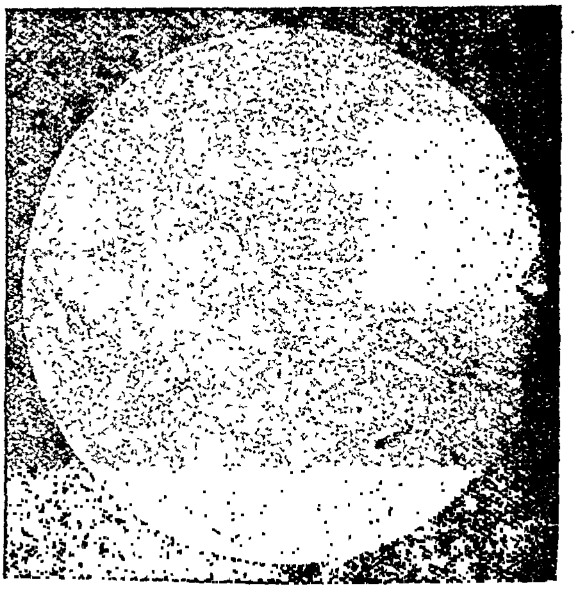
In this examination special attention was directed to a consideration of how the appearances shown and described in the soft tissues, in the bony tissues, and in the local tissue fluids of the ear would compare with those met with in the neighbourhood of other articular structures which are usually described under the heading of chronic rheumatism or rheumatoid arthritis; and (2) special consideration of the facts of morbid anatomy which have led to the recognition of a perfectly distinct disease, "otosclerosis." This disease is one to which increasing importance is being attached as the cause of the impaired hearing in young people in a considerable number of the cases of chronic non-suppurative middle-ear disease. The prognosis associated with it is very bad and little or no treatment is adopted, probably on account of the statement of Politzer that "from the anatomical changes found in the labyrinthine capsule it is evident that our therapeutic efforts must remain fruitless in this form of disease."

Two impressions are derived from this investigation. The first is that in the atrophic group of cases the absence of a detailed histological report of the lining membrane of the middle ear and descriptions of the naked-eye and microscopic appearances of the Eustachian tube makes any conclusion impossible as to the non-identity of this affection with that commonly spoken of as a hypertrophic catarrhal disease. The fact well known to pathologists of the frequency with which an "atrophic" appearance succeeds a "hypertrophic" one in catarrh of mucous membrane makes it probable that this is the explanation of the cases in question. The morbid anatomy of this mucous membrane must be brought into line with that of other mucous membranes. I have recently[5] shown and described an "atrophic" and "hypertrophic" condition of the intestinal mucous membrane which in my judgment is similar in nature to the two processes seen in the ear. With regard to "otosclerosis" a similar criticism applies. The absence of an adequate clinical history and of a histological report on the lining membrane of the middle ear and of a description of the state of the Eustachian tube renders the records incomplete. Further reference to the original paper which led to the recognition of otosclerosis as a distinct disease shows that the patients were old subjects, the respective ages of the seven cases being 77, 86, 75, 75, 50, 86, and 88, the average age therefore being 76. In view of the state of the tissues generally at that period of life too much stress must not be laid on the absence of "reactive phenomena" of inflammation such as are present in younger subjects. A reference to the other three original papers on "oto-sclerosis" to which I have had access shows an absence of unanimity as to the nature of the pathological process. Katz[6] concluded that in his case, a woman, aged 39 years, the condition was a *rheumatic inflammation*. Habermann[7] considered that in his case, a woman, aged 58 years, the disease was secondary to an inflammation of the lining membrane of the tympanic cavity. Bezold[8] regarded the condition as a primary inflammation of the periosteum in the neighbourhood of the stapes articulation. In these records also there is an absence of information as to the state of the aural passages, and in all the records there has been little or no reference to the general medical aspects of the case and no account of the post-mortem appearances of other joints and tissues of the body.

On these grounds, then, I consider that the data at present available do not warrant the recognition of more than one disease. The known facts can be adequately explained by reference to variations in local reaction—e.g., varying amount of exudate and varying degree of formation of new tissues, fibrous and osseous, such as are met with in chronic inflammation in other articulations. The correctness or otherwise of this opinion will not readily be determined from the examination of cases of disease in the human subject. Recourse must be had to comparative pathology, the study of which presents the following advantages. The tissues can be obtained at a relatively early stage of the disease; an adequate examination of the Eustachian tube, middle ear, and tympanic bulla is more easy than in the case of the human subject; and a more complete post-mortem examination of the whole animal can be made than is generally possible in man. I have examined three cases of deafness in dogs and have used as controls two cases where there was no history or evidence of deafness. In the case of two dogs the deafness was stated to exist by the owners, this opinion being shared by the expert veterinary surgeons at the New Veterinary College, Edinburgh, to whom I am indebted for the heads of the animals. The third dog was the property of a medical friend who had observed the onset and steady increase of the deafness. This was submitted to a complete post-mortem examination which revealed gross lesions—viz., chronic endocarditis and chronic intestinal catarrh, with a remarkable condition of stenosis of the intestine. The co-existence of these lesions is of great interest but their consideration is beyond the limits of the present paper, which will deal with the local lesions in the middle ear and Eustachian tube. It is well to emphasise that no conclusions can be drawn from the few facts here presented; my main object will be fulfilled if the attention of investigators is drawn to comparative pathology as a field of study well calculated to advance our knowledge of this department of human medicine.

The results of the examination[9] may be summarised. The Eustachian tubes of the deaf dogs showed distinct evidences of catarrh, the tympanic membranes were more opaque than normal, the mobility of the tympanic membranes and of the ossicles was impaired, the density of the temporal bone was increased, and the lining membrane of the tympanic bulla was extensively congested and thickened (see Fig. 2). A histological examination of the tympanic mucous membranes and also of the lining membrane of the tympanic bulla showed marked thickening—sclerosis—with increased vascularity. Special attention is drawn to the histological appearances of the Eustachian tube seen in Fig. 4. They suggest a query as to the soundness of the principle of the treatment of such cases by the use of Politzer's bag. This deafness can be explained by a diagnosis of "chronic hypertrophic catarrh"; at the same time the increased density of bone and overgrowth of fibrous tissue also justify a diagnosis of "otosclerosis." The amount of exudate and of adhesions was less than has frequently been found in cases of chronic catarrhal deafness in the human subject; further, the sclerosis of bone was diffuse throughout the temporal bone and was not mainly localised to the inner wall of the middle ear, as in cases of otosclerosis. But we know that similar variations are seen daily in other articulations in cases of chronic rheumatism where they are probably rightly regarded as mere variants of one pathological process and in the absence of further facts we are, I

FIG. 1.



The lining membrane of the tympanic bulla in a dog with no indication of ear disease. × 50.

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[5] Journal of Mental Science, July, 1903.

[6] Deutsche Me[illegible] 1890.

[7] Sc[illegible]

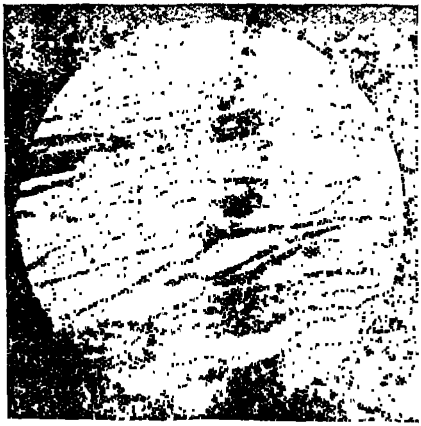
[8] Zeitschrift [illegible] xxiv.

[9] I have much pleasure in expressing my indebtedness to Dr. D. Waterston, curator of the Museum of the Royal College of Surgeons, Edinburgh, for invaluable assistance with the dissections.

believe, justified in so regarding the aural cases. The appearances in the soft tissues and in the bony tissues of the ear are those of chronic inflammation; they represent the manner in which these tissues respectively react to irritants of bacterial origin. In recent years it has become more and more evident that the only theory that allows the full meaning of inflammation to be grasped is the broad biological conception which recognises in inflammation an adaptive, protective, and reparative tendency common to the reactions to injury among all animals. Inflammation brings into operation a number of factors to counteract harmful agents, to protect the organism at large, and *to effect* healing. The common mode of origin, the similarity of the changes (though combined in different proportions) and the evident tendency of inflammatory processes to protect and to repair fully justify the teaching that *inflammation is essentially an adaptive, protective,* and reparative process, a means of self preservation. Yet it must not be forgotten that the mechanism of defence and preservation is far from perfect; the exudate may possess but little bactericidal power; the phagocytes may be powerless or the bacteria may multiply freely within them; extensive destruction of tissue may occur before the virulence of the bacteria is neutralised; the fixed cells may form imperfect material for repair or multiply in excess; the resulting cicatricial tissue may lead to serious functional disturbances (Hektoen-Riesman). A consideration of these points explains all the clinical and pathological features of cases of chronic non-suppurative middle-ear disease. The attention of aurists is only directed to these cases because the resulting local reactions which are mainly of a protective nature have, as it were accidentally, induced serious functional disturbances. With regard to the causal agents of the inflammation nothing definite can be said. We know that the common causes of injury to tissue are bacterial. With regard to aural disease it is known that the clinical picture of acute otitis media can be produced by the pathogenic activity of at least three different bacteria—streptococcus pyogenes, staphylococcus pyogenes aureus, and the pneumococcus. It is conceivable that the chronic forms of inflammation may be induced by the attenuated activity of the same bacteria. In other departments of medicine we find suggestive facts. The gonococcus *or its toxins induce at one time an acute local* suppuration, at another a chronic articular non-suppurative inflammation. The bacillus typhi can induce suppuration; it also occasionally induces a condition of joints clinically and patholo [illegible] om rheumatoid arthritis. Again, [illegible] the large joints has been very co[illegible] of dysentery in Europe (Davidson). And perhaps even of greater interest from the point of view of "otosclerosis" is a reference[10] to the attenuated *form of staphylococcus osteomyelitis recognised* by surgeons as a distinct clinical and pathological entity. While I have just stated that in my opinion we have to deal in all cases of chronic non-suppurative middle-ear disease with a local reaction to bacterial invasion *viâ* the Eustachian tube, we must remember the possibility of the co existence of an infection by the blood stream. This is probably a factor in many cases, more particularly in those in which there are clinical manifestations of disease usually designated as rheumatism *or gout.*

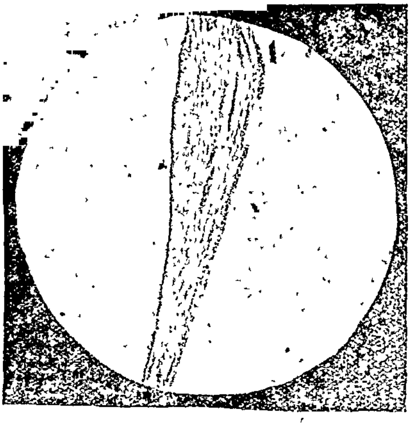
Edinburgh.

FIG. 2.



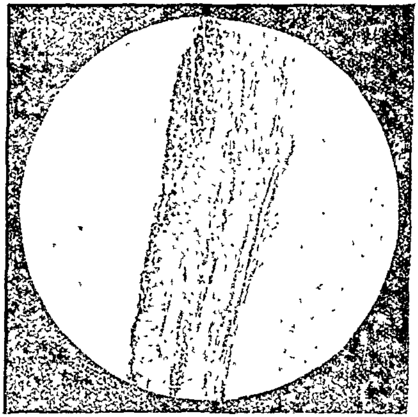
The lining membrane of the tympanic bulla in a deaf dog. Examination post mortem revealed chronic "dry catarrh." The dark bands are blood-vessels. × 50.

FIG. 3.



Vertical section of inner layer of the Eustachian tube, upper part, in a healthy dog. Section shows a single layer of columnar epithelium lying on a dense fibrous tissue—periosteum. Note the number of blood-vessels. × 50.

FIG. 4.



Vertical section of the Eustachian tube of the same animal as the specimen in Fig. 2. Notice the pronounced catarrh of the lining membrane and the increase in size and number of the blood-vessels in the periosteum. × 50.

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[10] Encyclopædia Medica, vol. I., Article "Diseases of Bones."

THE OPERATIVE TREATMENT OF HERNIA IN INFANTS AND YOUNG CHILDREN,

ILLUSTRATED BY 114 CONSECUTIVE CASES.[1]

BY ROBERT CAMPBELL, B.A., M.B. R.U.I., F.R.C.S. ENG.,
SURGEON TO THE BELFAST HOSPITAL FOR SICK CHILDREN.

WHEN the secretary of this society asked me to read a paper at one of our meetings I chose the subject of the treatment of hernia in infants and young children because it is one in which the majority of the members are more or less interested and because it is a condition in the operative treatment of which I have had considerable experience. In considering the question it is necessary for us to bear clearly in mind that the essential cause of hernia in children is the presence of a patent funicular process, and that, therefore, any method of treatment which aims at curing the deformity must secure the obliteration of this peritoneal pouch. Now, if we consult the text-books on surgery we find that most of them contain the statement that hernia in children is curable by a truss and that a steel spring truss covered with rubber is the most useful form to apply. If, however, we inquire a little more closely into the matter we find that it is not so simple as it at first sight appears. For instance, Mr. W. McAdam Eccles, a strong advocate of the use of trusses, in discussing the question in his monograph on hernia, admits that "the permanent closure of the processus vaginalis will be obtained in the majority of cases only after the continuous action of a steel spring truss over a period of some years" and that "the truss, carefully adjusted, must be worn by the child continually day and night, sleeping and waking, crying and peaceful." The endeavour to carry out this line of treatment will plainly involve the expenditure not only of much care and patience but also of a considerable sum of money in the purchase and repair of appliances. Truss treatment will therefore have to be confined to the children of the well-to-do. If, however, the result of the treatment were the permanent cure of the deformity we might be inclined to overlook the question of care and expense. But does the use of a truss secure this with any degree of certainty? I think not. It is true that in many cases the hernia ceases to descend but it is also true that in most cases the truss does not bring about the closure of the funicular process, but merely causes a narrowing of its neck, so that the patient goes through life with a peritoneal pouch ready at any time to receive a loop of bowel on any unusual increase of intra abdominal pressure. Coley, for instance, found on analysing a large series of cases of hernia in adults that about one-third of these had been treated for hernia in childhood by the application of a truss and there is a strongly growing belief among operating surgeons that all oblique herniæ in adults are due to the presence of a congenital sac. Against the use of trusses we may therefore fairly urge that it is a tedious, difficult, and uncertain method of treatment and that during its employment the patient is constantly running the risk of strangulation occurring. I am consequently of opinion that all herniæ in children should be treated by operation, with the possible exception of small easily controlled herniæ in the children of well-to-do parents; and this opinion is based on the following reasons: (1) by operation the funicular process is completely removed and the essential cause not only of herniæ in children but also, according to recent opinion, of all oblique herniæ in adults is got rid of; (2) the time occupied in curing a hernia by operation is about a fortnight as compared with three years by the use of a truss; (3) the cure by operation is almost certain to be permanent; and (4) the risk of operative treatment is certainly not greater than the risk of death from strangulation during the use of a truss.

My advocacy of operative treatment is based on a personal experience of 114 consecutive cases of radical cure in children. This series includes both strangulated and non-strangulated cases; and I may be permitted to dwell on a few points of interest in reference to them. All the cases were in[illegible]. Over two-thirds of them were on the left [illegible] and only five were females. The age [illegible]ion varied from three weeks to ten years. The two youngest patients, aged 21 and 24 days respectively, were operated on for strangulation, while the youngest child on whom I have operated apart from strangulation was six weeks old. In about nine out of every ten cases the sac was not continuous with the tunica vaginalis testis. The contents of the sac were generally small intestine; omentum was rarely seen; in only one case did the bladder present; while in ten cases the cæcum and vermiform appendix together with the lower end of the ileum were found. The strangulated cases numbered eight; all were under two years of age. The strangulation was in no case very acute but a marked tendency was observed to the formation of subserous hæmatomata between the layers of the mesentery and on the surface of the bowel. These were sometimes as large as a marble and gave rise to difficulty in reducing the gut.

I shall now turn to the operation, its risks, its complications, and its results. In children under two years, unless the hernia is very large and the walls of the inguinal canal in consequence are much stretched, a modified Mitchell Banks operation is performed. In older children and in all cases of large herniæ Bassini's operation is selected. The ligatures for the neck of the sac and for the blood-vessels are composed of catgut hardened in formalin and boiled. I have employed catgut prepared in this way for over five years and I was not aware that I was using any novel form of suture or ligature until I saw some correspondence on the subject two years ago in the *British Medical Journal*. An objection has been advanced against it that it is not sufficiently strong. I have been told by one of our gynæcologists that it cannot be relied on to secure an ovarian pedicle. But I believe that if good catgut be selected, that if it be properly prepared, and that if it be allowed to cool, and therefore to harden, after it has been boiled, it possesses sufficient strength for all ordinary purposes. I have tied the brachial, the femoral, and the popliteal arteries with it and have had no reason to repent my reliance on it. Silk I have long ceased to employ on account of its tendency gradually to make its way out months after the operation.

In the majority of the operations I have worn thin rubber gloves and I frequently, especially when demonstrating the operation to students, wear over the head a square piece of sterilised gauze split into two tails at either side, the anterior two being tied behind the neck and the posterior two being brought forwards over the mouth. This latter precaution I adopted after seeing operators and their assistants now and again during an operation in which they were much interested shed showers of dandruff into the wound, and also from the observation that some people cannot speak to you without spitting into your face. The "wipes" employed are of sterilised gauze wrung out of boiling saline solution and the dressing consists of dry sterilised gauze and wool held in position by several turns of a spica bandage on either side and also by a looped perineal bandage which includes, and exercises gentle pressure on, the scrotum. This bandaging of the scrotum I consider to be of great importance as it entirely prevents that œdema of the scrotum which is so frequently seen if a spica bandage only be employed. A piece of jaconet with a hole for the penis is fixed over the dressing with two or three turns of a bandage.

As regards after-treatment, the child is kept in the recumbent position by straps round the shoulders, the legs are lightly secured to sandbags by straps and buckles, and a urine glass is placed between the thighs, the penis being fixed in it by a plug of cotton-wool. In this connexion I might remark that it is better not to circumcise a child before operating for hernia as the long prepuce acts as a guide for the urine. After the first day the child gets his ordinary diet. The skin sutures are removed on the seventh day, the wound is covered with collodion, and in hospital cases the child returns home on the ninth or tenth day, instructions being given not to allow him to get on his feet until a fortnight has elapsed from the time of operation.

Turning now to the risk of the operation we find that it is practically *nil*. Not a single death has occurred in the whole 114 cases. The complications also have been exceedingly few. Bronchitis has been met with twice, both patients being children affected by rickets; suppuration, necessitating the opening up of the wound, occurred in one case. I might here remark that nothing militates more against a successful permanent cure than sepsis. Accumulation of blood clot in the wound requiring the removal of two sutures occurred in one case. The blood in these cases

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[1] [illegible]lster Medical Society on Dec. 3rd, 1903.

is venous, and its effusion is, I think, accounted for in this way. During the separation of the sac some of the smaller veins of the spermatic plexus get torn but do not at first bleed to any appreciable degree. If, however, the inguinal canal be sewn up so tightly as to constrict the veins then the blood is poured out in considerable quantity.

The results of the operation are most satisfactory. Nearly all the patients have been seen six months after operation and in only one case was there any tendency to recurrence and this simply amounted to slight bulging of the abdominal wall opposite the internal ring.

I think that the facts which I have put before you are sufficient to show that the operative treatment of hernia in infants and young children is the quickest, easiest, and most certain means of dealing with the deformity and that the use of trusses should be the exception and not the rule.

Belfast.

TUBERCULOSIS OF THE TONSILS IN CHILDREN.

BY L. KINGSFORD, M.D. EDIN., D.P.H. CANTAB.

IT is now recognised that tuberculosis of the faucial tonsils instead of being, as was formerly supposed, a disease of great rarity is one of comparative frequency. Owing to the difficulty of recognising the disease by the naked eye its diagnosis and frequency can be ascertained only by the aid of the microscope and by inoculation experiments. A considerable number of observers, amongst whom Straussmann[1] Kruckmann,[2] Schlenker,[3] Ruge,[4] and Walsham[5] with the microscope, and Dieulafoy[6] by inoculation experiments are perhaps the chief contributors, have recorded a large number of cases of tubercle of the tonsils in adults. But so far as I can ascertain only two observers, Friedmann[7] with the microscope and Latham[8] by inoculation, have confined their attention to the tonsils of children. The usual method of infection of the tonsil is by tuberculous sputum or by the blood stream secondary to tubercle in the lungs or elsewhere. The former method is more common in adults owing to the greater frequency of phthisical cavities, but in children the more usual infection is probably by the blood stream. Primary infection of the tonsils is, however, not infrequently met with in children and in such cases the tonsils show either the only evidence of tubercle in the system or else lesions of an oder date than any lesions elsewhere. The primary infection may be from infected food lodging in the crypts or from inhaled bacilli settling on the fauces and there are no means by which one can distinguish the source of the infection. In feeding experiments with animals the tonsils have sometimes become tuberculous, but as no record has been made of any similar infection by inhalation experiments it is probable that most of the primary tonsil cases are due to food. On the other hand, if inhalation tubercle occurs at all in the tonsils it would be more likely in early childhood when mouth breathing is so common.

With reference to the frequency of the disease, Friedmann, out of 145 post-mortem and operation cases, found evidence of tubercle 17 times, 12 of these being cases primary in the tonsils, whilst Latham by inoculation demonstrated the presence of tubercle bacilli in seven out of 45 operation and post-mortem cases. It has been found by Schlenker and Wright[9] that occasionally tubercle bacilli were present in the adjacent cervical lymphatics when the tonsils were free, and it seems reasonable to conclude that in these cases the bacilli may have passed through the tonsils without injuring them. Two years ago I cut sections of, and examined microscopically, the tonsils removed post mortem from 17 children of ages varying from four months to nine years. All these cases showed some enlargement of the cervical glands, which in 11 were obviously tuberculous. The tonsils were obtained from the East London Children's Hospital, Shadwell, and my best thanks are due to the then pathologist to the hospital, Dr. Olive Rivière, to whom I am indebted for the tonsils and for permission to use the post-mortem notes. I will give a brief description of the post-mortem conditions and of any microscopical changes found in the tonsils.

CASE 1.—The patient was three years of age. The post-mortem condition was as follows. There was marked caseation of the thoracic and abdominal glands with acute general miliary tuberculosis. With regard to the tonsils the right one was enlarged and scarred. Microscopically there were a few giant cells and some fibrosis but no tubercle bacilli were found. Apparently the tonsil here shared in the general infection.

CASE 2.—The patient was four years of age. The post-mortem condition was as follows. There were early caseation of the bronchial and mesenteric glands and early general miliary tuberculosis. As to the tonsils, the right one microscopically showed a few giant cells with some surrounding fibrosis. There were no tubercle bacilli. Probably here again the tonsil shared in [illegible]

CASE 3—This patient was [illegible] mortem condition was as foll[illegible] all the thoracic and some of the mesenteric glands. There were also present tuberculous broncho-pneumonia, miliary tubercles in the spleen and the kidneys, and commencing caseation of the cervical glands. With regard to the tonsils, the right one showed superficial ulceration and microscopically some giant-cell systems with some fibrosis and necrosis but no bacilli. The left tonsil showed great numbers of tubercle bacilli grouped together in some of the more superficial follicles, but no giant cells were detected. In this case the oldest lesions were those of the thoracic glands and the tonsils were probably infected by the sputum.

CASE 4—The patient was aged eight months. The post-mortem condition was as follows. There was a chain of caseous and breaking down glands extending from the left tonsil to the clavicle; there were also some tuberculous tumours *in the cerebrum with acute general miliary* tuberculosis. A careful examination of the tonsils failed to detect any trace of tubercle. The infection had evidently taken place through the pharynx and may conceivably have entered by the pharyngeal tonsil which was not examined.

CASE 5—The patient was two years of age. The post-mortem condition was as follows. There were old caseation of the thoracic glands and general tuberculosis. The left tonsil had very large crypts and microscopically showed typical giant-cell systems. No bacilli were found. The right tonsil was hypertrophied but not tuberculous. The infection was evidently secondary to the thoracic glands, probably by the blood stream.

CASE 6.—The patient was aged one year. The post-mortem condition was as follows.. There were bronchiectasis and fibrosis of both lungs and scattered caseous tubercles, slight caseation of the tracheal and mesenteric glands, early general miliary tuberculosis, and some caseation of the cervical glands. Both tonsils contained giant-cell systems and in the right one some tubercle bacilli were present in the giant cells. Here the infection was secondary, probably by the blood stream.

CASE 7.—The patient was five years of age. The post-mortem condition was as follows. There was broncho-pneumonia but there were no visible tubercle lesions in the body. Both tonsils were hypertrophied but otherwise were healthy.

CASE 8.—The patient was aged four months. The post-mortem condition was as follows. There were old tuberculosis of the left bronchial and tracheal glands, tuberculosis of the left lung, and some generalised tuberculosis. There was one firm caseous cervical gland on the left side. Both tonsils were quite healthy.

CASE 9—The patient was aged one year. The post-mortem condition was as follows. There were old tuberculous disease of the right lung and old caseation of the tracheal and bronchial glands. All the cervical glands on the left side were enlarged, the upper ones containing miliary tubercles and those near the clavicles showing caseation. Both tonsils were healthy.

CASE 10.—The patient was aged nine years. The post-mortem condition was as follows. No pathological changes were met with beyond some engorgement of the lungs, perisplenitis, and enlarged submaxillary glands. Both tonsils were hypertrophied and showed inflammatory exudation but there was no evidence of tubercle.

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[1] Straussmann: Virchow's Archiv. Band xcvi.

[5] Walsham: [illegible] ociety of London, vol. xlix.

[6] Dieulaf[illegible] s de Paris, April, 1895.

[7] Fried[illegible] Anatomie und zur Allgemei[illegible]

[illegible] 1900.

[9] Wright: New York Medical Journal, April, 1900.

CASE 11.—The patient was aged two years. The post-mortem condition was as follows. There were old caseous thoracic glands with acute general tuberculosis. Both tonsils were healthy.

CASE 12.—The patient was aged one year. The post-mortem condition was as follows. There were old tuberculous thoracic glands with acute general tuberculosis and some miliary tubercles in the right cervical glands. The left tonsil was hypertrophied and under the microscope typical giant cells were seen. Giant cells were also present in the right tonsil but no bacilli were found. The infection here was secondary to the tubercle of the thoracic glands.

CASE 13.—The patient was aged 11 months. The post-mortem condition was as follows. There was tuberculosis of the left lung which had spread from caseous left tracheal and bronchial glands; there was also acute general tuberculosis. There were caseous nodules in the submaxillary and cervical glands on both sides. Both tonsils were normal in size. The right tonsil contained a few not very typical giant cells. The left tonsil on section showed a small apparently caseous area, which under the microscope was seen to be composed of many typical giant-cell systems involving several of the follicles and a surrounding area of necrosis. Tubercle bacilli were present in some of the giant cells. Owing to the fairly advanced tuberculosis of the left tonsil and to the fact that it was also the left cervical, left tracheal, and left bronchial glands that were chiefly affected, it may possibly have been the case that the original entry was through the tonsil.

CASE 14.—The patient was two years of age. The post-mortem condition was as follows. There were old caseation of the right tracheal glands and old fibrosis with some caseation of the right cervical glands with acute miliary tuberculosis. The right tonsil was enlarged and the left was atrophied but otherwise healthy.

CASE 15.—The patient was four years of age. The post-mortem condition was as follows. There were very old caseation of the right tracheal glands and recent tubercle of the intestines and meninges. Both tonsils were quite healthy.

CASE 16.—The patient was three years of age. The post-mortem condition was as follows. There were caseous thoracic glands, especially on the right side, and cavities in both lungs, intestinal ulceration with some caseation of the mesenteric glands, and caseous masses in the brain. The cervical glands were enlarged and above the right clavicle there were some very old fibro-caseous glands. Both tonsils were healthy.

CASE 17.—The patient was aged one year. The post-mortem condition was as follows. There was caseation of the thoracic and mesenteric glands. There were cavities in the right lung, intestinal ulceration, and general tuberculosis. One cervical gland was caseating. Both tonsils were small but healthy.

Of these 17 cases, therefore, seven showed evidence of tuberculosis of the tonsils when examined microscopically but only three exhibited any naked-eye evidence of the disease. Of these three one showed ulceration, another scarring, and the third a caseous spot. Out of five cases where the tonsils were hypertrophied only two showed tubercle, the remaining tuberculous lesions being found in tonsils of normal size. Case 13 is the only one having any claims to consideration as a primary tonsillar infection and that case is very doubtful. The remaining cases were certainly all secondary to lesions elsewhere, the infection of the tonsils having been by the blood in five and in the other case probably by the sputum. In Cases 4, 8, and 14 where at the necropsy it seemed likely that the bacilli had entered originally through the tonsils no evidence of tubercle could be found in them. The parts of the tonsils which were the seats of the lesions were usually the lymphoid follicles not far from the epithelial surface, but in no instance was I able to trace bacilli in from the crypts or surface of the tonsils. With regard to the ages of the cases it will be seen that two occurred in the first year of life, two in the second, and one in each of the third, *fourth*, and fifth years. Goerdeler[10] has met with several under six months and Latham one at the age of three *months*.

It has surprised me on investigation to find how few cases of tubercle have been recorded in hypertrophied tonsils removed by operation. Purves Stewart[11] described one case in 1895 and Friedmann found one case out of 54 that he examined, but Walsham and Wright out of a large number of cases did not come across a single instance. I cut sections of the hypertrophied tonsils of two operation cases which had enlarged cervical glands but found no trace of tubercle in either case. Altogether, some 200 cases seem to have been examined microscopically and only two cases of tubercle were found. Dieulafoy was more successful by inoculation as he found tubercle in eight out of 61 cases by this method, but since he did not in his experiments exclude any tubercle bacilli which might have been present free in the crypts his results are not quite so valuable as they would otherwise have been. It seems fairly reasonable to conclude that if hypertrophied tonsils removed by operation are tuberculous the infection has entered by those tonsils, for otherwise symptoms of serious disease could hardly fail to be noticed.

The belief which has of late years steadily been gaining ground—namely, that the tonsils are one of the most important channels by which the tubercle bacilli enter the system in childhood—has many supporters, amongst them Woodhead,[12] Latham, and Aufrecht. Indeed, Aufrecht[13] goes so far as to say that this happens in practically every case of tuberculosis at any age. He contends that the bacilli pass through the tonsil to the cervical glands and from them directly into the blood stream. It seems hardly likely, however, that they would frequently pass through the tonsils without leaving behind some lesion which, by its chronicity, age, or extent (compare Case 13), would give some idea of its primary nature. In view of the small number of primary tonsil cases described compared with the total number of cases investigated I do not think we are justified in going further than to say that the tonsil is a recognised channel of infection, and the evidence seems strongly against Aufrecht's contention.

From these cases and from the investigations of others the following conclusions may reasonably be drawn: (1) that tuberculosis of the tonsils, especially in cases with tubercle elsewhere, is fairly common, though the disease is usually latent; (2) that tonsil tuberculosis may be primary and, indeed, the only seat of the disease in the system, though this is rarely the case; (3) that the usual method of infection is by the blood stream in children from an older focus elsewhere; (4) that infection also may occur by the sputum in children; (5) that when the tonsils are tuberculous the corresponding cervical glands become affected; and (6) that sometimes where it is probable that the infection entered through the tonsils they were quite healthy but the adjacent cervical glands were tuberculous.

Dover.

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[10] Goerdeler, quoted by Aufrecht.

[11] Purves Stewart: Brit. Med. Jour., May, 1895.

[12] Woodhead: THE LANCET, Oct. 26th, 1894, p. 957.

[13] Aufrecht: Journal of Tuberculosis, Asheville, N.C., April, 1903.

PRELIMINARY NOTE ON

THE PROPHYLACTIC ACTION OF GARLIC AGAINST TUBERCULOUS DISEASES.

BY DR. GIULIO CAVAZZANI.

AFTER the favourable results obtained in treating pulmonary phthisis by means of garlic, which I published for the first time in 1901[1] and which were confirmed later by further statements of mine and of others,[2] I thought it might be useful to see if garlic would also have a favourable effect on the course of other tuberculous infections in animals for experimentation and, eventually, if it would demonstrate a specific action against phthisical diseases. The question is of such vital importance that, having obtained favourable results from the first researches, I think it is my duty to make them known immediately in order to provoke discussion and to stimulate research by which if my purely objective statements were confirmed, a therapeutic and civil problem which is perhaps the greatest one of our age would be solved.

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[1] G. Cavazzani: L'Allium Sativum nella Cura della Tubercolosi Polmonare, Suppl. Policlinico, April, 1900.

[2] P. Piccinini: Di un Nuovo Preparato dall' Allium Sativum, Corriere Sanitario, 1901. G. Cavazzani: L'Aglio nella Cura della Tubercolosi Polmonare, Gazzetta Medica Lombarda, 1902. L. Sacchi: Nuove Osservazioni sull' Efficacia Terapeutica ecc., Milano, 1902. G. Cavazzani: L'Uso dell' Aglio nella Terapia della Tubercolosi ecc., *XIIo Congresso Medico* [illegible] nnari Deplano: Tubercolosi Polmon[illegible] 03. B. Donti: Contrib. alla Cura Ra[illegible] Gazzetta Internazionale di Medicina, 1903.

About the end of June, 1903, I took eight guinea-pigs, six of which had been submitted to a preventive treatment for a fortnight, each swallowing daily 0 06 gramme (one grain) of garlic juice. After having dried and powdered expectorated mucus from tuberculous patients I insufflated a small quantity of this material into the larynx of each guinea-pig. The animals so treated were kept for two days in a room impregnated with the same powder. Two guinea-pigs were kept as controls throughout the experiment. Three of the remaining six were given the above-mentioned quantity of garlic for a fortnight and the other three were given a similar amount till the end of September. I killed the animals in the first week of October.

The results of the necropsies were that the abdominal organs and the lymphatic system of the two guinea-pigs used for control were completely filled throughout with tuberculous formations in different stages of development. The microscopic examination of some tubercles proved the presence of Koch's bacillus. In the bodies of the three animals which had been treated with garlic for one month I found from 10 to 20 small tubercles, some of them in the liver and some in the spleen. The examination of the tubercles did not reveal the presence of Koch's elements, but instead it showed the presence of numerous fibres of young connective tissue. In the bodies of the other three guinea-pigs, those which had been treated with garlic up to the end of the experiment, I could find no tuberculous formations though the most minute examination was made. The small number of animals used in the experiment forbids the drawing of conclusions.

If these results should be confirmed by further researches, which I have already begun, it would be proved that garlic prevents at least guinea-pigs from contracting tuberculous diseases through breathing the germs. As this seems to be the commonest way of contracting phthisis, and if we may consider animal pathology in the same light as human, it might mean the discovery of a method for preventing consumption.

Venice.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES OF A CASE OF HÆMATURIA DUE TO THE HÆMORRHAGIC DIATHESIS.[1]

BY H. B. A. PEARSON, L.R.C.P. LOND., M.R.C.S. ENG.

THE patient, who is an unmarried female, 40 years of age, has been suffering from an attack of hæmaturia with variable losses of blood ever since Christmas, 1901. Her urine is acid in reaction; on standing it looks like beef-tea with sediment at the bottom and, as would be expected, it contains albumin. Under the microscope blood cells in large numbers and blood casts are seen. During the attack she has suffered from pain in the region of the right kidney, [illegible] passing down in the direction of the left ureter to the bladder, giving an impression that for the first 12 months the right kidney only was in fault. Menstruation is regular but prolonged to eight days; 20 diapers are used and become well soaked. Bright coloured blood has been vomited but there has not been any symptom to suggest either hæmoptysis (there is no cough or expectoration) or hæmatemesis due to gastric ulcer, or even a varicose condition of the throat. Bright-coloured blood has been passed from the bowel but like so many of her sex the patient suffers from constipation and the passage of hardened fæces over the mucous membrane would be sufficient to account for this. She suffers from a rash, pinkish red in colour, fading into yellow, following the lines of the lower inter costal nerves. This is probably nervous in origin and traceable to the two kidneys as it occurs on both sides. She has not had any rash of a petechial or purpuric character, neither has she suffered from epistaxis, hæmatomata, or swelling in the joints due to hæmorrhage.

The family history is as follows. The patient's paternal grandmother died suddenly at the age of 28 years from hæmorrhage. The father, son of the above, died at the age of 60 years from hæmorrhage into the brain or meninges after an illness of 24 hours' duration; he had no brothers, but his three sisters all died suddenly under the age of 30 years from hæmorrhage; one of the sisters had three children, all of whom died young from hæmorrhage. The patient, his daughter, lost one brother at the age of 15 years from heart disease and hæmorrhage; one sister, aged 24 years, died suddenly with vomiting of blood, and another sister, aged five months, bled to death. She has five sisters living, all in good health except that one of them in her confinements has ante- and post partum hæmorrhage. She has one brother living, in good health and not liable to hæmorrhage. One of her sisters lost one boy, aged one year and eight months, one girl, aged two years and seven months, and one girl, aged five years, from hæmorrhage. Her mother's family was healthy and not liable to hæmorrhage. The patient's first attack of hæmaturia occurred in 1894; it was caused by mental worry due to the death of her father and lasted for eight months. The second attack came on in 1899, after the death of a niece, and lasted for three months. She has always suffered from vomiting on the slightest provocation. She has had measles, whooping cough, pleurisy, and congestion of the liver. The cause of the hæmorrhage is evidently associated with some abnormal condition affecting the kidney or its hilum, as I have washed out the bladder on three different occasions with negative results.

This class of case seems to be rare. According to American records not one case was reported in ten years, but Grandidier, on the other hand, has collected references to a considerable number, of whom only a small minority reached maturity. The family history of this patient is at variance with the doctrine currently taught—namely, that the females usually transmit the diathesis to their male children. Evidently in this case the paternal grandmother transmitted it to her three daughters who all died from it under the age of 30 years, and through her son to his daughters. This family history is certainly worth studying and also being recorded. The patient herself personally does not give any clue as to what she is suffering from and is able to carry on her occupation. Hot articles of food, however, increase the hæmaturia, so she is practically limited to food taken cold. She feels better in cold than in hot weather.

New Wandsworth, S.W.

OPERATIVE TREATMENT OF A PERFORATED GASTRIC ULCER.

BY JOHN H. TONKING, M.B. LOND., L.R.C.P. LOND., M.R.C.S. ENG.,

SURGEON TO THE WEST CORNWALL MINERS', WOMEN'S, AND CHILDREN'S HOSPITAL.

THE patient whose case is now described is a single woman, 39 years of age. For about 18 months she had suffered from symptoms of gastric ulcer and usually confined herself to a special diet but with occasional lapses, one of which occurred on the evening of Oct. 21st, when she partook of potted tongue. Early on the following morning she was awakened by violent internal pain which was agonising when I saw her at 9 A.M. Her abdomen was then absolutely rigid but there was no vomiting. I thought it advisable not to give morphine but I administered one-thirtieth of a grain of nitrate of strychnine hypodermically and communicated with Dr. Frank Hichens of Redruth, who saw the patient with me at 11 A.M. and concurred in the diagnosis of perforated gastric ulcer. Morphine (a quarter of a grain) was then given and the patient was removed to the West Cornwall Miners', Women's, and Children's Hospital at Redruth, a distance of three miles. Here at 2 P.M.—i.e., within 12 hours of the perforation—Dr. W. Blackwood administered ether and I with the help of Dr. Hichens cut down on the stomach. The anterior wall midway between the lesser and the greater curvatures was covered with inflammatory lymph and the abdomen was full of turbid serum, a large quantity of which escaped. At this stage the patient's pulse, which had been 120 per minute at first, rose to 132 and became very weak. An ounce of brandy and one and a half ounces of hot coffee were thereupon given by the rectum as well as one thirtieth of a grain of strychnine hypodermically. The perforation was about as large as a pea and was situated in the centre of an induration which from its size and thickness (it occupied about the extent of a five-shilling piece) suggested a new growth. Much difficulty was encountered in suturing the perforation, many of the silk sutures cutting out, but at last it was closed with four Lembert sutures and the whole induration was tucked in and secured by a few more Lembert sutures. The surface of the stomach was wiped with gauze swabs, as much fluid as possible was removed, a drainage-tube was inserted, and the wound was closed with silkworm gut. The patient was fed by nutrient enemata until the 28th when her bowels were moved by calomel followed by a laxative enema. On this day one drachm of whey was given by the mouth every hour and on the following day one drachm of peptonised milk was given every hour. The course of the temperature showed few special features, never falling below 97° F. and not rising above 100° except on Oct. 31st and Nov. 2nd. Hypodermic injections of one-thirtieth of a grain of strychnine and one-hundredth of a grain of digitalin were given several times a day from Oct. 31st to Nov. 5th inclusive. The convalescence, which was long and tedious, was interrupted by an attack of catheter cystitis and about Nov. 19th by an abscess bursting in the position of the drainage tube; after this, however, she improved rapidly and left the hospital as recovered on Dec. 22nd. Since the operation there has been a marked change for the better in her gastric symptoms and she is no longer troubled with the pain and pyrosis from which she formerly suffered.

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[1] The patient was shown at a meeting of the South-West London Medical Society in April, 1903. See THE LANCET of April 18th, p. 1105.

Camborne, Cornwall.

A CASE OF CONCURRENT ATTACK OF URTICARIA AND MALARIAL FEVER.

By DR. GEORGE PAPAKOSTA,

GREEK ARMY MEDICAL SERVICE.

THE patient in this case was a sergeant of infantry, 26 years of age, who had always been in good health until two years *previously* when he suffered very much from malarial fever of an obstinate character. He was then serving in Missolonghi and for a great while he took quinine which provoked hæmaturia. Again in Corfu in 1902 he was twice attacked with the same fever, of which he was cured, and he remained well till the end of November, 1903, when for four days he felt himself much out of sorts and on the morning of Dec. 2nd he was admitted to the military hospital complaining of shivering, headache, giddiness, vomiting, and diarrhœa. His temperature was found to be 103·4° F., his tongue was furred, his liver was apparently normal, his spleen was rather enlarged, and all over his body and face there was a general red eruption of urticaria which at first gave rise to a suspicion that he might be suffering from measles. In the afternoon his temperature fell to 99·1°, the vomiting and diarrhœa ceased, the eruption disappeared, and towards night his condition became good and he perspired freely. On the morning of the 3rd he had no fever but in the afternoon he had a fresh attack of fever and the former symptoms reappeared and lasted till the following day when his temperature fell and the urticaria with the associated symptoms disappeared. He was not given quinine on account of the hæmaturia, but on the morning of the 5th he was again seized with shivering and his temperature rose to 101°. I immediately injected 15 grains of quinine. The fever continued till the next evening but without any recurrence of the eruption or of the other symptoms. The man is now fairly well although weak. Examination of his blood showed that the plasmodia of Laveran were present.

Corfu.

GLOUCESTER INFIRMARY.—At the meeting of the governors of the Gloucester Infirmary held on Dec. 31st, 1903, the chairman, Colonel Curtis Hayward, reported that of the £10,000 required for building the nurses' home and effecting improvements in the infirmary £7500 had been already received.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

LONDON HOSPITAL.

23 CONSECUTIVE CASES OF OPERATION UPON THE STOMACH.

(Under the care of Mr. C. W. MANSELL MOULLIN.)

THE following notes, for which we are indebted to Mr. C. H. Miller, are the record of 23 consecutive cases of operation upon the stomach during his term of office as house surgeon from March to November, 1903.

CASE 1.—The patient was a married woman, aged 27 years, who was admitted on March 26th. She had always enjoyed good health until 12 months before, when she began to suffer from pain in the epigastrium. It nearly always began two hours after food and was relieved by sickness. Four months before admission she vomited a large quantity of dark blood and this occurred again four weeks later. In spite of being strictly dieted and kept in bed the symptoms steadily grew worse and the patient kept losing ground. The abdomen was hollow. There was no dilatation of the stomach and there was no superficial hyperæsthesia, but there was one spot by the tip of the left tenth rib which was very tender on deep pressure. Laparotomy was performed on March 31st and the scar of an old ulcer was found on the serous coat near the pylorus. Posterior retrocolic gastro-jejunostomy was performed and a lateral anastomosis was made between the two sides of the jejunal loop, both by direct suture. The patient vomited three times in the course of the night. Small quantities of water were given by the mouth the same evening and pancreatised milk the next day. Nutrient enemata were administered for the first 24 hours and at the end of that time calomel in two grain doses every four hours up to ten grains was given. This was followed by a turpentine enema, after which the bowels acted well. The patient was given soft solids at the end of the week and left the hospital perfectly well on April 25th.

CASE 2.—The patient, a single woman, aged 28 years, was admitted on April 22nd. She gave a history of indigestion for the last ten years and of violent epigastric pain and vomiting, especially after solid food, for the last six months. The pain usually began half an hour after food and was relieved by vomiting. There was no history of hæmatemesis or of melæna. The abdomen was rigid, especially over the upper part of the right rectus. There was a point of superficial tenderness two inches above the umbilicus and one inch to the left of the middle line and of deep tenderness in the right epigastrium. When the abdomen was opened stenosis of the pylorus was found, due to the scar of an old ulcer, and posterior retrocolic gastro-jejunostomy with a lateral anastomosis was performed by direct suture as in Case 1. The after-treatment was the same. Pancreatised milk was given by the mouth after 24 hours and solid food at the end of a week. The patient was discharged well on May 25th.

CASE 3.—The patient, a man, aged 36 years, was admitted on April 23rd. He gave a history of pain in the epigastrium and vomiting for the last six years. Hæmatemesis occurred in 1900. In 1902 the abdomen was explored and a duodenal ulcer was found. This was scraped and painted with nitrate of silver but without giving the patient any relief. Vomiting continued three or four times a day. The abdomen was opened and a great mass of adhesions was found around the pylorus and the first part of the duodenum matting everything together. The same operation was performed as in the previous cases. Peptonised milk was given after 24 hours. The vomiting ceased and the patient made uninterrupted progress for three weeks, when the pain and vomiting returned for a time. He was discharged at the end of four and a half weeks and was seen again two months later in much better condition and free from all symptoms but an occasional attack of indigestion.

CASE 4.—The patient, a man, aged 44 years, was admitted on June 11th. He had suffered from indigestion as long as he could remember, the pain coming on half an hour after food. There had been two attacks of hæmatemesis in June, 1902. After this the patient was strictly dieted but without obtaining any relief. On examination the epigastrium was rigid; there was no deep tenderness but there was superficial tenderness at the back of both loins. When the abdomen was opened a number of adhesions were found on the posterior surface of the stomach around the pylorus. The same operation was performed and everything went well until the fifth day, when it was discovered that the wound in the abdominal wall (which had been sewn up with catgut boiled in xylol) had given way and that there was a large prolapse of intestine. This was replaced as soon as possible under an anæsthetic but the patient, in spite of being transfused twice, never rallied from the shock and died 36 hours later. At the post-mortem examination there was no peritonitis or leakage from the operation wounds nor was there any physical sign to account for his death.

CASE 5.—The patient, a woman, aged 33 years, was admitted on May 13th, being sent by Dr. F. J. Smith. A history of pain after food, with occasional vomiting for the last four years, was given, the symptoms steadily growing more severe. Three months before admission she had vomited half a pint of blood. On examination there were much tenderness in the epigastric and right hypochondriac regions and some superficial tenderness between the scapulæ. The abdominal muscles were contracted and the abdomen was very rigid. No scar was visible on the serous surface of the stomach. The same operation was performed. Sickness was almost continuous for four days. At the end of that time it ceased and the patient was able to take semi solid food at once. She was discharged to a convalescent home on the twenty-second day after the operation and reported herself on her return as feeling perfectly well and quite free from pain.

CASE 6.—The patient, a man, aged 37 years, was admitted on May 14th. He gave a history of pain coming on one hour after food for the last 12 months. The pain was usually relieved by vomiting but occasionally persisted for some hours with great intensity. There was no hæmatemesis or melæna. No superficial or deep tenderness was present and no tumour could be felt. On opening the abdomen the stomach was found to be dilated and there was much thickening with some adhesions around the pylorus. The same operation was performed and the patient was discharged well on June 17th. Two months later his condition was perfectly satisfactory.

CASE 7.—The patient, a woman, aged 50 years, was admitted on June 18th and gave a history of indigestion and vomiting for many years. As a rule vomiting relieved the pain. Seven weeks before admission she was reported to have brought up 12 pints of blood and to have suffered from melæna for some days. On examination the upper part of the abdomen was rigid and there were deep tenderness and pain in [illegible] There was no superficial tendern[illegible] felt. On opening the abdome[illegible] the stomach wall near the pylorus and some adhesions were found at the cardiac end. The stomach was opened and the interior was examined with a speculum to ascertain if there was any bleeding point. An anterior gastro-jejunostomy (making use of the opening through which the interior had been explored) with a lateral anastomosis between the contiguous sides of the jejunal loop was performed. This was followed by a good deal of bleeding, the patient continuing to vomit, first bright and then dark blood, until she became seriously anæmic. The bleeding stopped [illegible] after several drachm doses of [illegible] e vomiting continued with dim[illegible]; but in spite of this she was able to take and to retain small quantities of peptonised milk and iced champagne and on the fifth day was given semi-solid food. After this there was no further trouble and she was discharged on July 20th able to eat anything without inconvenience.

CASE 8.—The patient, a man, aged 54 years, was admitted on June 18th. He gave a history of pain and vomiting for upwards of eight years, which had been steadily getting worse. There was no history of hæmatemesis. He had lost three stones in weight in the last twelve months. On examination of the abdomen there was no superficial tenderness but the upper segment of the right rectus was rigid and here pressure caused a good deal of pain. The stomach was distended. There was a well-marked splashing sound but no tumour and no enlarged glands could be made out. On opening the abdomen the pylorus was surrounded by adhesions and on the anterior surface was an old scar. The whole of the lesser curvature was occupied by a mass which appeared to be carcinomatous. A posterior gastro-jejunostomy with a lateral anastomosis was performed. For the first 24 hours the patient was very sick but after that he took small quantities of pancreatised milk readily. Convalescence was protracted by a severe attack of bronchitis but the patient was discharged able to eat ordinary diet without pain or sickness on July 21st and when seen a month later had continued well and had gained in weight.

CASE 9.—The patient, a man, aged 25 years, was transferred to the surgical wards by Dr. Smith on June 22nd. There was a history of vomiting several times a day for the last seven weeks and of having brought up large quantities of blood on more than one occasion. There had been but little pain and that chiefly in the left loin (the patient had evidently had morphine freely). On opening the abdomen a cicatrix was at once visible on the anterior surface of the stomach near the cardiac end of the lesser curvature, and on opening the stomach through its anterior wall a deep crater-like ulcer was found in a position corresponding with that of the scar. An anterior gastro jejunostomy with a lateral anastomosis was performed by direct suture and as the patient was somewhat collapsed a pint of beef-tea with two ounces of brandy was injected by means of a catheter into the descending side of the loop. After the operation he was very restless and vomited frequently for the first 48 hours. As the pulse became very weak, continuous infusion of saline solution was performed on the third day, upwards of ten pints being injected. After this his condition improved rapidly. The vomiting ceased. Food was taken regularly and he was discharged from hospital on July 30th. Two months later he came back to report himself as quite strong and free from any unpleasant symptoms. He had put on more than a stone in weight.

CASE 10.—The patient, a woman, aged 23 years, was admitted on June 24th, being sent by Dr. Smith. She gave a history of hæmatemesis four years before, followed by pain and nausea after food. Four days before admission she had brought up a large quantity of blood and again on three occasions since. The motions had been black for some days. The abdomen was rather rigid but there was no superficial or deep tenderness and no tumour could be felt. After some days' feeding by enemata an operation was performed on July 7th and an old ulcer was found on the lesser curvature near the pyloric end. It could not be excised so a posterior gastro-jejunostomy was established with a lateral anastomosis as already described. The vomiting was severe for the first two days but ceased as soon as the bowels were well opened. The patient made an uninterrupted convalescence and was discharged to the country 25 days after the operation.

CASE 11.—The patient, a woman, aged 45 years, was admitted on July 4th, being sent in by Dr. A. P. Gibbons. A history of pain after food, relieved by vomiting, for many years past and of hæmatemesis and melæna two days before admission was given. The pain was chiefly in the right epigastric region, penetrating through to the back. There was no superficial or deep tenderness and no tumour or dilatation of the stomach could be made out. On opening the abdomen an old indurated chronic ulcer was found occupying the lesser curvature of the stomach. This was excised and as the shape of the stomach after the wound in its walls had been sewn up was not satisfactory a posterior gastro-jejunostomy without any lateral anastomosis was performed as well. The patient was seriously collapsed in spite of large saline enemata and was transfused (intravenous) to the amount of three and a half pints on the same [illegible] hypodermically [illegible] On the follow[illegible] [illegible]ll quantities of [illegible] food at the end [illegible] st 6th, free from pain, able to take food well, and gaining weight rapidly.

CASE 12.—The patient, a woman, aged 39 years, was transferred to the surgical wards by Dr. G Schorstein on July 13th. A history of pain after food for many years past was given which was relieved by vomiting. Lately the amount brought up had occasionally been excessive. On examination the stomach was much dilated; splashing could easily be obtained and there was an ill-defined induration in the lower part of the epigastric region. On opening the abdomen the transverse colon was found to be extensively adherent to the greater curvature and the pyloric end of the stomach was much contracted by scar tissue. The posterior operation was impossible so an anterior gastro jejunostomy with a lateral anastomosis was performed. The patient was transfused (intravenous) to the extent of three pints on the same evening. There was no vomiting and after 24 hours she took pancreatised milk well. She was discharged to a convalescent home on August 8th.

Case 13.—The patient, a woman, aged 30 years, was admitted on July 20th with a history of pain after food, which was relieved by vomiting, and of hæmatemesis and melæna on several occasions The abdomen had been already explored at another hospital but apparently nothing had been found and the stomach had not been opened. The patient was fed on nutrient enemata for 12 days before anything was done in the hope of improving her general condition. On opening the abdomen many adhesions were found around the transverse colon and the posterior surface of the stomach. The interior of the stomach was examined with a speculum, but no ulceration was seen and the opening made for this purpose was utilised for an anterior gastrojejunostomy. A lateral anastomosis was also made. On the same night the patient was transfused, three pints being injected into the veins, and nutrient enemata were given for 24 hours. The vomiting in this case was very persistent for four days and only ceased at the end of the week. 14 days later it began again and the loss of fluid was so great that subcutaneous transfusion to the amount of 12 pints was performed. The cause for this attack was never discovered. The temperature rose to 103° F. and remained irregular for about a fortnight and vomiting continued during the whole period once or twice a day, but it was noted that it made no difference to the patient's meals. An hour after food she would be sick without, however, bringing up anything that could be recognised as part of her last meal. Finally the vomiting ceased entirely on her going to a convalescent home and the condition of the patient improved very much.

Case 14.—The patient, a man, aged 30 years, was admitted on August 24th. There was a history of indigestion for years past, of frequent vomiting, and of one attack of hæmatemesis and melæna six days before admission. There was marked superficial tenderness on the whole of the upper part of the abdomen, with some deep tenderness in the right epigastric region. For some time the patient was dieted but as there was no improvement an operation was performed on Oct. 10th on Mr. Mansell Moullin's return. The pylorus was found to be thickened and contracted and to be fixed by adhesions to surrounding structures. As there was not a great amount of cicatricial tissue pyloroplasty was performed and a gauze drain (as there was a certain amount of oozing) was left for 48 hours. Vomiting was severe for three days and continued until the seventh Liquid food was given after 24 hours and convalescence after that was uninterrupted. The patient left the hospital completely relieved 25 days after the operation.

Case 15.—The patient, a woman, aged 50 years, was transferred to the surgical wards by Dr. Schorstein on Sept. 29th. A history of severe hæmatemesis on two occasions eight years before and of continuous pain after food since was given. Vomiting was frequent, the patient sometimes bringing up a pint or more of acid fluid. There was superficial tenderness over the whole of the upper part of the abdomen and over the lumbar spines. The stomach was evidently dilated and a cylindrical hard mass could be felt midway between the umbilicus and the ensiform cartilage. On opening the abdomen the lesser curvature of the stomach, especially towards the pyloric end, was found to be extensively infiltrated with old inflammatory deposits and the scar of an old ulcer was visible near the pylorus. Posterior gastro-jejunostomy with a lateral anastomosis was performed as described already. The patient vomited almost every hour for the first two days and then the vomiting ceased. At the end of a week she was taking soft solids without discomfort and she left the hospital in a month after the operation free from pain and feeling well.

Case 16.—The patient, a woman, aged 30 years, was admitted on Oct. 3rd with a history of indigestion with occasional hæmatemesis five years ago and of vomiting at intervals ever since, to the amount at times of many pints. Nausea after food was the rule but sickness was only occasional. Sometimes there was severe pain but this did not bear any relation to meals. The stomach was considerably dilated but no splashing could be made out. On opening the abdomen the pylorus was found to be constricted by the scar of an old ulcer and pyloroplasty was performed. This patient suffered from a good deal of flatulence at first and though when she was discharged on Oct. 31st this had disappeared there was an occasional feeling of nausea. It seemed as if the stomach, the walls of which were more or less atonic, did not empty itself so well through the enlarged pylorus as it usually does through a low gastro-jejunostomy.

Case 17.—The patient, a woman, aged 47 years, was admitted on Oct. 10th. There was a history of epigastric pain commencing the previous Christmas and followed after some time by vomiting. The pain was continuous and not relieved by sickness. The amount brought up was very small and appeared to consist chiefly of bile. The patient was very much wasted (her weight having fallen from 13 to 7½ stones) and she was deeply under morphine on admission. On examining the abdomen the upper segments of the rectus were rigid; there were both superficial and deep tenderness in the epigastrium and the stomach resonance was increased. On opening the abdomen no examination of the viscera was made owing to the patient's condition but a posterior gastro enterostomy with a lateral anastomosis was performed as quickly as possible. Hot saline fluid and brandy were injected into the small intestine during the operation and a large enema was given immediately after. On returning to the ward she was transfused to the amount of five pints. The operation had no effect upon the vomiting which continued as before. Food was rarely brought up. As a rule the ejecta consisted chiefly of bile with watery fluid as they had before the operation. On two occasions, at some days' interval, the patient became so collapsed that continuous transfusion was necessary. Towards the end she grew maniacal, so that it was very difficult to restrain her, and she died 24 days after the operation. At the post-mortem examination there was no peritonitis and both openings were perfect and apparently able to do their work well. There was no disease of the stomach, the liver, or the intestines. Unfortunately the head was not opened.

Case 18.—The patient, a man, aged 32 years, was admitted on Oct. 12th. In March, while stooping to put on his boots, he was seized with severe pain in the pit of the stomach and fainted. Later a large amount of blood was passed per rectum. Since then he had had two similar attacks. He had never been sick but had suffered since the first attack from epigastric pain which came on ten minutes after taking food and lasted for hours. There was no superficial or deep tenderness over the abdomen and no tumour could be felt but the stomach appeared to be a little dilated. On opening the abdomen there did not appear to be anything the matter with the stomach. A posterior gastrojejunostomy with a lateral anastomosis was performed in the usual way. The patient was sick three times and convalesced rapidly, leaving the hospital at the end of a month able to take food well and perfectly free from pain. In this case it is probable that the ulcer was in the duodenum.

Case 19.—The patient, a man, aged 36 years, was admitted on Oct. 19th, being sent in by Dr. Robert Hutchison. A history of abdominal pain for the last six months coming on after food and relieved by vomiting was given. He had never had hæmatemesis. The amount brought up was often very large. The stomach was very much enlarged and splashing was easily obtained. On opening the abdomen a hard fibrous ring was found surrounding the pylorus. Posterior gastro-jejunostomy with a lateral anastomosis was performed. There was no vomiting and the patient was discharged well and free from symptoms on Nov. 12th.

Case 20.—The patient, a woman, aged 23 years, was admitted on Oct. 30th. Six years before she had been in another hospital with symptoms of gastric ulcer. She had had no symptoms for three years after. For the last two years the pain after food had been growing more and more severe and for the last few months there had been incessant vomiting. There was well-marked superficial tenderness over the area corresponding to the eighth and ninth right dorsal nerves and there was deep tenderness in the epigastrium. On opening the abdomen there was a hard puckered scar on the lesser curvature, with a portion of the great omentum firmly adherent to it and stretched like a strap across the front of the stomach. Posterior gastrojejunostomy with a lateral anastomosis was performed. The patient was sick nine times in the first two days and suffered from a severe attack of bronchitis This delayed convalescence somewhat but she left the hospital on Nov 28th free from pain and taking food well

CASE 21 —The patient, a man, aged 36 years, was admitted on Nov 3rd with a history of pain with occasional sickness for the last nine years, which had been growing worse of late He had never had hæmatemesis but occasionally had brought up enormous quantities of fluid The lower border of the stomach could be felt below the umbilicus and there was distinct splashing On opening the abdomen the lesser curvature was obliterated by scar tissue which had dragged the pylorus quite close to the cardia It was difficult to say if the thickening was due to malignant disease or not. A posterior gastro jejunostomy with lateral anastomosis was performed The patient vomited four times in the first 24 hours and three times in the second Further progress was uneventful and he was discharged to a convalescent home on Dec 7th in a much improved condition

CASE 22 —The patient, a man, aged 43 years, was transferred to the surgical wards by Dr Hutchison on Nov 6th A history of having vomited two quarts of blood 20 months before and of having vomited one pint and suffered from melæna one month before was given He had suffered severely from pain after food and had found relief by making himself sick He had lost over two stones in weight recently On examination the stomach resonance was increased, a distinct splash was heard, there was no superficial tenderness but the upper part of the right rectus was rigid. The patient was very flabby and had suffered from chronic pleurisy On opening the abdomen a large hard mass was found at the cardiac end of the lesser curvature and there were many enlarged glands It was difficult to say whether it was malignant or not A posterior gastro jejunostomy with a lateral anastomosis was performed in the usual way The patient convalesced rapidly and was discharged on Dec 3rd He still suffered from attacks of pain which, however, were relieved by food and by hot drinks There was no nausea or vomiting

CASE 23 —The patient, a woman, aged 36 years was transferred to the surgical wards by Dr F J Smith on Nov 9th There was a history of pain after food with occasional vomiting for 15 years The symptoms had been growing more severe There was no hæmatemesis but probably some melæna. For some time past she had lived mainly on peptonised milk On examination the upper part of the abdomen was very rigid, especially on the left side Deep palpation was impossible owing to the extreme tenderness On opening the abdomen the stomach was found to be shaped like an hour glass, partly from the effects of an old ulcer on the lesser curvature and partly from the constriction caused by a band of omentum which was adherent to the scar As the stomach could not be drawn out of the abdominal wound an anterior gastro jejunostomy with a lateral anastomosis was performed in the usual way The patient was sick nine times altogether in the course of the first three days For some days after beginning to take solid food she complained of occasional slight pain but this entirely ceased after Nov 23rd and she was discharged to a convalescent home greatly improved in condition on Dec 5th

Remarks by Mr MANSELL MOULLIN —Of the 23 cases gastro jejunostomy was performed in 20, pyloroplasty in two, and excision of the ulcer with gastro jejunostomy in one The ideal operation for gastric ulcer is undoubtedly excision but it can rarely be performed either because the ulcer or the scar is too near to the pylorus or because the ulcer has attained such a size, from having been left too long, that such a proceeding would interfere with the shape of the stomach In two of the cases the ulcer was in the duodenum, where excision can rarely be carried out

The operation which I adopted in nearly all the cases was a posterior retrocolic gastro jejunostomy with, in addition, a lateral anastomosis between the adjacent sides of the jejunal loop, and the union was in all cases carried out by direct suture with silk and an ordinary needle The lateral anastomosis may prolong the operation a few minutes, certainly not more than ten, but on the other hand, it enables the patient to be fed at once in the best possible way, by introducing food directly into the bowel (and in many of these cases this is of the greatest service), it effectually prevents the possibility of such a thing as a vicious circle, and it renders the portion of the bowel which descends from the stomach through the opening in the mesocolon sufficiently rigid to check the rest of the small intestine from passing through the opening into the lesser peritoneal cavity, an accident which is said to have occurred on several occasions

In every case the patients were given immediately before the operation one thirtieth of a grain of strychnine with either one hundredth of a grain of digitalin or two grains of sodio salicylate of caffeine hypodermically, and an enema of 18 ounces of black coffee with two ounces of brandy In several the injection of strychnine and caffeine was repeated as soon as the operation was over, and in a few, owing to the state of the pulse, the same injection was given at six hours' intervals for several days A second enema of a pint either of saline fluid or of beef tea (it seemed to make little or no difference) with some more brandy was given as soon as the patient was back in bed, and nutrient injections of at least 12 ounces each were given at four hour intervals for 24 hours The patients were allowed small sips of water the same evening Small quantities of peptonised milk were given by the mouth after 24 hours and by the fourth day nearly all could take soft solids without inconvenience Morphine was always given the first night to relieve the pain and to secure a good night's rest, but not afterwards Two grains of calomel were given at the end of 24 hours and repeated every four hours up to ten grains Then a copious enema with an ounce of turpentine usually caused the bowels to act freely The most troublesome feature was the vomiting A small minority did not vomit at all Most of the patients were sick for 48 or 72 hour, regardless of what was done for them. In many instances they were able to take fair quantities of milk in the intervals between the acts of sickness and to retain it Even when food had been taken only a few minutes before the ejecta consisted chiefly of an acid brownish fluid Shock was met by injections of strychnine and caffeine, by raising the foot of the bed and bandaging the limbs, and in severe cases by intravenous transfusion Subcutaneous transfusion was employed with great benefit in those cases in which the loss of fluid by vomiting was excessive The fluid used was simple saline solution I have tried the addition of grape sugar but it seemed to cause more pain and I was not able to find that it possessed any compensatory advantage Two patients died one from shock following prolapse of the bowel owing to the wound in the abdominal wall giving way on the fifth day (I have not trusted to catgut boiled in xylol since), and the other at the end of three weeks from persistence of the symptoms for which the operation had been performed It did not give any relief In both the artificial communication was sound, without a sign of leakage, and appeared to be capable of doing all that was required of it

With regard to the state of the patients at the time of discharge nearly all were completely relieved of their symptoms Those in whom the stomach was much dilated and atonied still had dyspepsia at times and one or two in whom there were extensive perigastric or periduodenal adhesions continued to suffer a certain amount of pain Neither excision of the ulcer nor gastro jejunostomy can prevent that in such cases Both operations work wonders but neither one nor the other, nor both together, can give absolution from the consequences of ulceration which has been allowed to progress unchecked *for years Operation to be a success,* must be performed while the condition is still curable

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GOVERNMENT CIVIL HOSPITAL, HONG-KONG

A CASE OF DOUBLE AMPUTATION, RECOVERY

(Under the care of Mr E A R LAING, assistant superintendent)

A CHINESE male, aged 29 years, was admitted into hospital suffering from injuries by dynamite Both arms were blown off and both eyes were completely destroyed The accident had occurred 36 hours previously and the undressed wounds were in a filthy condition Chloroform was administered by Dr W V M Koch and both arms were at once amputated simultaneously above the elbow, the left by Mr J Bell, superintendent, and the right by Mr Laing The patient stood the operation well, only requiring one hypodermic injection of *strychnine The after treatment was uneventful* though there was a good deal of fever due to the condition of the face and eyes and he was discharged six weeks after, of course totally blind.

Remarks by Mr. LAING.—Double amputations not being very common it was thought worth while putting this case on record. The patient was young and a fisherman and had got over the primary shock, so everything was in his favour save the very septic condition of the wounds.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The Staphylococcus Aureus and Rheumatic Fever.—Dermoid Tumours of the Brain.—Racemose Aneurysm of the Brain.—Pulsating Exophthalmos with Aneurysms of the Internal Carotid.—Epithelioma of the Cervix treated by Passive Immunisation Therapy of Dr. Otto Schmidt.

A MEETING of this society was held on Jan. 5th, Mr. R. J. GODLEE, the President, being in the chair.

Dr. F. J. POYNTON and Dr. W. V. SHAW brought forward a paper in continuation of recent investigations upon the Pathogenesis of Rheumatic Fever and in support of the specific nature of the disease. Their observations were founded upon clinical, pathological, bacteriological, and experimental observation and they dwelt upon the importance of this broad survey of facts in studying rheumatic fever for the avoidance of side issues. Many people spoke of rheumatic fever in a vague way as an attenuated pyæmia and the result of any infection which might cause pyæmia. Dr. Poynton and Dr. Shaw were opposed to this contention, holding that rheumatic fever had a definite clinical entity, as much, for example, as tuberculosis. They relied entirely on fatal cases for their arguments. Supposing rheumatic fever were merely an attenuated pyæmia then they believed that the staphylococcus aureus, one of the most important causes of pyæmia in man, should also be a frequent cause of rheumatic fever. This, however, did not prove to be the case. The research was then described. Firstly, it was demonstrated that the two micro organisms, the staphylococcus aureus and the diplococcus rheumaticus, could be easily distinguished from one another; secondly, in 25 fatal cases of rheumatic fever investigated by Dr. A. Paine and themselves they had not found the staphylococcus aureus on culture or in the lesions; thirdly, in cases from which they had isolated the staphylococcus aureus from human tissues the condition had not been rheumatic fever; and, fourthly, they had studied the experimental results produced by injecting pure cultures of the staphylococcus aureus into rabbits and pure cultures of the diplococcus rheumaticus into rabbits and monkeys, this latter investigation with monkeys having been already published by Dr. Shaw.[1] These micro-organisms had been attenuated and treated under similar conditions. The staphylococcus produced septicæmia or pyæmia with multiple abscesses, or no result. The diplococcus produced the manifestations of rheumatic fever or no result. They criticised the attitude of mind which demanded constant results of a regulation disease in animals in response to an infection; it did not occur in man, nor was it to be expected in animals, for the symptoms varied with the virulence of the infection and the resistance of the tissues. Lastly, they had studied the effect of mixed infections with these two micro-organisms. Rabbits and monkeys had been used. In some cases both micro-organisms were injected simultaneously; in others the diplococcus was injected first and after recovery the staphylococcus aureus. The results were these. When the injections were simultaneous death was rapid and pyæmic abscesses containing the staphylococcus were found and also arthritis and in some cases endocarditis. The staphylococcus was most easily found in the blood and the diplococcus in the joints. Both micro-organisms were demonstrated in the tissues and isolated after death. When the staphylococcic infection followed the rheumatic the disease that developed was a pyæmia or rapidly fatal septicæmia. So far as it was admissible to argue from these experiments to clinical medicine the staphylococcus aureus, far from producing in mixed infection rheumatic fever, produced a pyæmia with multiple abscesses or a rapid septicæmia. A study of a clinical case of mixed infection by Dr. Paine and Dr. Poynton was described. The patient, a boy who was suffering from cellulitis of a leg, developed arthritis and pericarditis. In spite of the cellulitis the symptoms were so very similar to rheumatic fever as to raise this point in diagnosis. After death purulent pericarditis, arthritis, and multiple abscesses were found and Dr. Paine isolated from the pus the staphylococcus aureus and a diplococcus. The final conclusions were: (1) the staphylococcus aureus was not a cause of rheumatic fever either in simple or mixed infection; and (2) rheumatic fever was not an attenuated pyæmia so far as the staphylococcus aureus was concerned. The paper was illustrated by macroscopic and microscopic preparations, drawings, lantern slides, and cultures.

Dr. H. M. STEWART showed a specimen of Dermoid Tumours situated at the Base of the Brain. There were two tumours; one was of the size of a hazel-nut in the situation of the pituitary body, which showed the structure of a dermoid cyst; and the other, a large tumour, was situated between the frontal lobes and consisted of the wax-like material frequently found in dermoid cysts but with no epithelial elements. The patient was a man, aged 31 years, who had had syphilis five years previously and had suffered from headache for nine months. There were no other symptoms until a few days before death when he became feverish and vomited. The condition temporarily improved, then vomiting returned, and the patient died suddenly.

Dr. E. F. BUZZARD showed a specimen of Dermoid Tumour in the Brain. The patient, a boy, aged 14 years, complained of having had fits and paroxysmal attacks of headache and vomiting during the previous 12 months and on examination he proved to have very intense optic neuritis but no definite localising signs of his intracranial lesion. The boy died and at the necropsy a large dermoid tumour was found on the orbital surface of the frontal lobes. This tumour lay between the dura mater and lepto meninges and was non-adherent to the former but firmly attached to the latter in the region of the right Sylvian fissure. It had invaginated the brain tissue in this part and extended across the mid-line to the corresponding portion of the left hemisphere where it was not so deeply imbedded. The wall of the tumour was only definite on the right side and proved on microscopical examination to consist of definite skin tissue containing sebaceous glands and hair follicles. Outside this the pia arachnoid was much thickened and in places calcareous. The tumour itself was composed of greasy, crumbly, sebaceous material in which could be distinguished numerous hairs, epithelial débris, and fatty globules of varying size. The appearances suggested that the dermoid growth originated on the right side of the brain where the wall was best marked and that about the age of puberty the sebaceous glands took on great secreting activity with the result that the material so formed was gradually forced across the mid-line in front of the optic chiasma until it occupied the area seen at the necropsy. Apart from their great rarity, considerable interest attached to the presence of dermoid tumours in the brain owing to the obscurity of the source from which they spring and to the relation, if any, they bear to the less rare cholesteatomata. More recent writers, and in particular Bostroem, who had given very great attention to the subject, believed that every gradation could be found between a pial dermoid and a cholesteatoma and that both were epithelial in origin, thus opposing the older view which favoured the endothelial character of the latter.

Dr. J. H. DRYSDALE showed a case of Racemose Aneurysm of the Brain. The specimen was removed from a woman, aged 26 years, who had suffered from epileptic fits for 11 years. Ten days before death she had a fit and passed into a state of unconsciousness with weakness and rigidity of the left side. The coma deepened and the patient died. At the necropsy, on the right side of the brain a large area of greatly enlarged tortuous vessels filled with blood obscured the surface of the brain, filling the sulci and covering the intervening convolutions. The area extended forwards from the Rolandic fissure and was limited, though not quite strictly, to the convex surface of the brain. The right middle cerebral artery shortly after entering the Sylvian fissure was greatly and irregularly dilated, more especially as to its anterior branch which fed the large mass of vessels, one of which was almost as large as an ordinary brachial artery. Towards the anterior and inner portion there entered one of the anastomosing branches of the anterior cerebral vessel dilated to a size larger than that of an ordinary radial artery. A small quantity of effused blood was found at the base of the brain but this did not extend to the convexity. A vertical transverse section of the hemisphere showed a wedge-shaped mass of vessels extending down into the substance of the white matter and looking on section almost like a cavernous angeioma. On microscopical examination the main mass was seen to consist of spaces of varying sizes filled with blood. The walls of the spaces varied considerably in thickness. The condition corresponded to what was known in England as a cirsoid aneurysm.

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[1] Journal of Pathology and Bacteriology, December, 1903.

Mr. **HAROLD L. BARNARD** read the notes of a case of Traumatic Pulsating Exophthalmos consequent upon a bullet wound in the base of the skull. The patient, a male, aged 40 years, had shot himself in the mouth with a pistol. On admission to hospital he was conscious; there was left external ophthalmoplegia with loss of vision, pulsating exophthalmos, left facial paralysis, and discharge of blood and cerebro spinal fluid from the left external auditory meatus. Compression of the carotid artery caused cessation of pulsation and diminution in proptosis. Mr. Barnard performed ligature of the left common carotid artery on the day of admission into hospital. The artery was ligatured in two places and divided between. For some reason the ligature slipped off the proximal cut end, giving rise to alarming hæmorrhage. Mr. Barnard described how he had reapplied the ligature, although some difficulty was experienced in finding the end of the vessel which had retracted into its sheath The pulsation and swelling of the left eye subsided immediately upon applying the ligature but recurred slightly after a few days and then finally ceased in ten days; paralysis and blindness, however, persisted. Two months after this operation the patient developed signs of cerebral irritation; skiagrams were taken and the bullet was located in the middle fossa. A trephine opening was made in the squamous part of the left temporal bone and the bullet was found lying in the middle fossa surrounded by pus and portions of the shattered tegmen tympani; these were removed and a drain was inserted. The patient, however, developed a hernia cerebri and died two and a half months after admission into the hospital. At the post mortem examination an abscess was found in the left temporo sphenoidal lobe unopened and independent of the collection of pus in the middle fossa which had been efficiently drained.—Mr. **HUGH M. RIGBY** then described a Dissection of the Base of the Skull which had been removed at the post-mortem examination; the path taken by the bullet was shown and the condition of the internal carotid artery in its entire intracranial course. Two sacculated aneurysms were found, one at the first bend of the carotid in the petrous portion of the temporal bone and another at the second bend at the posterior end of the cavernous sinus. No arterio-venous communication was found and a noticeable feature was the absence of venous engorgement in either ophthalmic veins or cavernous sinus. Mr. Rigby laid emphasis on the fact that in this case the signs and symptoms of pulsating exophthalmos were due, not to an arterio-venous communication, as is said to be usually the case, but to the presence of an aneurysm. A reference to the best known papers on this subject showed what a difference of opinion existed on this point. The question of the treatment of this condition by ligature *of the common carotid artery* was next discussed and defended both by the results of statistics and the result in the present case, both aneurysmal sacs having been found completely filled by firm clot.

Dr. **R. N. SALAMAN** exhibited the Pelvic Organs of a case of Epithelioma of the Cervix from a patient who had been treated by the so called passive immunisation therapy of Dr. Otto Schmidt of Cologne, and whose case was referred to in the address given by Dr. H. Jossé Johnson to the Abernethian Society on Nov. 5th, 1903.[1] In this latter address attention was drawn to the occurrence of intestinal obstruction during the course of the treatment, and this together with the uræmic symptoms which ushered in death were ascribed to an undue fibrous formation, and "inconvenient cicatrisation" or overcure on the part of the diseased tissues under the curative stimulus of the serum. Microscopical preparations, both from the stricture of the colon and from the infiltrated anterior vaginal wall at the point where the ureter was constricted, showed clearly that not only was there no undue fibrosis but that the constricting agent in each case had been actively proliferating epitheliomatous deposits which were replacing the fibrous and muscular walls of both gut and ureter. The sections demonstrated also the absence of any evidence suggestive of atrophic growth, nor were there any more marked retrogressive cellular changes than could be observed in any case of epithelioma. The section of the gland from the left iliac region showed an active inflammation as well as the hyperplasia of endothelium found in cases of chronic irritation. *The following were the outlines of the treatment and clinical* course of the illness as very kindly supplied by Dr. Kochmann, in whose charge the case was. Oct. 22nd, 1901: Abdominal hysterectomy for fibroids; the right ovary was also removed (the cervix, since examined, was epitheliomatous). December, 1901, to January, 1902: Recurrent vaginal hæmorrhages. Feb 12th, 1902: Curettage of new growth in the vagina. End of April, 1902: Laparotomy performed in Berlin with view to radical operation. This was abandoned and the vaginal growth was curetted and cauterised with chloride of zinc. Sept. 3rd, 1902: Further cauterisation. April 6th, 1903: Dr. Otto Schmidt injected his serum, which was repeated twice at weekly intervals. No reaction apart from pain and swelling in immediate neighbourhood of the injection was observed. End of April, 1903: For ten weeks treated by injections under the personal care of Dr. Schmidt in Cologne. July and August: Treatment by serum continued in London. August: Colotomy performed to relieve the intestinal obstruction. Serum treatment interrupted. Oct. 15th and onwards: Vomiting and uræmic symptoms. Nov. 7th; Death.

Reviews and Notices of Books.

Traité d'Hygiène. Procédés Rapides de Recherche des Falsifications et Altérations. (*A Treatise on Hygiene. Rapid Methods of Analysis for the Detection of Adulterations.*) Par le Dr. P. SMOLENSKY (de Saint-Pétersbourg). Traduction de russe par S. BROIDO et A. ZAGUELMANN. Annotées par L. GUIRAUD, Professeur d'Hygiène à la Faculté de Médecine de Toulouse, et A. GAUTIÉ, Préparateur du Cours d'Hygiène à la Faculté de Médecine de Toulouse. Paris: G. Steinheil, éditeur. 1904. Pp. xxxii.-752. Price 20 francs.

THIS book is a French edition of a work published contemporaneously in St. Petersburg by its Russian author and must, in fact, except in so far as the translation is concerned, be considered his work. There are, it is true, some footnotes written by the editors but these are few in number. Dr. Smolensky in his preface truly remarks that every man must eat and drink and must also be affected by his surroundings and that on that account what he eats, what he drinks, and the nature of his environment are all points of importance. He proceeds to state that in order to form a just opinion as to the good or bad qualities of these material objects which concern him so closely it is neither possible nor necessary to make a detailed examination in every case. What is practically necessary is, for example, to determine whether food is good or *bad, genuine or* adulterated, and to do so as quickly as possible. In such a case minute analyses, which necessitate a *well-fitted* laboratory, and the time necessary for carrying out the experiments may both be wanting and in the ordinary course of events in hospitals, asylums, and such places what is required is that the person responsible for the quality of the food should come to some immediate and correct decision in regard to the articles which are to be given to those under his care. The design of the book is to teach the best method by which such simple analyses are carried out—examinations which demand neither the use of costly chemical balances nor of high powers of the microscope. The author adds that almost all the necessary experiments described in the book can be carried out by means of apparatus to be found at the nearest shop devoted to chemical appliances. The aim and scope of the work are highly commendable and the reader may begin the highest expectations and the hope the very work for which he for years. A study of the volume itself may damp his ardour or may at least convince him that he will be unable to obtain some of the apparatus described without considerable delay. Dr. Smolensky wrote at St. Petersburg, the capital of a great country, and may be able to get Fesca's hydrostatic balance or Thörner's hydrometer at the shortest notice. The superintendent of, say, an English county lunatic asylum might indeed consider himself lucky if he could get and use such instruments whilst the patients waited for their dinner. It is at least doubtful if they would share his enthusiasm. Briefly, then, it must be confessed that the body of the book, considered from the point of view of a medical officer to a provincial asylum or "home," does not quite carry out the promise of the preface.

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[1] THE LANCET, Nov. 14th, 1903, p. 1374.

Considered purely on its intrinsic merits the work possesses great value and it contains an enormous mass of useful information which is not to be found in any English text-book with which we are acquainted. We must confine our remarks to a brief outline of its contents. The first 13 chapters deal with food and in these the English reader will probably find something which is new to him on the subject of horseflesh, sour cream (which is a necessary adjunct to one of the best of Russian soups), eggs, and various grains which are not used as human food in Russia. There is also an instructive disquisition on sausages. Chapters XIV. to XVII. are devoted to alcoholic beverages, including kwass, a drink which is much affected by Russian peasants but which does not usually commend itself to the English palate. The chemical composition of this beverage is given, there is a recipe for its manufacture, and the researches of Ilinsky, Stéfanovitch, Téréchtchenko, and others on various points of interest which it presents are duly set forth. Separate chapters are devoted to tea, coffee, cocoa, condiments, vinegar, to the noxious colouring matters used in food and in other ways, and, finally, to the ills which may arise from cooking utensils. The portion of the book which treats of food occupies the chief part of the volume (pp. 1–531) and the remaining part is taken up by chapters on air, water, soil, housing, lighting, and clothing (pp. 532–687). Amongst the appendices are a long bibliographical index and a table of authors quoted in the text.

The work has distinct merits as a book of reference in dietetic questions pertaining to Russia but it should be clearly understood that it is by no means a waistcoat-pocket guide to show the busy man how to determine the purity of any given article of diet at five minutes' notice. The French edition is well printed on good paper and the illustrations are clear and readily comprehensible.

Encyclopædia Medica. Vol. XIII: Ulceration to Zinc Poisoning. Edinburgh: William Green and Sons. 1903. Pp. 584.

THE volume under review contains a few really good articles; the majority of the contributions are, however, of so condensed a character that the most which can be said for them is that they are fairly complete *résumés* of the subjects which they treat. As a reference to the list of authors will show, most of the articles have been written by experts. Nobody, however, finds more difficulty in condensing his knowledge on a specific subject than the man who knows most about it. Taken as a whole the general level of excellence hitherto attained in the previous volumes of this medical encyclopædia has been maintained in the present volume. Among the articles which call for special mention must be included that on the subject of Pathological Changes in Urine, by Dr. A. E. Garrod; perhaps we should not be far wrong in saying that this is among the best of the contributions to this volume. On the other hand, the article on Uric Acid is somewhat disappointing. The author, Dr. J. A Milroy, has clearly been embarrassed in his task by the very weight of his knowledge on this subject. Dr. T. B. Hyslop has apparently laboured under the same difficulty, for his disquisition on "Unconsciousness" is altogether too abstruse for ordinary readers who are not psychologists or alienists. Of its literary and scientific merits it is impossible to take two views but we think the article is out of place in the Encyclopædia Medica. Mrs E. Garrett Anderson and Mrs. M. A. D. Scharlieb represent the lady contributors to this volume, the former supplying an article on Vaccination and the latter an account of the Non malignant Tumours of the Uterus. The first of these two articles may be relied upon as an accurate record of the most important statistics on the subject and as a temperate and convincing exposition of the arguments for vaccination, and what is more important for revaccination. The gynæcological subjects included under the headings of uterus and vagina, especially from the point of view of treatment, are satisfactorily dealt with. Developmental Errors of the Uterus are described by Mr. A. E Giles and Malignant Tumours by Mr. J. Bland-Sutton The article on Vessels, by Dr. W. Russell, calls for special commendation. We think that the distinctions drawn by this author between atheroma and arterio-sclerosis would, if generally recognised and admitted, remove much of the ambiguity which obscures the correct understanding of the pathological processes involved in their production. The article on Visceral Pain by Dr. James Mackenzie has practical bearings and represents some excellent original work; the clinical methods of investigating the deep seated cources of abdominal pain are described and their degrees of trustworthiness are defined. In the appendix an omission in a previous volume is made good by an excellent account of Plague, and in conclusion we may remark that in our perusal of this volume we have discovered no gross error of fact or printer's lapse, with the exception of one instance of misspelling on p. 101, where "heating" is twice spelt "healing." This evidence of careful editorship reflects great credit on the individual contributors as well as upon Dr. D. Chalmers Watson, the editor in chief.

Notes on Alcohol. By Sir WALTER GILBEY, Bart. London: Vinton and Co. 1903. Pp. 31. Price 6*d*.

IT would be absurd to say that brandy, whisky, gin, and rum have the same physiological effect because they all contain alcohol. To the person *in extremis* genuine brandy is generally administered because it is known to be a more powerful restorative than any other spirit. Further, as Sir Walter Gilbey points out in the interesting brochure before us, the flavours of the various spirits are of importance, and according to his view, which we share, any deficiency as regards flavours renders the spirits less suitable for consumption. This amounts to saying that spirits are only satisfactory when they have been well matured, for as a rule raw or fresh spirit is objectionable to the palate, but in course of time these flavours which are at the initial stage unpleasant and probably also injurious are resolved into agreeable flavours of a harmless kind. There can be no doubt that by far the greater proportion of whisky upon the market consists, if not entirely of grain alcohol, of a mixture of that spirit and malt. Grain spirit is featureless and neutral as regard-taste; it is "silent," while malt spirit possesses a peculiar flavour and bouquet. Age effects no appreciable change in grain spirit at all commensurate with the effect of age upon a malt spirit. In a word, the fact of a malt spirit being drinkable is a guarantee of age, but the same does not apply to a grain spirit. Sir Walter Gilbey gives a very interesting history of the manufacture of spirit and his "Notes" contain some charming woodcuts illustrating distillation as it was in vogue two and a half centuries ago The woodcut facing the title page shows the interior of an early distillery and was published by John Taylor at "The Ship" in St. Paul's Churchyard in 1692. The woodcut on p. 3 shows the early pot-still and upon it is printed a recipe "how to make aqua vitæ out of beer." The spirit so obtained would be practically identical with modern whisky. This interesting drawing, it may be noted, was taken from a work entitled "*The Art of Distillation*," by *John French*, a doctor of physic, and was printed in 1561. Sir Walter Gilbey then gives an instructive account of the peculiarities of spirits obtained from different materials and by different methods. The appendix is devoted to the description of the patent still "invented by Mr. Æneas Coffey of the Dock Distillery, Dublin, distiller, fifth day of August in the first year of the reign of His Majesty King William IV., 1831." As is well known this system of producing alcohol is the most economical and accordingly patent spirit or grain spirit is especially used for blending with malt spirit which cannot obviously be produced so economically in the pot-still. If only the physiological effects of alcohol are desired grain spirit answers the purpose admirably. But there is very good reason for believing that spirit containing the peculiar products of the distillation of malt, wine, or sugar duly matured is not only more acceptable to the palate but less prejudicial to the health of the consumer. Sir Walter Gilbey goes a step further when he says that "it may be worth notice that a pure malt whisky certainly promotes temperance to a degree greater than a whisky deficient in flavour can do, for the neutral tasteless spirit added by the blender to new crude whisky diminishes its coarseness and by thus disguising the potency of the spirit gives a false impression as to its age. Again, the absence of flavour induces the consumer to mix much less water with his spirit than he would if he drank a well-matured pure malt whisky." There is a deal of truth in this. Those who wish to be familiar with the modern methods of producing spirit and of the art of blending will find all the necessary information in this instructive pamphlet. The public would appear to know very little of the question as to what is an all-malt spirit, an all grape spirit, or a blended spirit, but the publication of this little work leaves no excuse for such ignorance which, as long as it exists, is calculated to be prejudicial to the consumer's interests. We maintain that the consumer should be made aware of the character of the article which he is purchasing and that it should be insisted that upon the bottles of all spirits there should be printed a clear statement accurately describing the nature of the contents.

LIBRARY TABLE.

Consider the Children. By HONNOR MORTEN. London: R. Brimley Johnson. 1904. Pp. 80. Price 1*s.* net.—This is in many ways a very sensible book. Miss Morten considers, and we quite agree with her, that there is no useful purpose served in trying to teach children who are starving and that to teach infants—i.e., children under five years of age—for five hours per diem, three of which are consecutive, is ridiculous. She also considers that the subjects taught in board schools are far too numerous, a point which we have raised over and over again. We believe that we are correct when we state that the syllabus of the London School Board contains 36 different subjects. We do not altogether agree that corporal punishment should be done away with. Corporal punishment, provided that it is administered with a birch and then only by a head teacher, and is not carried out until some little time after the commission of the offence, is an excellent method of enforcing discipline. As for the food question, the difficulties in the way of supplying school children with food are notorious. The primary responsibility for feeding children rests with the parents who have brought them into the world and anything that lessens parental responsibility is a bad thing, but, on the other hand, it is useless to try to cram knowledge into children who are badly housed and insufficiently fed. Modern "educationists" seem to have entirely forgotten the meaning of the word "*educo*." Education should properly be a developing of intellect. Plants grow from seeds which are tended and nourished; the horticulturist does not take a full grown plant, cut it up into little bits, and ram it into the seed, as information is forced into the modern child. The type of education should be that employed by Socrates as given in the dialogue of "Meno." Miss Morten concludes with a chapter upon the religious wrangle. She is of opinion that the teaching in public elementary schools should be wholly secular. Into this question we shall not enter, for it is not our province to do so. But Miss Morten shows ignorance when (pp 77 and 79) she says that the State supports a body of clergy and buildings for the teaching of the State religion. That so clever a woman as Miss Morten should argue in this fashion is astounding when we look at her sensible remarks upon teaching and medical matters in schools in other parts of her book. The State no more pays for the clergy of the English Church than it does for the Salvation Army or for Miss Morten's last new hat The only clergy of the English Church paid by the State are some prison chaplains and the naval and military chaplains and these are paid in the same way as Roman Catholic and Presbyterian chaplains.

Leonora By ARNOLD BENNETT. London: Chatto and Windus. 1903 Pp. 362. Price 6*s.*—This novel is a very clever study of middle class life in the Potteries and Leonora, the protagonist, is a remarkable sketch of a woman who "found herself" when middle aged. Mr. Bennett's views upon medical men are somewhat peculiar. John Stanway, to avoid approaching ruin, took a large dose of morphine hypodermically. The medical man tried various remedies without success and went away. He returned after a while and went away again and then we are informed that "the doctor had said that he might survive many hours." No medical man would leave a case of morphine poisoning in this casual manner. But apart from this slip the book is excellent.

Natural Physical Remedies. By H. H. HULBERT, M.R C S Eng, L R C.P. Lond. London. Simpkin, Marshall, Hamilton, Kent, and Co., Limited 1903. Pp 268. Price 2*s.* 6*d.* net—An account written in a somewhat popular fashion of the uses of light, heat, electricity, and exercise in the treatment of disease. All these are useful applications and are only too often exploited by quacks, so perhaps it is well that qualified medical men should study them.

The Examination of the Urine. By J. K. WATSON, M.D., C.M. Edin London: The Scientific Press. Pp. 30—This little book is, according to the author's preface, intended for nurses but students should also find it very useful. It is divided into three parts dealing respectively with the urinary apparatus, with the characteristics of the urine both in health and in disease, and with the collection and examination of the urine. Microscopical tests are omitted as being beyond the scope of the work which, so far as it goes, is simple and very clearly written.

In Lakeland Dells and Fells. By W. T. PALMER. London: Chatto and Windus. 1903 Pp. 351. Price 6*s.*—This is a book which causes an unhappy reviewer who lives and works in London to sigh over his lot For it is a record of clean air, sunshine, clean rain, the smell of a moor on a hot day, the bleating of sheep, and the song of birds. Not that a fell shepherd's life is a sinecure like that of his fellow, of Tahiti (mentioned in the "Anti-Jacobin"), for there *are* sheep on the fells and sometimes there is snow. Mr. Palmer's book will give the town dweller a very vivid idea of the trials of a shepherd's life. Besides this Mr. Palmer talks pleasantly of foxes and rabbits, of fishing, of rock climbing and waterfowl, and many another country sight and occupation. There are portions of this little island not yet spoiled by railways, factories, and motor-cars, and long may they remain so.

Official Year-book of the Scientific and Learned Societies of Great Britain and Ireland. Twentieth annual issue. London: Charles Griffin and Co. 1903. Pp. 304.—This extremely useful work is a complement for the scientific worker to the indispensable "Whitaker." It contains full details of the constitution and working of the scientific and learned societies of these islands. The societies are divided into 15 sections. It is altogether an admirable compilation.

The Swedish System of Physical Education. By THEODORA JOHNSON. Bristol: John Wright. London: Simpkin. 1899. Pp 79.—This little book which we only received in October, 1903, is an expansion of a paper read by Miss Johnson before the British Medical Association in 1894. Swedish exercises and massage undoubtedly have a most beneficial influence in improving nutrition and in preventing or correcting deformities when they are used under careful medical supervision. Miss Johnson does not claim impossibilities for the system and we are glad to see that she lays stress upon the dangers which may accrue from massage and exercises being allowed to drift into the hands of quacks.

The Elements of Kellgren's Manual Treatment. By EDGAR F. CYRIAX, M.D. Edin. London: John Bale, Sons, and Danielsson. 1903 Pp 596.—Dr. Cyriax's work is founded upon a thesis which under the same title was accepted with commendation for the degree of M.D. by the University of Edinburgh in 1901. It gives a very complete account of Kellgren's methods as well as illustrative cases of various diseases in which the treatment was used. We cannot say that we are so impressed with its value in acute specific infectious diseases as Dr. Cyriax appears to be. It may improve nutrition and so do good but we have our doubts as to the wisdom of "heart shaking" or "side shaking" in typhoid fever or in diphtheria, which we understand Dr. Cyriax to recommend. Surely also to allow absolute freedom of diet to a patient suffering from typhoid fever is, to say the least of it, risky.

New Inventions.

THE "UNIQUE" GAS GRILLER

THE method of cooking meats by broiling or grilling has undoubted dietetic advantages, assuming that it is properly carried out. It is important, however, that grilling should be rapidly effected and that a large surface of the meat should be exposed to the direct action of a high and uniform temperature in order that the nutritive juices of the meat should be retained within its substance and also that the flavour should be properly developed. It is further desirable for obvious reasons that both sides of the meat should, if possible, be simultaneously cooked, a consummation that can hardly be attained by grilling over hot coals. By using gas, however, both sides of the meat can be cooked at the same time, but then it often, if not universally, happens that the flavour of the meat is seriously affected by the improper combustion of the gas Mr. A E. Harris of 64, Finsbury-pavement, London, E C., has devised a gas griller which, we think, completely overcomes the objection to the use of gas for grilling and which gives a uniformly fierce and "clean" heat that simultaneously cooks both sides of a steak, chop, sole, or sausage. The construction of the griller is quite simple and consists merely of a metal box, the vertical walls of which inside are so constructed as to form a burner of a certain design. The walls are hollow and of wave-like shape —thus ∿∿∿∿—and on the crest of the wave are holes at which the gas is burnt. The effect of this wave-like shape is that the gas in burning heats the supply of gas within the "wave" previously to combustion. It is as though the gas were passing through a series of tubes which are superheated. The air-supply is necessarily heated at the same time. The result is complete combustion and the absence of any smell due to the escape of unburnt products and the sulphur compounds are completely oxidised. The heat is thus intense, as is the case with all burners constructed, as this is, on the "regenerative" principle. The burner is "atmospheric." We have seen this grill in use and its action is very satisfactory. It cooks meat rapidly and perfectly and the flavour is excellent because the juices are retained and there is no suggestion of the flavour of partially burnt coal gas. During all the time the outside air is free to play over the meat as with roasting. It is well known that in order to secure the perfect combustion of coal gas both the air- and gas supply should be heated. Meat cooked by this griller is not diminished in size or "dried up" but is plump, juicy, and appetising. An ordinary steak is thoroughly cooked in five minutes and it is stated that 72 steaks can be perfectly grilled in the course of one hour at a maximum cost of 1¼*d* It is proposed to construct large grills upon this principle for hotels and restaurants It need hardly be added that the adoption of this griller on a large scale would save the production of volumes of smoke now discharged into the air from the chimneys of hotel and restaurant kitchens.

THE "FACILE" FOOD WARMER.

THIS is a very simple device by which food may be kept warm by means of an ordinary night-light. It consists of a tin stand, semi-pyramidal in shape when erect, provided with a lower platform for the night-light and an upper platform with perforations on which to place the food container. The apparatus when ready for use is about three inches high. The supports at one end may be detached while at the other end is a hinge so that the parts collapse to a flat plate which may be packed easily for travelling purposes The food warmer may be safely placed by the bedside when a night-light is used and thus it will prove very useful in the nursery or sick room. The specimen which we have described was sent to us by the Safety Letter Box Co., of 81, Denmark-hill, London, S.E., and the inventor is Miss Bishop.

AN ELECTRIC FOOT OR BODY WARMER.

THE electric current promises to be adapted to all sorts of domestic comforts; it is only a matter of economical production, but it must be admitted that in many applications electricity is at present expensive. There are one or two points about an electric foot or body warmer recently brought to our notice which recommend it. In the first place it is stated that it does not cost more than a penny for six hours' use; in the second it is so constructed that the heat is not allowed to accumulate but to disperse slowly, whilst at the same time the warmer itself keeps comfortably hot; and thirdly the apparatus may be attached to any system of supply, whether it is intermittent or continuous or at a pressure within the limits of the ordinary domestic lighting supply. With this warmer all that is necessary to be done is to place within it an eight candle power lamp identical with that used in the house. The wire "lead" terminates in an adaptor which fits into the electric light socket in the same way as a lamp, by means of a bayonet catch. The switch is then available for turning the current on to the warmer. The warmer thus serves in place of the hot water bottle or the bedpan for warming the bed or it may be used as a foot warmer or for warming garments. The warmer, which is of the shape of a stone foot warmer, is inclosed in flannel. We found that on wrapping the foot warmer in an overcoat or on placing it in the bed while warmth is steadily maintained it never approaches a point of risk. The eight candle-power lamp is exactly suited to the requirement. The price of this warmer is 21*s.* nickel-plated, 17*s.* 6*d.* in brass or copper, and 15*s.* in tin, and the manufacturer is Mr. W. Back, 166, Queen's-road, Bayswater, London, W.

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SURGEONS WHO HAVE WON THE VICTORIA CROSS.

Compiled by G. F. Blake.

Registrar of the Royal College of Surgeons in Ireland.

The Victoria Cross was instituted by Royal Warrant, Jan. 29th, 1856. *It is provided that not rank, or long service, or wounds, or any other circumstances whatever, save the merit of conspicuous bravery or devotion to the country in the presence of the enemy, shall be held to establish a sufficient claim to the honour.* Since its institution less than 500 crosses have been conferred, 26 of which have been awarded to surgeons. The following notes show how each of these 26 distinguished members of the medical profession obtained the coveted decoration:—

William Babtie, Major, now Lieutenant Colonel, R A.M.C., C.M.G., M.B. Glasg. 1880, L.R.C.P. and S. Edin. 1880, was awarded the Victoria Cross for going out and attending wounded exposed to heavy fire and afterwards going out, also under heavy fire, and bringing in Lieutenant Roberts who was lying wounded on the veldt. "Colenso, South Africa," 1899.

William Bradshaw (deceased), Assistant Surgeon 90th Regiment, L.R.C.S. Irel. 1854, was awarded the Victoria Cross for gallantly defending the wounded left under his charge and was himself wounded. "Lucknow, Indian Mutiny," 1857.

Thomas Joseph Crean, Surgeon-Captain 1st Imperial Light Horse, now Captain R.A.M.C., L.R.C.P. & S Irel. 1895, Hon. F.R.C.S. Irel. 1901, was awarded the Victoria Cross for conspicuous gallantry in continuing to attend wounded in the firing line under heavy fire at 150 yards range when he was himself wounded, and only desisted when he was hit a second time. "Tygerskloof, South Africa," 1901.

John Crimmin, Surgeon, now Lieutenant-Colonel, I.M.S, C.I.E., L.R.C.P. Irel. 1882, L.R.C.S. Irel. 1879, was awarded the Victoria Cross for attending wounded actually within the enemy's fighting line, and had at one time to leave his charge and to fight hand to hand against heavy odds, killing one man with his sword. When help arrived the enemy were driven off. "Burma, India," 1889.

Campbell Millis Douglas, Assistant Surgeon 24th Regiment, now Brigade-Surgeon A.M.D. (retired), M.D. Edin. 1861, L.R.C.S Edin. 1861, Silver Medal Royal Humane Society for saving life at sea, was awarded the Victoria Cross for his gallant and daring manner in taking boat through dangerous sea and rescuing 17 officers and soldiers. "Little Andaman Island," 1867.

Henry Edward Manning Douglas, Lieutenant R A.M.C, D.S.O., L R.C.P. Edin. 1898, L.F.P. & S. Glasg. 1898, was awarded the Victoria Cross for having shown great gallantry and devotion under severe fire in the open in attending a wounded officer and on the same day attending another wounded officer and men under a fearful fire. "Magersfontein, South Africa," 1899.

Thomas Egerton Hale, Assistant Surgeon 7th Regiment, now Surgeon-Major A M.D. (retired), J.P., M.D. St. And. 1856, M.R C S. Eng. 1854, was awarded the Victoria Cross for remaining with a wounded officer and bringing in wounded under fire. "Sebastopol, Crimean War," 1855.

Edmund Baron Hartley, Surgeon-Major Cape Mounted Rifles, now Surgeon-Lieutenant-Colonel, Colonial Forces, Cape Colony, C.M.G, L R C.P. Edin. 1880, M.R.C S Eng. 1874, was awarded the Victoria Cross for attending and carrying wounded to a place of safety under fire. "Basutoland, South Africa," 1879.

Anthony Dickson Home, Surgeon 90th Regiment, afterwards Surgeon-General, A.M.D. (retired), K.C.B., M.D. St. And. 1847, was awarded the Victoria Cross for persevering bravery and admirable conduct in defending the wounded left under his charge. "Lucknow, Indian Mutiny," 1857.

Neville Reginald Howse, Captain New South Wales Medical Staff Corps, L.R.C.P. Lond. 1887, M. 1886, F. 1897, R C.S. Eng., was awarded the Victoria Cross for going out under a heavy cross fire and carrying a wounded man to a place of safety. "Vredefort, South Africa," 1900.

Edgar Thomas Inkson, Lieutenant, now Captain, R.A.M.C., L R C.P. Lond. 1898, M R C.S. Eng. 1898, was awarded the Victoria Cross for having carried a wounded officer over exposed ground to a place of safety under heavy fire. "Tugela, South Africa," 1900.

Joseph Jee (deceased), Surgeon 78th Regiment, afterwards Deputy Inspector General A.M.D., C.B, M.R.C.S. Eng. 1841, winner of the Grand Prix du Casino, Monte Carlo, 1873, was awarded the Victoria Cross for gallantry in attending, protecting, and saving a number of wounded. "Lucknow, Indian Mutiny," 1857.

Ferdinand Simeon Le Quesne, Surgeon A.M.D., now Major R.A.M.C, L.R.C.P. Lond. 1886, M.R.C.S. Eng. 1886, L.S A. Lond. 1885, was awarded the Victoria Cross for attending a wounded officer in front of the enemy's loopholes and attending another officer under heavy fire when he was himself wounded. "Burma, India," 1889.

Owen Edward Pennefather Lloyd, Major A.M.D., now Lieutenant-Colonel R.A.M.C., L.R C.P. Edin. 1877, L.R.C.S. Edin 1877, was awarded the Victoria Cross for conspicuous bravery in going to rescue a wounded officer under heavy fire. "Kachin Expedition, India," 1894.

[illegible] Surgeon Cape Mounted Pc [illegible] .C.P. Edin. 1878, was av [illegible] nding wounded under heavy fire, although himself wounded, and carrying wounded to a place of safety under fire. "Transvaal War, South Africa," 1881.

Valentine Munbee McMaster (deceased), Assistant Surgeon 78th Regiment, M R C.S. Edin. 1855, M.D. Univ. Edin. 1860, was awarded the Victoria Cross for attending to, and bringing in, wounded under a heavy fire and was himself wounded. "Lucknow, Indian Mutiny," 1857.

William Job Maillard (deceased), Staff-Surgeon Royal Navy, M B 1888, M D. 1891 Lond. Univ., M.R C.P. Lond. 1888, M.R.C S. Eng. 1888, was awarded the Victoria Cross for going through a perfect hail of bullets and endeavouring to rescue a wounded seaman of H.M.S. *Hazard.* "Island of Crete," 1898.

[illegible]

Arthur Martin [illegible] Constabulary, L. [illegible] was awarded the [illegible] under a heavy fire at 100 yards range and assisting a wounded officer to a place of safety when he was himself shot three times. "Vlakfontein, South Africa," 1901.

[illegible] af [illegible] of [illegible] the Victoria Cross for rescuing wounded officer from [illegible] and binding his wounds in the presence of [illegible] n War," 1854.

[illegible] ckerson, Lieutenant, now [illegible] 1896, Victoria University, Manchester, was awarded the Victoria Cross for going out and attending wounded man under a heavy rifle and shell fire, dressing his wounds and remaining with him till he was removed to a place of safety. "Wakkerstroom, South Africa," 1900.

Herbert Taylor Reade (deceased), Surgeon 61st Regiment, afterwards Surgeon-General A.M.D., C.B, M.R.C.S. Eng. 1849, was awarded the Victoria Cross for gallantry in dislodging with small force party of rebels firing on wounded. "Delhi, Indian Mutiny," 1857.

James Henry Reynolds, Surgeon Major, now Lieutenant-Colonel, A.M.D. (retired), M.B., M.Ch. Univ. Durh. 1867, Hon. F.R.C P. Irel. 1879, was awarded the Victoria Cross for conspicuous bravery in attending the wounded under fire and defence of hospital. "Rorke's Drift, Zululand, South Africa," 1879.

Henry Thomas Sylvester, Assistant Surgeon 23rd Regiment (retired), Knight of the Legion of Honour, M.D. Aberdeen 1855, L.R.C.S. Edin. 1853, L.S.A. 1869, was awarded the Victoria Cross for going out to a wounded officer and attending wounded under heavy fire. "Sebastopol, Crimean War," 1855.

William Temple, Assistant Surgeon Royal Artillery, now Brigade Surgeon A.M.D. (retired), M B. Univ. Dub. 1858, L.R C.S Irel. 1858, was awarded the Victoria Cross for gallant conduct and devotion in assisting wounded under heavy fire. "Maori War, New Zealand," 1864.

Harry Frederick Whitchurch, Surgeon-Captain, now Major, I.M.S., L.R.C.P. Lond. 1887, M.R.C S. Eng. 1887, was awarded the Victoria Cross for rescuing a wounded officer when the troops with which he was fell back, having to proceed over a mile under the enemy's fire. "Chitral, India," 1895.

THE LANCET.

LONDON: SATURDAY, JANUARY 9, 1904.

The Dental Requirements of the Army.

The recent war in South Africa brought vividly before the military authorities the importance of insuring that the teeth of soldiers on active service should be in an efficient condition. The question has attracted for many years the attention of the dental profession and the notice of the War Office was drawn to it by the British Dental Association and others in the years previous to the outbreak of war. At the commencement, too, of the campaign dental services were volunteered but not accepted, and it was not until the subject was brought forcibly home by the large number of men invalided on account of dental disease that a move was made by the appointment of 12 civil dental surgeons—a number totally inadequate for the forces in the field.

The question of the dental requirements of the army is, we believe, engaging the notice of the War Office and it is to be hoped that some workable scheme will be forthcoming. The subject is, however, beset with many difficulties and there are many issues to be considered. In the first place it is essential that those responsible for any scheme should have some knowledge of the amount of time and physical exertion which dental operations entail, and some idea should be obtained of the number of hours of work likely to be required to keep the teeth of a definite number of men in order. For this purpose statistics might be obtained from those trained in dental surgery. Without a definite basis to work upon it will be impossible to formulate a really efficient scheme. Again, the scope of services to be rendered must be defined. A very large majority of the recruits require a considerable amount of dental attention. At the present time nothing is done to place their mouths in order and to keep them in a state of efficiency, with the result that, although the soldiers on enlistment may have a sufficient masticating apparatus, in the course of time it is likely to be impaired considerably by the ravages of dental caries. This condition of affairs, as the recent campaign showed, proved to be a serious waste in the fighting strength of the army and from a commercial aspect a serious monetary loss. A large amount of this loss could have been avoided by insuring that the mouths of all men on active service were in a condition capable of dealing with their rations and were also free from all sources of sepsis; the removal alone of septic roots and teeth previously to active service would have avoided a large amount of dental sickness. The experience of dental practitioners is that men and officers who served during the campaign and who had their teeth placed in proper order suffered little from dental troubles. There can therefore be little doubt that the efficiency of the army would be considerably enhanced by insuring that the mouths of all soldiers were in thorough order. A man on being accepted as a recruit should, during his period of training at the depôt, have his mouth properly treated and should be given instruction in dental hygiene. If this is done it will require but a comparatively small expenditure of time to keep his teeth in a proper condition, providing that he receives attention at regular periods and shows himself willing to be helped.

Roughly speaking 50 000 recruits are enlisted each year, and as it is more than possible that at least two hours' work would be necessary for each recruit the services of between 60 and 70 dental surgeons would be required for this branch of the work alone. These figures are probably well within the mark, and the only way in which a trustworthy estimate of the time and services required can be obtained is by a thorough investigation of the subject. In considering the means for carrying out the dental requirements of the army there is the possible difficulty of obtaining a sufficient number of qualified dental surgeons Work involving elaborate technique would, however, not be called for, and the main operative treatment would consist in the removal of teeth and the insertion of plastic fillings. This work could be to some extent carried out, it is suggested, by the Royal Army Medical Corps if officers entering that service were compelled to pass through a course of instruction at one of the dental hospitals; while for the treatment of the recruits and special cases qualified dental surgeons could be appointed to the different military centres. But we are not prepared offhand to advocate any increase of the multifarious duties of the Royal Army Medical Corps. Nor do we suppose that the department will consider the present a favourable season for making these officers compulsory dental students. The question requires careful thought and we cannot help feeling that in the elaboration of any scheme the advice of a practitioner of dental surgery would probably prove of considerable assistance to the authorities.

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The Scottish Poor-law Medical Service.

On many occasions attention has been called in our columns to a serious anomaly peculiar to the Scottish Poor-law service—namely, the insecurity of the medical men in their tenure of office—and a case of which mention was made in The Lancet of Dec. 19th, 1903, p. 1758, induces us to return to the subject. It is well known that in England and Ireland the appointments of Poor law medical officers are made by the local bodies—i.e., parish councils or boards of guardians—but the appointments once confirmed are not terminable at the instance of these boards or councils without the express sanction of the Local Government Board in either London or Dublin. In Scotland, on the other hand, the position of affairs is quite different, for a Poor-law medical officer holds office entirely at the discretion of the parish council or board of guardians which has a legal right to dismiss him of its own initiative without alleging any offence on his part or otherwise justifying its action. To a certain order of mind the simplicity of this arrangement might seem to be a recommendation, but a moment's reflection would suggest that an authority so extensive might sometimes degenerate into an arbitrary despotism, and experience shows that this is so. The most recent victim of this policy is Dr. J. F. D. MACARA of Durness in Sutherlandshire, who has been medical officer of that parish for several years. It is easy to understand that he may not have been a *persona gratissima* in the eyes of his late employers, for he has been largely instrumental in making known the grievances of the Poor-law medical service, and in THE LANCET of Dec. 23rd, 1899, p. 1776, we published a letter from him in favour of the movement for granting a stated annual period of holidays, the locum-tenent to be paid by the parish. This object is a very reasonable one, for a medical practitioner holding such an appointment cannot absent himself without providing a substitute and in the sparsely populated districts of northern Scotland no one in a position to take his place might be accessible within a radius of many miles. The crowning achievement of a parish council bent on harassing a medical officer was perhaps that which came to pass, or at least had its origin, in South Uist, one of the many islands on the west coast of Scotland. Mr. J. LAMONT, the Poor-law medical officer of that island, was dismissed from his appointment in July, 1898, for some reason to which no prominence was given but which apparently arose out of a dispute as to the closing of a school during the prevalence of an epidemic. In the following September he was arrested at night in his mother's house in Glasgow, lodged in prison for two days, conveyed under a police escort to South Uist, and eventually sent for trial to the county town, Inverness, where the jury acquitted him. The charge brought against him was that after vaccinating infants at places very remote from his residence he did not make a second journey to inspect the vesicle but gave certificates of successful vaccination on information supplied by some intelligent inhabitant of the locality in question. The accused had no difficulty in showing that his offence was venial and that the same system was followed by other vaccinators whose patients were scattered over wide areas. Copious details of Mr. LAMONT'S case and a report of the debate in the House of Commons to which it gave rise are to be found in THE LANCET of 1899. The obvious moral is that legislation is urgently required investing the Local Government Board of Scotland with powers of intervention and veto in the dismissal of Poor-law medical officers so that there may be uniformity of procedure in the three divisions of the kingdom.

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Housing of the Poor in Dublin.

THE question of the proper housing of the working classes, which has for several years been prominent among the problems of municipal government in London and in many English provincial cities, has reached its most acute stage in Dublin. Readers of THE LANCET, recalling the communications of our Special Sanitary Commissioner as well as our weekly letter from Dublin, will not be surprised to learn that an unfortunate condition of things exists in the Irish capital. We have before us an official report of a conference on the subject between the Parliamentary representatives of the county and city of Dublin, the corporation of Dublin, and the Dublin Trades Council, which discloses conditions to which it is probable no parallel can be found elsewhere and that call urgently for reform in the interests alike of health and of decency. In a population of 292,000 persons, in which there were 59,263 families containing an average of 4·6 persons in each, it was found in 1901 that 21,702 of these families occupied only a single room and that 13,620 occupied only two rooms; in other words, 162,481 persons lived, ate, and slept in 48,942 rooms, and the report asserts, we hope with absolute accuracy, that "no such state of things, or anything approaching to it, exists in any other town in the United Kingdom." Endeavours have been made, by the corporation of Dublin, by the large minded charity of Lord IVEAGH and of Messrs. ARTHUR GUINNESS and Co., and by the energy of the Great Southern and Western Railway Company and of some building companies established for the purpose, to meet the requirements of the case, but possibly because the evils described have been suffered to accumulate for a long period these endeavours have not yet been able to overtake or to cope with them. It is manifest that a large population housed in the manner described must be a standing menace not only to the health of the community but also to law and order, and it would be difficult to conceive the existence of any "injustice to Ireland" of a more flagrant character than that of suffering such an abuse to continue unrelieved. The city contains a large number of insanitary areas and some absolutely derelict spaces, all of which might be covered with new dwellings; but which, even if they were entirely utilised, would soon be insufficient to meet the ever-increasing demands of the population. The committee appointed to inquire into the subject is unanimously of opinion that it is necessary to build cottages or self-contained dwellings on the outskirts of the city and to provide cheap means of transit to and fro for workers. In order that this may be done it asks for a simplification of the laws relating to the acquisition of land and for a considerable prolongation of the time over which the repayment of municipal loans for building purposes may be extended, expedients to which it has already been found necessary to have recourse in England. The extension of the repayment of loans over long periods is a course by no means to be adopted without grave consideration, since it unquestionably opens the door to many abuses in municipal government, but there are many conditions, and those now existing in Dublin appear to be examples of them, in which it would clearly be the lesser of two evils. The city is not rich enough to attempt the speedy removal of the consequences of accumulated neglect unless ample time can be given for the repayment of the principal sums required and for some recoupment from the rents of the new buildings which must be erected.

In view of the condition of overcrowding disclosed by the report it is not remarkable that the annual death rate per 1000 living during the third quarter of 1903 was 18·9 in Dublin, as against 14·1 in London, 14 6 in Edinburgh, 16 2 in Glasgow, and 17·3 in Belfast. In round numbers this means that 1460 people die every year in Dublin who, if they had been placed in the better sanitary conditions of London, would have remained alive. In dealing with the typhoid epidemics at Belfast[1] we clearly showed that the insalubrious conditions of that city could well place it next to Dublin and above Glasgow in its death-rate. Even among the better classes the standard of domestic cleanliness and comfort is not so high in Ireland as in England; and the toleration of poultry and of "the gintleman that pays the rint" and his family in the cabins of the rural peasantry is not entirely without parallel in the general untidiness of many homes in which the pressure of poverty cannot be pleaded as an excuse for their condition. Even with a people naturally cleanly in their habits overcrowding would mean dirt, and dirt would mean disease; and where it unfortunately happens that cleanliness is very little regarded the consequences are bound to follow in a still more pronounced degree. The state of things described by the report to which we refer must to a great extent neutralise the best efforts of sanitary reformers in Dublin; and is amply sufficient to occasion, not only by reason of epidemic prevalences, but also by its effect in lowering the general standard of health among the population, the condition of the death-rate which the Registrar-General records. It is unquestionably high time that the subject received the attention of the Legislature. It is not one which is likely to commend itself to demagogues, and there is therefore all the more reason why the necessary reforms should be urged forward by the voices of the medical profession, and by those of all educated people who desire at once to ameliorate the condition of their poorer neighbours and to remove a source of manifest danger alike to the physical and the moral health of the community.

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[1] See THE LANCET, Nov. 19th and 26th and Dec. 10th and 31st, 1898.

It is hardly possible without the guidance of complete local knowledge to form an opinion as to the character and the sufficiency of the methods suggested for dealing with the evils disclosed by the report; but in December, 1899, and January, 1900, we published a series of articles setting forth the insanitary conditions of Dublin and explaining how so many "derelict" houses and spaces have come into existence. A few years ago streets or spaces which might be described as "derelict" were to be seen here and there in London and it was usually said or imagined that they were "in Chancery," but the report tells us that, as might have been expected, some of the overcrowding of Dublin is due to the falling to pieces of old habitations which it seems to be nobody's business to rebuild or to repair. Since 1879 more than 3000 houses have been "detenanted" and closed, and although many have been rebuilt or improved many more are either in ruins or have disappeared. At present there are in Dublin 302 derelict houses, 148 houses in complete ruin, and derelict spaces on which 82 houses formerly stood—in all, 532 houses. Some of the derelict houses and ruins are the property of the corporation and with regard to these, we presume, nothing but the want of available means could prevent the spaces which they occupy from being utilised. It is quite conceivable that, especially with the Irish love of litigation, any attempt to use or to improve derelict property might call forth numerous claimants and might entail considerable and utterly useless expense. The extension to Ireland of some of the provisions of the English law, as suggested in the report, would suffice to overcome many impediments of which we in this country have had practical experience; and it surely would not be impossible to devise some simple method by which the rights of *bonâ fide* owners of the soil might be protected, or compulsorily acquired at equitable rates by the corporation or by a building company, in cases where pieces of land are unoccupied or are covered only by ruinous remains. The Local Government Board, or some kindred body, might easily be empowered to prevent unjust confiscation; but it is manifest that no scruples of a merely red-tape description should be suffered to prevent the abatement of a public nuisance or the reform of conditions disgraceful to civilisation and injurious to the welfare of the public.

Annotations.

"Ne quid nimis."

RADIO-ACTIVITY OF THE ANIMATE AS WELL AS THE INANIMATE.

IT is impossible to review the exciting and intensely interesting situation to which the discovery of radio-active emanations has brought scientific thought without feelings of the deepest wonder. Almost every day sees discovery added to discovery and phenomena are disclosed which threaten to render obsolete the use of the word occult. Facts are rapidly being presented before time has been given to formulate a theory which will explain them and the faculty of imagination was never so active in attempting to break down the barrier between the psychical and the tangible. We no sooner recover from the excitement of the discovery of the *x* rays and the remarkable phenomena related to them, than the atom is announced to be after all not the finitely small but a tiny system swarming with electrons. The discovery of radium and its remarkable properties comes, so to speak, in the nick of time to clinch the argument and for the first time scientific men are able to say, "We have actually touched the borderland where matter and force seem to merge into each other." Barely a moment is left to ponder over this stupendous revelation before it is announced that the transmutation of one element into another has been ascertained for certain to take place. In the meantime investigation apparently in an entirely different field has brought some French chemists to state positively that an imprint of the dead Christ, revealing the manner of his death and passion, is apparent upon the Holy Shroud of Turin. Their explanations appeared to be crude and referred to the action of emanations from the dead body upon the embalming materials of the sheet. The outline of the dead Christ upon the shroud was regarded as a "vaporographic print." In these days of the announcement of new active rays, emanations, vapours, etheric vibrations, electrons, or whatever we may choose to call them, the explanation may be different and more exact. In several communications to the Académie des Sciences M. Blondlot, for example, has lately described what appears to be yet a new grouping of active rays for which he suggests the designation "n" rays. These rays have the property of augmenting the brightness of a phosphorescent substance such as platino-cyanide of barium the luminosity of which has been appropriately adjusted by exposure to a salt of radium. They are able to traverse metals and other opaque bodies and appear to be given off by most sources of light and heat, including the sun. Further, they are able to be brought to a focus by means of a lens of glass or by one consisting of an aluminium shell containing a solution of salt. While studying Blondlot's rays M. Aug. Charpentier observed that emanations of a similar character were emitted by the human body and that the effect produced upon a sensitive screen placed at a little distance was proportional to the physiological *activity of the part, being greatest in the case* of muscle and nerve. By using a small screen and noting the variation in luminosity which it exhibited he found it possible to map out the area of the heart and to trace the course of nerves beneath the skin. That the phenomena were not due to heat simply was shown by interposing screens of aluminium or glass, which did not affect the result, nor could the rays be supposed to have been previously absorbed from some external source since the manifestations were obtainable equally well after the part of the body under observation had been kept in darkness for nine hours. As yet it does not appear that this method of investigation has more than a theoretical value, but the same might have been said of the early stages of almost any application of scientific methods and it is possible that the researches of M. Charpentier may have far-reaching consequences. In an annotation in THE LANCET of April 26th, 1902, p. 1216, we hazarded the question, "*Does the human body possess* properties akin to radio-activity?" The researches of M. Charpentier would appear to indicate clearly that it does.

THE ARMY MEDICAL SERVICE: PRESENT AND FUTURE.

NOW that the Report of the Royal Commission on the War in South Africa with its accompanying minutes of evidence has been widely read and discussed it may not be without interest to our readers if we call their attention to some remarks which appeared in our Annus Medicus for 1900. Speaking of the war then going on in South Africa we referred to some of the lessons to be learned from our experience in that campaign in regard to the medical services of the present and the future. "It is impossible," we said, "*for financial reasons to* maintain in time of peace a Royal Army Medical Corps at a strength and on a scale adequate for the requirements of a big war. That the corps as it exists at present must be largely increased and that its officers must have increased facilities for professional study and training is obvious. The way in which this can be best accomplished must be considered hereafter. A radical and comprehensive reorganisation will be necessary for the purpose. But some scheme in the nature of the German system of keeping the civil medical element in touch with the army will also have to be introduced, as well as a method of welding all branches of the medical service—militia and volunteers—with the regulars and of giving all their members some training in military medical duties. The war in South Africa has opened a new chapter in the history of the British Empire by closely cementing the colonies with the motherland; and we have now to frame an organisation by which the whole strength of the medical element at our disposal can be made available in war. The aim in our future wars will rather have to be to take the hospital to the wounded than the wounded to the hospital. The field hospitals will require to be treated as independent units in every respect and to be furnished with adequate transport, and the bearer columns will probably have to be attached to, and utilised by, these hospitals. A more easily-working and active organisation will also have to be given to stationary hospitals to enable them to change their position and to move when and where they are required. The hospital nursing system will have to be largely increased and better provided for; but we do not believe that it is practicable or expedient to have female nurses with the moveable hospitals in the immediate track of the front fighting line. As regards the men of the Royal Army Medical Corps, it has always seemed to us that every attention should be given to their hospital training as orderlies and nurses and that their military training in the way of parades and inspections should be curtailed as much as possible. The usefulness of such men lies in the former direction—as properly qualified attendants on the sick and wounded—and not in their acquaintance with military drills or their smartness as soldiers. The question of the organisation of a special service with a large sanitary executive for the carrying out of practical army hygiene will have to be considered and settled. There is much besides—such as having an army medical school in London instead of at Netley—affecting the medical service and all that appertains thereto which will have to be taken up in earnest in the coming army reforms, but whatever is done must be done deliberately and in time of peace." Very much of all this, as our readers know, has been carried out already. To the foregoing summary statement of what we then regarded as the main requirements it seems desirable to make a slight addition in order to make it a fairly complete one for the present time. In a campaign provision should be made for advanced medical depôts to advance, as far as practicable, with the forces in the field for the *twofold purpose of replenishing field hos*pitals with supplies of medical and surgical stores and of relieving them whenever desirable of the transport of any unnecessary stores. These advanced medical store depôts should be in charge of a field medical storekeeper and should be provided with a packer, a carpenter, and a cutler as laid down in the "Field Service Medical Manual for the Indian Army." The adoption on field service of some system for the movement and location of such depôts at various convenient and accessible points would be attended with manifest advantages.

PROXIMUS ARDET UCALEGON.

THE appalling disaster which occurred at Chicago on Dec. 30th when the Iroquois Theatre took fire during the performance of a matinée has resulted in 588 persons losing their lives. Panic and not burning would seem to have been the principal cause of such a loss of life, one which exceeds that of any other theatre fire except that which occurred at the Ring Theatre, Vienna, in 1881 when 600 lives were lost. It is useless to speculate upon what further precautions might have been taken as regards the structure of the building. The theatre was quite new and was built on the most modern principles, being as "fire-proof" as it was possible to make it. There were in all 40 exits but, and this is a most important point, the doors of the emergency exits had never been opened and were not only locked but were rusted in their frames. So says the Chicago correspondent of the *Daily News* of Jan. 1st, while the Chicago correspondent of the *Times* of the same date states that the asbestos curtain between the stage and the auditorium had never worked properly during the five weeks that the theatre had been open. Panic, of course, neutralises every effort that may be made by builders, municipal authorities, or managers to render theatres safe, but nevertheless someone on this occasion must have blundered. The London County Council has done excellent work in safeguarding theatre-goers from fire but there is one London theatre at least where one portion of the house is in a most unsatisfactory condition and that is the amphitheatre in Covent Garden Theatre. Exit from or entrance to, these seats is obtained either by passing between the rows of chairs, which rows are placed very near together on a steep set of "gradines," or else by passing under the amphitheatre seats through a narrow passage like those in the Catacombs. What would happen here if there were a fire is awful to contemplate and the arrangement should certainly be altered. Another point to which we draw attention is the notice frequently seen in London theatres, "Extra exit to be used in case of necessity only" or words to that effect. Now this should not be allowed. Every exit should be able to be used at every performance. Extra exits which are supposed to be used only in cases of emergency are when the time comes either found to be unusable or are not known to exist. The Chicago fire, as do most calamities, gave rise to both heights of heroism and depths of selfishness. There is no need here to recapitulate the heroism of Mr. Foy, the actor, or of the Right Reverend — Muldoon, the Roman Catholic Bishop of Chicago. The heartless conduct of the livery-stable drivers who being on strike refused to drive the dead and the injured to the hospitals seems incredible. If this report be true we do not think that Chicago will forget the occurrence in a hurry. Messages of sympathy have already passed from His Majesty the King and from the official representatives of us Britons to our kin beyond the seas and we can but add our condolences. The new year opens mournfully for Chicago and the saddest feature of the catastrophe is that a large proportion of the victims is made up of children.

"Quos dulcis vitae exsortes . . . .
Abstulit atra dies."

THE FAT BOY OF PECKHAM.

Mr. Hopkins, sitting at the Lambeth police court, has held that Johnnie Trundley, known to the public as the Fat Boy of Peckham, when he appears for the purpose of exhibiting his abnormal proportions upon a music hall stage is not playing or performing for profit and that consequently his so appearing is not to be forbidden under the Act for the Prevention of Cruelty to Children, 1894. This decision should settle the question of this obese infant's education, for so long as he can attract the curious to gaze upon him he will, presumably, be able to reside in the metropolis or to tour the country according to his engagements in the charge of a governess or a private tutor, instead of being consigned to the care of the public education authority. For the present, at all events, he will also be able to earn his living, and it is to be hoped that some portion of his emoluments will be set aside to provide for the time when he may have passed the zenith of his fame. He is certainly a child of very unusual development, even for cases such as his. In THE LANCET of July 19th, 1890, p. 161, we published the letter of a correspondent which gave the following figures with regard to a boy aged five and a half years. Height, 4 feet; weight, 8 stones 5 pounds; circumference of abdomen, 42½ inches; waist, 37½ inches; chest, 37 inches; neck, 14 inches; head 22½ inches; thigh, 23 inches; calf, 15½ inches; arm, 11½ inches; and forearm, 10½ inches. We have not before us the particulars relating to young Trundley, but as he was stated at the police-court to be five years of age and to weigh 10 stones 4 pounds they may be assumed to exceed those quoted. The attention aroused by the Peckham child has nothing new or surprising about it. Every travelling showman would testify that obesity has always been at least as highly appreciated by the public as abnormal stature, and the youthful Trundley has had the advantage, or the disadvantage, of living in an age in which notoriety is easily achieved. Even in these circumstances it is doubtful whether his fame as well as his vast proportions were not exceeded long before the days of halfpenny newspapers and cheap music-halls. He "cuts" no "record" in respect of size but is beaten in that respect by popular heroes and heroines who flourished more than a century ago. The "Encyclopædia Britannica," referring to an authority which we have not been able to verify, mentions a girl who at four years of age weighed over 18 stones. In "Cursory Remarks on Corpulency" by William Wadd, surgeon, published in 1816, we find recorded the death of "the surprising Worcestershire girl" who at five years old was 4 feet in height, 4 feet 2 inches round the breasts, and weighed nearly 16 stones. The same authority also mentions a seven-year-old boy in Paris who weighed 15 stones 10 pounds. In the matter of fame it will be long before the name of Trundley surpasses that of Daniel Lambert which has become almost a part of the English language. Daniel was born at Leicester in 1770 and died in 1809 at Stamford. The grandson of a celebrated cock-fighter and addicted to sport throughout his life his dimensions were not extraordinary and his habits were not different from those of other lads until he was 14 years old. When 23 years of age, however, he turned the scale at 32 stones and although he is recorded to have been then able to walk from Woolwich to London at the time of his death in his fortieth year he had attained the prodigious weight of 52 stones and was more or less helpless. He was a modest man and when he had achieved physical greatness fame was thrust upon him. He was for long unwilling to be made a show of but he gained a more than local reputation and people travelled from far to see him, resorting to various devices in order to be allowed to do so. At length the prospect of profit overcame his resolution and for four years before his death he exhibited himself in London and in the provinces. He was apparently a man of some wit, for once before he permitted the public to gaze upon him an inquisitive person had gained access to his presence by pretending to be a fellow sportsman interested in the pedigree of a mare, whereupon Lambert promptly replied, "She was bred by Impertinence out of Curiosity." In these respects, as well as in his dimensions, he has set an example which Master Trundley will not find easy to surpass. Before the days of Daniel Lambert Edward Bright of Malden was a well known fat man, although his name no longer lingers as a household word. He died in 1750 at the age of 30 years weighing 42 stones 7 pounds and is stated to have been "an active man till a year or two before his death, when his corpulency so overpowered his strength that his life was a burden and his death a deliverance." He was married and "left a widow big with her sixth child." Both Bright and Lambert seem to have been genial, good-humoured fellows, very popular among those who visited them; indeed, popularity seems to be the lot of the corpulent in fact as well as in fiction. The heroes of fiction, however, have the advantage in the matter of lasting glory and the names of Daniel Lambert and the fat boy of Peckham sink into insignificance beside those of Falstaff and the fat boy in "Pickwick."

MORE SUBSTITUTION.

FRESH disclosures appear almost every day in regard to the expanding practice of substitution. Foods, drugs, wines and spirits, and articles of clothing are all submitted to the impudent process, and according to representations recently made to us by a large firm of makers of meat foods and extracts the same kind of imposition is being practised by selling as extract of meat a preparation of yeast. It is well known, of course, that by a process of peptonisation an extract may be made from yeast cells which resembles extract of meat in chemical composition. Thus such an extract contains albumose, peptone, albumins, and extractives, and doubtless, on that account, possesses distinct nutrient value, but these facts can never justify the description of the preparation as extract of meat and it is infamous to state on the label that it is made from finest beef only. But surely there is a remedy for such an obviously false description. Chemical analysis would appear to be able easily to bring the fraud to light since genuine meat extracts give no appreciable result when added to alkaline copper solution, while yeast extract gives an abundant precipitate of a bluish-white colour. To some extent this test enables an approximate estimation of the amount of added yeast extract to be made. When—and we are weary of asking the question,

—is the fraud of substitution, which is rapidly reaching serious dimensions, going to receive the attention of our legislators? If the bakers are compelled according to the provisions of the Bread Acts to mark with the letter "M" all bread which contains potato flour or something which is not wheat, why cannot some such system be extended to every article, be it food, drink, or clothing, which is not the genuine thing but a substitute for it?

THE DIFFERENTIAL DIAGNOSIS BETWEEN MALIGNANT AND BENIGN TUMOURS.

Professor J. B. Farmer read before the Royal Society on Dec. 10th, 1903, a paper, a full *résumé* of which was published in THE LANCET of Dec 26th, 1903, p. 1830, dealing with an important series of observations which, in conjunction with his collaborators—Mr. J. E. S. Moore and Mr. C. E. Walker—he has made on the subject of malignant growths. These researches go to show that the cell proliferation of cancerous neoplasms is characterised by a nuclear division which is distinct and distinguishable from that which is common to cell proliferation in ordinary tissue growth or in benign tumours. The particular form which is found according to these researches in all malignant growths so far examined, resembles in its essential cytology that which is met with in reproductive tissue. Without entering into details it may be stated generally that the proliferating cells which are typical of malignant growths pass through a stage of nuclear division which is technically known as heterotype mitosis. This heterotype mitosis, which also occurs as a phase in the history of the development in sexual cells, shows prophases of development in which the chromosomes instead of appearing as delicate thin rods or V's split longitudinally, to present the appearance of short thickened loops or rings. Further, these chromatic loops or rings are arranged lengthwise along the spindle and ultimately divide transversely instead of longitudinally as is normally the case in nuclear division. When once this heterotype mitosis has supervened in the progress of cell proliferation all the daughter cells arising from such heterotype division contain a reduced number of chromosomes. All these stages were beautifully illustrated by microscopic sections under high-power objectives and by lantern projections. Divested of its envelope of cytological nomenclature the type of nuclear division which these observers have found in malignant growths may be said to be the same as is found in the developmental stages of ovaries and testes, with the difference, however, that the series of metamorphic phases stops short of the phase at which true sexual cells—ova and spermatozoa—are produced. One of the great points of interest which attaches to these observations is that their essential features were not discovered by accident. They were anticipated and expected from the analogy of vegetable growths and from the characteristic appearance of apogamous and aposporous reproduction in ferns. Apart from the enormous advantage which the recognition of heterotype mitosis in new growths confers in the differential diagnosis between malignant and benign neoplasms Professor Farmer and his colleagues have furthered pathological progress by indicating a direction in which future researches with regard to the pathogenesis of cancerous growths may be pursued. Were it permissible at this early stage of these important investigations to speculate on the various factors which determine as it were the reversion on the part of somatic cells to a condition which closely resembles the prophase stages of sexual cells, considerations of loss of specialised function, due to hyper-stimulation in presence of adequate nutrition, might suggest a reason for this overflow of energy in the direction of reproductive growth. The conception of malignant neoplasms as predatory and independent organisms carrying on a parasitic existence in the tissues of their host is by no means new; in fact, it is as old as the word "cancer" itself. This in no way detracts from the independent originality of the work of Professor Farmer, Mr. Moore, and Mr. Walker.

MILK AND TUBERCULOSIS.

A FEW years ago the propagation of tuberculosis through the ingestion of the milk of tuberculous cows, or at least of such as suffered from tubercle of the udder, was looked on as established beyond dispute. The possibility of infection by this means had been proved experimentally on cattle and rodents, and the alleged increase of mesenteric tuberculosis among children, concurrently with the decrease of the mortality from every other form at all ages, was held to be the strongest possible confirmation. So firm was the conviction that on the strength of it Bang elaborated his procedure for the elimination of infected animals from herds and heavy losses were gladly incurred by owners of all classes in all countries for the purpose of being able to claim that their stocks had been tested and found free from all taint. But quite recently misgivings have been entertained on the subject and a reaction of opinion has been setting in on all sides. Koch's bold denial of the transmissibility of bovine tubercle to man, based on the negative evidence of his failure to infect cattle with the human disease, was far from commanding general assent, not only from being wholly inconsistent with the results obtained by others, but from the fact that all he had succeeded in proving was the greater virulence of bovine tubercle in relation to rodents, carnivora, and monkeys, and if to them presumably to man himself; he had indeed proved too much. But the statistics of tuberculosis in childhood, for it is on the incidence of the disease in the age period in which milk constitutes the main article of food that the late Sir Richard Thorne laid stress, have within recent years been the subject of considerable discussion. He assumed that "tabes mesenterica" was in all or nearly all instances an obsolescent synonym for mesenteric tubercle. Many, however, maintain that as a cloak for ignorance or as a euphemism it covers a heterogeneous multitude of wasting diseases of nutrition, including even congenital syphilis, the cases of tuberculosis forming a negligible quantity. It is urged not only in this country but on the continent, where a fallacy in our nomenclature of diseases can have no influence, that the experience of the post-mortem rooms in children's hospitals gives no support to the notion that the milk of tuberculous cows can be held accountable for any appreciable amount of infantile tuberculosis, for tuberculous deposits in the mesenteric and intestinal glands appear, as in adults, to be almost always secondary to others in the lungs or pleura, and that the abdominal form is extremely rare as a primary disease. The obvious rejoinder is that when the two coexist it is quite impossible to decide which was the first in order of time, and that the course of infection in tuberculous meningitis is *viâ* the thoracic duct, the entrance of the bacilli having been effected per os. The whole question has been under discussion in the section of pediatrics of the German Association of Naturalists and Physicians at Carlsbad; the statement of Schlossmann that in Germany, at any rate, milk infection played but an insignificant part in infantile tuberculosis was accepted well-nigh unanimously. At the meeting held at Cassel in September last Ganghofner of Prague reopened the discussion on the report of Heller of Kiel who stated that among 714 children dying from diphtheria in the period 1873–94 tubercle was found in one organ or another in 140, or 19·6 per cent., and in 53 of these the glands of the alimentary canal were affected primarily, these being 37·1 per cent of the tuberculous cases, and in 33 of the 53 the mesenteric glands were alone affected, even the intestine itself remaining free.

The conclusions of Councilman, Mallory, and Pearce of Boston, U.S.A., drawn from the examination of 220 cases of diphtheria, agreed in the main with those of Heller, but Biedert, Baginsky, Hansemann, Virchow, Benda, and in short every other observer in Germany had, said Ganghofner, arrived at a very different opinion, Baginsky's figures, for instance, having been 144 cases of tuberculosis among 806 of fatal diphtheria, or 17·8 per cent., against Heller's 19·6 per cent., but only six, or 4·1 per cent., of the tuberculous cases having apparently been infected through the alimentary canal. Ganghofner, following in every detail, to the mode of examining the viscera, the methods of Heller, found among 972 cases dying from scarlet fever, diphtheria, measles, or small-pox evidence of tubercle in 252, or 25·9 per cent. In 179, or 71 per cent., of these the peribronchial lymph glands or the lungs or both were involved, and in 51, or 20·2 per cent., the bowels or mesenteric glands were so too, but in four cases only (two of measles and two of scarlet fever) was it limited to these. While Councilman and his colleagues at Boston, though dealing with but one-third of the material, arrived at results (37·8 per cent. of abdominal cases among those in which tubercle was present) almost identical with those of Heller at Kiel (37·1 per cent.), Baginsky at Berlin found the percentage of the total and of the abdominal cases of tubercle among children dying from infectious fever about one-tenth of the above, and Chiari in the course of seven months failed to find one in which the disease was restricted to the bowel or its vicinity. Hueppe has, however, suggested, and Penzoldt has proved, that in the act of swallowing the bacilli in milk may lodge in the tonsils, and setting up tuberculosis of the bronchial and tracheal glands simulate infection through the respiratory channels. Max Wolff, and more recently Weleminsky, feeding rabbits with tuberculous material induced pulmonary disease only, and the same results were obtained by Ravenel and by A. Hand of Philadelphia with apes, the intestines invariably escaping. It would appear, therefore, that the localisation of the lesions affords little, if any, clue to the mode of access of the infection, that ingestion no less than inhalation may lead to pulmonary and bronchial tuberculosis, while a primary pulmonary lesion may soon be put into the shade by the more extensive abdominal disease set up by self-infection through swallowing the sputa. In these circumstances the sole resource seems to be, as Biedert declared, the experimental feeding of large populations with different quantities of tuberculous milk. The conditions for this inquiry Biedert found almost ready to his hand in Bohemia where the mortality from every form of tuberculosis in the 85 districts, excluding Prague (where the influx of patients to the hospitals and the importation of foreign cattle would deprive the calculations of all value), ranged between 21·2 and 58·3 per 10,000 inhabitants and the percentage of tuberculous udders reported from the slaughter-houses from 0·03 to 1·8 But so far from there being any correspondence between the two the ratio was rather the reverse, and that for obvious reasons. Many districts are purely agricultural or forest, while others are densely peopled, the seats of industries and mining; and the incidence of tuberculosis varied directly as the density of the population, and in the urban districts the dairy farms were under better control. To this there was but one exception—viz., Gablonz, where both figures were high, the population being industrial and slaughtered cattle largely imported from Galicia. Ganghofner forbore to extend the like inquiry to Germany, being deterred by the extraordinary disproportion of tuberculous carcasses reported in the different states—e.g., 15·2 per cent. in Prussia, 29·39 per cent. in Saxony, and 6·3 per cent. in Bavaria—for which Ostertag of *Stuttgart accounts by admitting that in southern Germany* only the most pronounced cases were notified, whereas Biedert was satisfied as to the general uniformity of the practice in Bohemia. But before attaching great weight to the Bohemian figures it would be necessary to know something more as to the methods as regards death certification in the several parts of the country, and as to the death-rates from tuberculosis in the several age groups Similarly information would be desirable as to the methods of nursing in the several districts; whether, for instance, suckling or artificial feeding obtained, and whether in the latter case the custom of boiling the milk prevailed It would seem extremely probable that where overcrowding and poverty were present the effects of tuberculous milk, even if considerable, would be overshadowed. But on Behring's thesis infection by milk would exert its influence indirectly at every age period.

THE ACTION OF ANÆSTHETICS ON PLANTS.

THE close similarity in composition and properties of animal and vegetable protoplasm is brought into strong relief by the extremely interesting and curious investigations that have been recently made on the action of the vapours of ether and chloroform in promoting the process of inflorescence in plants or, in other words, in forcing them to flower at an earlier period than is natural to them. The production of early blooms in the lilac, the lily of the valley, the deutzia, and the azalea is a large and important industry in the early spring and for any grower to obtain well-developed flowers a week or two in advance of his brother horticulturists, especially if it can be accomplished at little cost, means large receipts and in addition the satisfaction of successful rivalry. Many years ago Claude Bernard, desirous of recording the phenomena common to animal and plant life, submitted both to the action of anæsthetics. He placed a specimen of the sensitive plant under a bell glass with a small sponge dipped in ether and found that after the lapse of a few minutes the expanded leaves became insensible and ceased to close when touched. This experiment has been the parent of much research of late years and the results obtained have been summed up by M. Emile Lemoine, a fellow of the Horticultural Society, and have been published in the last number (October, 1903) of the journal of that society. The next step was taken by Dr. W Johannsen of Copenhagen who, noticing that many plants push forth their buds after a period of repose such as occurs during the winter months or even in unfavourable seasons during the summer, conceived the idea that by inducing such a condition of rest by means of anæsthetics the plants would be, as it were, renovated and stimulated and rendered capable of developing their buds with greater vigour. Acting on this principle Dr. Johannsen was able to show at a meeting of the Copenhagen Academy of Sciences lilac blossoms forced by etherisation. The value of the proceeding was quickly recognised by horticulturists in Germany, France, and England, and these experimenters all proved in accord in regard to the remarkable power that the vapours of ether and chloroform have in promoting the formation of the inflorescence of plants. Lilacs, and especially the variety named Charles X. which is notably a difficult one to force, lilies of the valley, azaleas, and deutzias were subjected to the vapour of ether and timulant effects on the production not only of flowers but of leaf-buds and leaves were observed. M. Leblanc reported to the Société Centrale d'Horticulture de Nancy that his experiments with chloroform had been quite successful. On Feb. 19th last he chloroformed some plants of azalea mollis, giving them about half the quantity he would have used had it been ether and exposing them to the action of the vapour for about 48 hours. They were at once removed to a greenhouse at a temperature of 65°F. From March 5th the flowers began to expand a little and attained about to their full dimensions on the 8th, whereas plants grown for comparison were not expanded until

March 21st. The chambers in which the vapours are set free should be of large size and to prevent their escape should be absolutely air tight and all manipulation must be executed in the daytime since the approximation of a light if air has gained access to the interior is liable to be followed by violent explosion which may occasion great destruction of property and possibly loss of life. The quantity of ether employed to air was about 30 or 40 grammes of pure sulphuric ether boiling at 95° F. to 100 cubic litres of air and the duration of exposure one or sometimes two periods of 48 hours. The economy of fuel effected by this method of forcing, which can be done at either a high or a low temperature, is considerable and covers the cost of etherification.

RADIUM AT BATH.

AFTER the discovery of Sir William Ramsay that radium slowly evolves helion, it is not surprising that traces of radium should be found in the deposits of waters which evolve small quantities of that gas. Professor Dewar some time ago employed the gases from the King's Bath at Bath as a source of helion for experimental purposes. The Hon. R. J. Strutt, son of Lord Rayleigh, now reports that the deposits at Bath contain radium in detectable amount but the proportion is very small, though probably radium would be found in larger quantities at a great depth where helion is set free. Can the healing properties of the waters have anything to do with radio-activity?

PERITONITIS IN SCARLET FEVER.

IN the *Boston Medical and Surgical Journal* of Dec. 10th, 1903, Dr. J. H. McCollom and Dr. J. B. Blake have described two cases of a rare complication of scarlet fever—namely, general peritonitis. This complication is not mentioned in most of the text-books, including Allbutt's "System of Medicine." The cases now described were the only examples of it in 8000 cases of scarlet fever admitted to the Boston City Hospital. The first case occurred in a boy, aged five years, who was admitted on April 10th, 1900, with diphtheria. Two days later the skin became red and on the following day the diagnosis of scarlet fever was obvious. On the twenty-third day after admission the patient complained of abdominal pain and vomited but on examination nothing to explain it could be found. The urine became slightly albuminous and the vomiting, tenderness, and rigidity of the abdomen continued. Ten days later the umbilicus began to protrude and the area around it was red, swollen, and painful and the abdomen was distended and dull in the flanks. 43 days after admission paracentesis yielded 21 ounces of pus which showed on culture the streptococcus pyogenes. On the next day the umbilicus ruptured and for several days fluid leaked from it. On May 31st the thorax was aspirated in the seventh space and a few drachms of pus were withdrawn; the right ear was discharging slightly. Recovery followed. In the second case a man, aged 31 years, was admitted on April 22nd, 1903, on the seventh day of an attack of scarlet fever with a brilliant eruption and a systolic apical murmur. 13 days later there was a trace of albumin in the urine and he was slightly nauseated. On the following day there was abdominal pain. On May 9th there were abdominal tenderness and suppression of urine. Abdominal distension and rigidity rapidly developed. The legs were drawn up and the face became pinched. The abdomen was opened and a free discharge of thin pus, followed by a curd-like substance, took place. The intestines were red and congested. The peritoneal cavity was flushed with saline solution and drained with gauze wicks. The patient rallied but the suppression of urine continued and the vomiting increased. Death took place 25 hours after operation. A culture from the pus showed the streptococcus. At the necropsy a layer of fibrin was found on the diaphragm, the spleen, the liver, and both pleuræ. There were also acute nephritis and vegetative endocarditis. In both cases the peritonitis occurred late and apparently was due to secondary streptococcic infection which was part of a more general infection.

A PURE MALT WHISKY BILL.

WE understand from a very authoritative source that a pure malt whisky Bill is to be introduced into Parliament in the approaching session. We have for some time taken special pains to point out the urgent need there is for dealing with the practice of substitution which exists to an appalling extent in the spirit trade. We have vigorously maintained that the State should regard it as a fraudulent act to sell grain spirit as genuine malt whisky or genuine brandy, and that legislation should be adopted which shall require in the case of all spirits sold for consumption a label placed on the bottle containing a statement upon it accurately describing the nature of the contents It is not only a question of fraud that is concerned but a question also of injury to health We should be very gratified if some measure of control on the lines indicated were adopted, particularly as we feel that the inquiries instituted by THE LANCET Special Analytical Commission on Brandy opened the eyes of our readers and, through them, of the public to the blending tricks of the spirit trade. (It is interesting to note that according to the dictionary the word "blend" is allied to "blind").

THE BRITISH OPHTHALMIC HOSPITAL AT JERUSALEM.

Their Majesties the King and Queen are giving their patronage to an entertainment which is being arranged for the forthcoming season at His Majesty's Theatre in aid of the British Ophthalmic Hospital at Jerusalem. The entertainment will consist of historical tableaux and musical and dramatic performances by leaders in the operatic and theatrical world. Our readers do not require to be reminded of the terrible effects of ophthalmia in the East. They leave a lasting impression upon all travellers and represent an amount of suffering that is practically incalculable. With the object of relieving this form of suffering the institution known as the British Ophthalmic Hospital, which is the only one of its kind in the East, was started some 21 years ago as an out-patient dispensary within the walls of Jerusalem, and since that time has made much progress, relieving thousands of poor sufferers not only in the neighbourhood of Jerusalem, but along all the coasts of the Holy Land and in districts and countries still more distant. It has been found necessary from time to time to enlarge the size and to extend the sphere of usefulness of the institution till at the present moment there exists a well-built hospital standing in its own grounds of six acres on the Bethlehem-road with wards containing 50 beds under the supervision of two experienced resident English surgeons. But this extension necessarily means increased cost and the annual subscriptions have been totally inadequate to meet current expenses. In order that the 50 beds may be always available a sum of £2000 annually is necessary, but towards this there is only a small endowment fund bringing in less than £50 a year, while the annual subscriptions amount to the paltry sum of £300 a year. Like the hospitals in this country the British Ophthalmic Hospital opens its doors to all of whatever race or creed and it is non-proselytising and non-political. On the other hand, it is organised by a great Christian order of chivalry, the Order of the Hospital of St. John of Jerusalem in England, and is supported mainly by Christian charity. The statistics for 1902, when only 16 beds were available, show that there were 674 in-patients admitted, 6062 new out-patients, and a total attendance of out-patients of 19,196. The number of operations performed was 1271 and anæsthetics were administered 680 times. An institution standing by itself as this one does and performing such excellent service to the sick poor ought not to be compelled to plead for funds and we hope that the charitable public will when the facts become known respond liberally. The deprivation of sight is one of the saddest calamities with which the human body can be afflicted and a charity which administers to the defects of the physical organ of sight must be worthy of universal sympathy and help; nor should we forget that the healing of the blind formed part of the ministrations of a Great Physician and Master whose birth some 1900 years ago in the land where the British Ophthalmic Hospital is situated we have but recently celebrated. Subscriptions should be sent to the honorary secretary of the British Ophthalmic Hospital, The Chancery, St. John's Gate, Clerkenwell, London, E C.

ANTIDIPSO.

IN reference to analyses made by Dr. R. Hutchison at the London Hospital and by ourselves of the specific for drunkenness called "Antidipso," we published in THE LANCET of Dec. 19th, 1903, p. 1742, our estimate of the value of the preparation. We received thereupon a visit from Mr. A. L. Pointing who brought the originals with him of certain testimonials which he had previously forwarded to us. He has since sent us the following letter:—

The English Illustrated Magazine,
Bloomsbury Mansion, 24 and 25, Hart-street,
London, W.C., 2nd January, 1904.

Manager, THE LANCET, 423, Strand, W.C.

re Antidipso and the Ward Chemical Co.

DEAR SIR,—Referring to my interview with you yesterday when I placed before you evidence, in the way of original testimonials, bearing out our claim that Antidipso cures drunkenness, the letters you had before you showed that the cure was equally effective where the powders had been administered without the knowledge of the patient as it was when taken with the patient's knowledge.

You read letters from patients themselves blessing the day that they took Antidipso; you had letters from mothers, wives, and sisters thanking us for putting within their reach the means of curing their brothers, husbands, and fathers of the craving for drink.

All this data fully warrants the claim we make for this specific and we feel sure that you will do us the justice of making known to your readers the result of the interview and the knowledge that you now have that our specific, Antidipso, does what is claimed for it, viz., it cures the craving for alcohol.

I trust that I shall see this reference made by you in your next issue.

Yours faithfully,
ENGLISH ILLUSTRATED MAGAZINE,
A. L. POINTING, Director.

We have no objection whatever to publishing Mr. Pointing's letter as he desires. His statement that "this data fully warrants the claim we make for this specific" is not borne out. We do not believe that "Antidipso" cures the craving for alcohol and no amount of testimonials from drunkards, or the friends of drunkards, even if we had tested their accuracy, could possibly be accepted as a proof of what is claimed.

PULMONARY TUBERCULOSIS IN LEWIS.

ALTHOUGH pulmonary tuberculosis may be said to be one of the diseases affecting mankind generally, yet in some parts of the world it is certainly rare. For instance, it is said to be very uncommon in the Faroe Islands, in the Hebrides, and in Iceland. We have received a communication from Dr. C. M. Macrae, medical officer of health of Lewis district, which is of interest in reference to the geographical distribution of this disease. He draws our attention to a passage in Miss Goodrich-Freer's book "The Outer Isles." This writer quotes from an older work, Smith's "Lewisiana," and endorses the statement as a present fact that "tubercular consumption is unknown in Lewis." Dr. Macrae says, "For the sake of truth and the best interests of Lewis men this assertion has to be not only disputed but very seriously denied." He goes on to remark that a century ago, when this remote "outer isle" was more isolated from foreign intercourse and outside influences and diseases, the island may have been justly credited with partial, if not total, immunity from pulmonary tuberculosis. This statement is corroborated by the observations of Dr. D. Christison recorded in the Transactions of the Society of Scientific Associations in 1863; and Dr. Morgan, writing in 1855,[1] suggested that the immunity was due to peat smoke. Dr. Macrae says, however, that "this semi-Madeira character of a blessed exemption from a malady so death-dealing can no longer be maintained, much less boasted of." He states that the victims of the disease in Lewis number from 46 to 60 annually and are yearly on the increase. The insular authorities, he adds, are resolved to take such steps as may prove efficient in securing such remedial means as have proved successful elsewhere in checking the spread of the disease. This marked change in the local incidence of the disease is interesting as demonstrating the communicability of the disease by means of intercourse between an insular community and the general population.

THE SKI.

SKIS, like snow-shoes, are intended to facilitate progression over snow but whereas with the latter laborious tramping is essential with the former an easy gliding motion like that of a skater on ice can be maintained with comparatively little exertion when the snow is sufficiently deep and smooth. The chief objection to snow-shoes is the width of the tread which compels the wearer, especially if of short stature, to straddle to an uncomfortable extent. The ski, on the contrary, is quite narrow and yet owing to its great length the superficies it opposes to the snow is considerably larger than that of its racket-shaped rival. A ski consists of a slender strip of hard elastic wood, generally ash, about eight or nine feet long but only a little wider than the sole of the wearer's foot and nowhere much more than one inch in thickness. Anteriorly it tapers to a point which is curved upwards, the posterior end being similarly bent but to a much slighter extent. An expert on skis can travel at the rate of five or six miles an hour or more on flat ground, but down hill there is scarcely any limit to the speed which he may attain. 20 or 25 miles an hour is not considered an excessive rate under favourable conditions. As will readily be imagined, rapid movement on a yielding surface beneath which unseen, or only faintly indicated, obstacles may exist cannot be free from danger. In Norway where skis are universally used, even by children going to school and by postmen on their rounds, accidents are said to be extremely rare, if not altogether unknown, but elsewhere unfortunately the record is less favourable. No doubt the great depth of the snow throughout the Scandinavian peninsula is sufficient to account for the immunity. The deeper the snow the less danger there is of unseen obstacles and even if falls should occur they are little likely to be attended by injury when the hard surface is abundantly covered. A fatal ski accident which occurred in the French Alps was reported in the *Archives de Médecine Militaire* for August, 1903, by Surgeon-Major C. Legrand. A soldier belonging to the 30th Chasseurs was taking part in ski drill with his company near Barcelonnette when passing over a concealed irrigation channel at a high rate of speed he stumbled and nearly fell. He was going down hill at the time and in the endeavour to save himself contrived to knock his iron-pointed staff against one of his skis. It swung round base downwards and lodged in the snow, whereupon the sharp end struck him under the right jaw bone, inflicting a punctured wound. Immediately a jet of arterial blood spouted but his comrades were able to control the flow by digital pressure on the wound. At the regimental hospital the submental artery was ligatured and at once all hæmorrhage ceased, but on recovery from the chloroform it was found that left hemiplegia had occurred. That evening there was slight oozing of blood from the wound. Death from coma took place about 48 hours fter the accident. At the post-mortem examination the ommon carotid artery was found to have been wounded s well as the submental. The carotid wound was horiontal, only about one-third of the vessel remaining intact

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[1] Brit. Med. Jour., 1855, p. 1039.

MISTLETOE.

IT is difficult to see by what exact process of reasoning mistletoe (*Viscum album*) has come to be regarded as oisonous by the vulgar. Botany books describe the fruit s "inferior" but succulent and we know that birds, especially the mistle-thrush, eat it and convey the undigested eed to the trunks of trees to which its viscous coating nables it to adhere. Writers from Paracelsus down to quite recent times have been loud in their praises of mistletoe as a cure for epilepsy and as lately as 1881 Dr. R Park, writing in the *Practitioner*, describes a mining district in the Forest of Dean where heart troubles were habitually treated with a certain tincture of mistletoe, which was handed on to him among medicine bottles found in a rural surgery. This proved a good substitute for digitalis. At the beginning of the eighteenth century Colbatch published a work upon mistletoe which ran into many editions. He describes a drug made from the plant as "a most wonderful specific remedy" for convulsions and as late as 1806, if not later, the same drug is prescribed most confidently by a certain Dr. Henry Frazer in cases of epileptic seizure. Going back to the days of Pliny we find that philosopher describing the *Viscum album* as an antidote to poison and a remedy for sterility. His, too, is the classic description of the plucking of the mistletoe by the Druids. At a later period, but still long before medicine had arrived even at the "signaturist" stage, mistletoe is found playing a great part in the Volu pa and other Scandinavian sagas. It was with a sprig of the plant, or an arrow made of the stalk of the plant, that the blind and somewhat dull-witted god Hodur was induced by Loki, the evil principle, to have his fling, in a literal sense, at Balder, the Daylight or good principle. Myth represents Balder as being killed outright by the mistletoe, a little plant growing on the eastward slopes of Asgard, and the sole thing among minerals, plants, and poisons, as well as among gods and men, that had not promised Freya to be harmless if used against her son Balder. Within this myth of the German forests there are doubtless other myths, but it is to this ne, perhaps, that the mistletoe owes its character as a poisoner, a remedy in cases of "soul disease"—for it was thus that epilepsy was regarded—and as a presider over chartered liberties between the sexes now symbolised by kissing.

GANGRENE OF THE KIDNEY.

IN the *Australasian Medical Gazette* for November, 1903, r. R. E Weigall has published the following case of the re condition of gangrene of the kidney. A married woman, ged 23 years, was seized with sickening pain in the region the right kidney which extended down the right leg and as followed after an hour by hæmaturia. While at rest in d she was free from pain and had a temperature of 100° F. palpation the right kidney was very tender and any ovement caused pain. On the next day the urine was ood-stained but there was no evidence of fresh hæmorage. The temperature was normal, the kidney was tender, and pain occurred on any movement. In the evening, 28 hours after the onset, there was a severe rigor, the temperature rose to 104·6°, and the urine was scanty. On the following day the urine which had been passed in 24 hours amounted to only 26 ounces but was normal in character. On the fifth day 23 ounces of urine were passed and the kidney was apparently functionless. It could be grasped and manipulated without pain. The patient was rapidly becoming worse. The temperature ranged between 103° and 104°. The symptoms included a coated tongue, vomiting, and a pulse of from 140 to 160 per minute. Gangrenous kidney was diagnosed. Although the patient appeared to be moribund an operation was performed. A large loose gangrenous kidney, which was completely twisted on its axis, was exposed. The pelvis was quite green. The kidney was removed. From the hour of operation the patient began to rally. Saline enemata were given. In four days the daily secretion of urine reached 52 ounces. The immediate cause of the twisting of the kidney appeared to be that when the patient was watering her garden one of her children jumped straddle-legged on to her hips and struck his knee in the region of the right kidney which was already loose

WARDROP'S OPERATION FOR ANEURYSM.

THE brilliant success which followed Hunter's operation for aneurysm by ligation of the artery on the proximal side of, and at a distance from, the sac led to its employment for most of the larger arteries of the body, but there were some aneurysms which were not amenable to this mode of treatment because it was impossible to apply a ligature on the proximal side of the aneurysmal sac The most important member of this category is the innominate artery. The vessel itself is short, only about one and a half inches in length, so that the aneurysm would need to be close to the bifurcation and very small in size to allow of the application of a ligature on the brachiocephalic trunk between the sac and the aorta Such conditions never occur in practice and, therefore, for the treatment of an innominate aneurysm proximal ligation is impossible. This was the position towards the close of the first quarter of the nineteenth century when James Wardrop suggested that distal ligation would probably have an effect identical with that produced by the application of a ligature on the proximal side, and his aim in making this suggestion was to arrest completely the flow of blood through the sac so that coagulation could occur, though the hydrostatic pressure would not be lessened, at all events at first. In the case, however, of an aneurysm of the innominate it must be rarely, indeed, that it is possible to apply a distal ligature to the vessel itself and therefore Wardrop made the suggestion that the branches of the innominate, the carotid and the subclavian arteries, should be tied instead. The difficulties in ligating the first or second part of the subclavian artery are very great and therefore Wardrop advocated tying the third part Inasmuch, however, as many branches come off from the subclavian in the first and second parts ligation of the third part cannot, even when combined with occlusion of the carotid artery, lead to a complete stasis in the blood flow through an innominate aneurysm, but experience has shown that it does at least modify the blood stream to such an extent as to promote the deposition of coagulum in the aneurysm. It will be seen that Wardrop suggested the ligation of *both* branches of the innominate artery but curiously nearly every text-book on surgery describes Wardrop's operation as ligation of one only of the branches. In "Looking Back" in THE LANCET of Jan. 2nd, 1904, p 48, we have reprinted a review of a paper by Wardrop describing a case of carotid aneurysm in which he had successfully applied a distal ligature to the artery. It is perhaps the situation best suited for a distal ligature when an aneurysm involves the carotid artery near its origin. This operation was first performed on the carotid artery by Wardrop, though it is named after Brasdor who treated a femoral aneurysm by this method in 1799.

THE UNIVERSITY OF LONDON: INSTITUTE OF MEDICAL SCIENCES.

WE understand that towards the fund being raised by the Senate of the University of London for the proposed Institute of Medical Sciences, Mr. H. T. Butlin, the dean of the Faculty of Medicine, has contributed £1000; Sir William Church, Bart., K.C.B., President of the Royal College of Physicians of London, £100; and Mr. J. Tweedy, President of the Royal College of Surgeons of England, £100.

ANOTHER FATAL ACCIDENT ON SCAFELL.

THREE months only have passed since we recorded a fatal accident on Scafell.[1] Another fatal accident took place near the scene of the last disaster on Dec. 26th when a party of climbers attempted the ascent of Scafell, avoiding the dangerous route taken by the ill-fated party in September of last year by climbing the way of Steep Ghyll. On their return from the summit of Scafell two of the party attempted the descent of Deep Ghyll, which is generally a rock climb, but on this occasion the ghyll was filled with snow and the climber, Mr. Goodall, who subsequently lost his life, wishing to gain further practice in glissading, took the lead. He safely descended the ghyll, passing over the screes and the lower edge when he stopped suddenly, then to the horror of the other climber he began to slide down the slope, unable to control himself, and finally disappeared from view. His body in falling struck the rocks on Lord's Rake at the base of Deep Ghyll and death seems to have been instantaneous. It is a somewhat sad coincidence that the deceased was a journalist who supplied several of the accounts relating to the last fatal accident. It is probable that no amount of ordinary foresight would in this case have prevented the accident, but as we understand that the victim insisted on taking the lead it is quite possible that his own confidence may have contributed to the accident. In such an exhilarating pastime as mountain climbing the dangers by which it is attended may easily be forgotten and the need for caution cannot be too often reiterated. This is the more emphasised by the fact that Mr. Goodall is said to have been an experienced climber.

A PRIZE in clinical medicine has recently been founded at Charing Cross Hospital by the old students and friends to commemorate the connexion of Dr. T. H. Green with the hospital and medical school for the long period of 34 years. The prize is open to all unqualified Charing Cross students who have finished their preliminary work and have prosecuted their clinical studies for not less than one year at the hospital. It will be given for the best work done upon some special subject involving simple clinical observation in the wards or clinical laboratory and on the result of a practical examination on cases in the wards. The subjects of research may be chosen by the candidates themselves but they must be submitted to the examiners for their approval.

THE medical officer of health of the Cape Colony states that for the week ending Dec. 12th, 1903, no case of bubonic plague in a human being was reported from any place in the colony. Plague-infected rats were found at Port Elizabeth, East London, Queenstown and Knysna, but of 631 examined in the Cape Town and Harbour Board area was affected with plague. As regards the Mauritiu telegram from the Acting Governor received at the Colo Office on Dec. 26th states that for the week ending Dec. there were 62 cases of bubonic plague and 41 deaths the disease.

THE annual course of lectures at the Hospital for sumption and Diseases of the Chest, Brompton, will opened by Sir Richard Douglas Powell on Wednes Jan. 27th, when he will take as his subject Foreign Bodie the Bronchi. The lectures for 1904 will be delivered as at 4 P.M. on Wednesday afternoons and will be fre qualified practitioners and to students of medicine.

THE opening clinical lecture of the spring session of North-East London Post-Graduate College will be give the Tottenham Hospital by Dr. T. Gilbart Smith, physi to the London Hospital, on Thursday, Jan. 14th, at 4.30 The subject announced is Certain Points in the Diagnos Fluid in the Chest and all medical practitioners are invite

AT the National Hospital for the Paralysed and Epile on Tuesday, Jan. 12th, Dr. J. A. Ormerod will lecture Friedreich's Ataxy and on Friday, Jan. 15th, Dr. C. Beevor will lecture on Muscular Atrophy.

Looking Back.

FROM

THE LANCET, *SATURDAY*, JAN. 7, 18

I believe that much mischief has been done by the application of bandages to diseased parts, with a view stimulate the absorbents," without that attention to the lower part of the limb, which is essential to the pati safety. It has not been proved that we possess any di power or control over the absorbents; whilst the powe limiting or controlling deposition is evident and dem strable. You are no doubt aware that every part of living body (except the hair, nails, and teeth) is un going perpetual change, differing in degree according to various textures, but extending even to the solid parts may be proved even in the bones. Now to effect this two opposite functions are necessary, the one the bringi deposition of new matter, the other the removing or away that which has become useless; the latter of functions is termed absorption; now so long as the tion and absorption are equal to each other, the although undergoing continual change, will neither nor diminish; but if the deposition exceed the accumulation must result; and if the absorption the deposition of new material, diminution or wasting the part must ensue. Hence, therefore, we may trace wasting of limbs under the use of bandages, (often empl by beggars and others who simulate diseases) and the beneficial effects of diminishing the swellings and ments which have been produced by disease, more to the compression of the bloodvessels, which diminishes quantity of blood circulating within them, without to any other power, supposing the absorption to continue its usual rate. The more you investigate this subject more demonstrable it will appear. The pathology of swelling of the lower extremity sometimes occurring childbirth, termed *phlegmasia dolens*, has shown that return of the blood has been obstructed in the vein, the obstruction not extending to the artery, the blood continued to be propelled into the limb, and the more or serous portion of it forced into the surrounding parts, ticularly the cellular structure. Now this swelling the actual obstruction to the circulation of the blood demonstrated, and Dr. D. D. Davis has the merit of been the first, in this country at least, to publish the ledge of this interesting fact; this swelling, I repeat, long been considered as a disease of the absorbent system, and many ingenious hypotheses had been framed to explain it; but their fallacy became obvious when demonstration afforded the light of truth.[1]

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[1] THE LANCET, Sept. 26th, 1903, p. 896.

TRAINING OF, AND REGULATIONS FOR, MIDWIVES IN ITALY.

I.—TRAINING OF MIDWIVES.

THE importance of a careful education of midwives has long been recognised in Italy and their training made a special care of the State. In a country where, even more than in England, the bulk of obstetric practice is in the hands of the midwife and where social and climatic conditions probably favour the spread of infection to an unusual degree it was indeed most necessary for the welfare of the community that all the protection possible should be afforded to parturient women, especially of the lower and poorer classes, among whom the mortality from puerperal fever had been very high. Trustworthy statistics as to the death roll from this cause previously to the year 1887 are unfortunately not obtainable, but it is admitted to have been very heavy. From 1887 onwards, however, a separate record has been kept of such deaths and the total number for each year, together with the proportion it bore to every million of inhabitants, is given in the subjoined table, the last column of which shows also the deaths from causes incidental to pregnancy, parturition, and the puerperium other than puerperal fever:—

Year.	Total deaths from puerperal fever.	Rate per 1,000,000 inhabitants.	Total deaths from other diseases of pregnancy, parturition, and puerperium.	Rate per 1,000,000 inhabitants.
1887 ...	2504	85	4436	150
1888 ..	2451	83	4430	149
1889	2106	70	4003	134
1890.. ...	1662	56	2713	90
1891	1633	54	2445	81
1892	1530	50	2233	73
1893... ...	1774	58	2216	72
1894... ...	1604	52	2444	79
1895	1514	49	1893	61
1896	1292	41	2335	75
1897	1199	38	2143	63
1898	1214	38	2016	66
1899	1302	40	2270	71
1900... ...	1033	32	2001	62
1901... ...	994	30	1773	54
1902	1037	32	1746	53

One of the most potent factors contributing to the improvement noticeable in the later years as shown in this table has without doubt been the better equipment of the midwife for her responsible duties and the precautions taken by her as a result of her more careful training.

The education of the midwife was placed under the supervision of the Government in virtue of a law passed in 1876 for the institution of obstetric schools. According to this enactment such a school can be established in any city where a university or a medical school already exists, the necessary funds being provided by the Minister of Public Instruction in conjunction with the provincial or the communal authority, and the direction and the teaching being undertaken by the professor of obstetrics of the local university or medical school. It can also be established in any other city, but then one or other of the local authorities must bear the cost. The latter class of schools may be placed on the same footing as those connected with the universities by their fulfilling the requirements of the present law, for the purposes of which the kingdom is divided into university districts, each school of obstetrics falling under the jurisdiction of the university in the district of which it happens to be.

Every obstetric school is required to have in addition to the directing professor (who is nominated by the King) at least one doubly qualified medical assistant and one certificated midwife, both of whom are nominated by the Minister. According as the necessity may arise there may be added, on the advice of the directing professor, other qualified assistants and midwives who are also nominated by the Minister. Further, no obstetric school can be established except in connexion with a maternity hospital or a hospital containing at least 15 beds for maternity cases and in which in the course of a year the number of labours is not less than 120, taking the average of the last five years. The number of pupils must not exceed that of double the number of beds. There are intern pupils, who have their quarters and food in the school, and extern pupils, who live outside, but all are equally subject to the discipline of the school, the rules of which must have received the approval of the Minister of Public Instruction. To be admitted as a pupil the candidate must be healthy, free from physical imperfections which disfigure or unfit her for the work, and must have attained the age of 18 years and not passed that of 36. She must produce a certificate of good conduct from the municipality of the commune where she has lived for the last two years and of having been successfully vaccinated or of having had small-pox. In order to be admitted to the examinations for the midwife's diploma the candidate must have passed the entrance examination of the third elementary class or other equivalent test and have paid the matriculation and inscription fees. (The total fees for the curriculum, including that for the diploma, amount to 89 francs—£3 11*s*). Having fulfilled these requirements she is furnished with an inscription card upon which a report is written every two months as to the pupil's diligence, progress, and conduct. At the end of the second scholastic year the pupils who have passed the examination of the first year present to the rector of the university or to the directing professor of the school an application to be allowed to continue the practical course

As to the teaching itself it is partly theoretical, partly practical, the former being given in the form of lectures by the directing professor, the latter at the bedside of the patient The theoretical course lasts one year; the practical course commences simultaneously with the theoretical and lasts two years for extern pupils, whilst for intern pupils the second year's course is reduced by one third. There are two examinations, the first being held during the last ten days of the theoretical course, the second at the end of the practical course. The theoretical examination consists of two parts—a written and an oral, the former lasting not more than four hours, the latter half an hour. The examining commission (which consists of the directing professor of the school as president and two other members nominated by the university of the district on the advice of its medical faculty) decide by vote whether the candidate has passed or not and if the majority declare in her favour the individual members, each of whom disposes of five points, award three, four, or all of these according as the candidate has secured "simple approval," "distinction," or "eminence" respectively in the examination. In the case of a poor candidate who obtains "eminence" the matriculation and first year's fees are returned to her. In order to gain admission to the practical examination the candidate is required to present the history of two cases observed by her during the clinical course written by herself and signed by the directing professor. The examination is oral, lasts at least one hour, and is made to turn partly upon the two cases presented by the candidate and partly on the principal obstetric manipulations as practised on the phantom. Questions are also put regarding the diagnosis of pregnancy and obstetric explorations, on the method of assisting at labours, on the dangers and the precautions necessary in complicated cases, and upon the duties of midwives in the exercise of their profession. The votes of the commission are then taken as before and the successful candidates receive diplomas from the universities of their districts conferring upon them the right to practise.

Women who a [illegible] of this law
were engaged i
regular qualifica
passed the pract

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[1] Extract from lecture on Bandages delivered to the students of the [illegible]o Borough Dispensary by Mr. Alcock.

three years—i.e., from 1880 onwards—no one not holding the regular diploma has been allowed to practise as a midwife in Italy.

II.—REGULATIONS FOR MIDWIVES.

With that regard for detail which characterises Italian legislation in sanitary matters very precise instructions are contained in the Act of Parliament dealing with the duties of midwives practising in Italy, whether these exercise their profession independently as private individuals or whether they do so in the capacity of paid servants under the control of the communal authority. While exception may be taken to some of these directions, as, for instance, to that recommending the routine douching of the vagina by the midwife, which by many will be considered inadvisable, it will be seen that on the whole the rules given are excellent. That they were not without a favourable effect would seem to be borne out in a striking manner by the statistics already quoted, in which it will be observed that a remarkable reduction in the number of deaths from puerperal fever occurred in the first year after their introduction—namely, in 1890, a fall in the mortality having taken place in that year of 14 per million from that of the previous year, equal to a diminution of 20 per cent. The Act referred to was put in force on Feb. 23rd, 1890, and is termed "Special Regulations and Instructions for the Obstetric Practice of Midwives in the Communes of the Kingdom." Its provisions, which are worth quoting pretty fully, and which still remain unmodified by later legislative measures, are as follows:—

Article 1.—Every midwife must provide herself with a bag containing the means necessary for assisting at a natural labour and [illegible] in urgent cases. In this bag must be kept [illegible] which accompany the present regulations. [illegible] fe will attend with the greatest possible accuracy to the rules laid down in the instructions.

Article 3.—The midwife is obliged to call a doctor immediately any- [illegible] bour, or during the puerperium, [illegible] ken with a thermometer placed [illegible] (100·4° F.)

Article 4.—Should no doctor be procurable the midwife, as soon as the temperature taken as above rises at any period of the puerperium over 38·5° C. (101·3° F.), will notify the municipal authority of the fact in order that the necessary measures may be taken. In case she should fail to do so she will be punishable by fine.

Article 5.—The midwife is hereby prohibited from employing surgical instruments or practising manual operations on the fœtus in utero for which she is not authorised by her diploma, except in cases of exceptional urgency where it is not possible to procure medical aid in [illegible] midwife assumes the responsibility of [illegible] of this article is punishable by a fine

Article 6.—A midwife who has attended a woman affected by any infective puerperal process must abstain from the exercise of her profession for at least five days wherever it is possible to provide other help for obstetric cases. In any case the midwife must not approach another pregnant, parturient, or puerperal women without having had the written authorisation of the communal sanitary officer who will ascertain whether she has been subjected to a thorough and effectual disinfection according to the rules prescribed in the instructions accompanying the present regulations. Any contravention of this injunction is punishable by a fine of 500 francs (£20) and with imprisonment for from one to six months.

Article 7.—Every midwife must keep a register of the confinements she attends by order of the communal authority, recording each case as soon as possible after the termination of the labour.

Article 8.—In terms of the sanitary law midwives are entitled to have the medicines and antiseptics which they require for the poor whom they attend in labour supplied to them gratuitously by the commune or institution whose duty it is to provide gratuitous attendance for the parturient poor.

INSTRUCTIONS FOR MIDWIVES.

Article 1.—Every midwife called to assist a parturient woman must bring with her (*a*) a bag containing t[illegible] Irrigator to hold one litre, a rubber tub[illegible] to it, and two vaginal glass tubes; (2) [illegible] nail file; (3) an apron of white material, fr[illegible] sleeves, of such form and size as to cover the whole of the front part of the person; (4) a stethoscope; (5) a Centigrade maximum thermometer tested for accuracy; (6) a pair of scissors for cutting the cord; (7) a gum-elastic catheter for drawing off the urine and a gum-elastic sound. *b.* Materials for disinfection: (1) boric acid, 200 grammes (six and two-third ounces), divided into five equal powders, one of which is to be dissolved from time to time as required in a litre of hot water to serve for vaginal irrigation and for disinfecting the hands and instruments; (2) soap; and (3) carbolised cotton-wool or sublimate-wool for vaginal plugs.

Article 2.—The midwife on her arrival at the house of the patient will see that, as far as possible, the room in which the labour is to take place and every article required is perfectly clean and especially that the linen has been freshly washed. She must then (1) prepare two litres of the antiseptic solution in the way indicated in Article 1 (*b*); (2) pour a sufficient quantity of this solution in a basin and immerse in it for at least ten minutes the instruments used in the course of the labour—namely, the vaginal tubes, the catheter, and the scissors; (3) after having turned up the sleeves of her dress above the elbows wash her hands and forearms with soap and water for the space of at least five minutes, paying especial attention to cleaning the nails with scissors, file, and nail brush. She will then put on the apron and again wash the hands, this time with the antiseptic solution.

Article 3.—After these preparations the midwife may approach the patient and, if the case be not urgent, proceed to an external examin tion, endeavouring thus to ascertain the most important data regar ing the presentation and the conditions of health of the fœtus l means of palpation and auscultation. She will then wash the extern genitals and adjacent parts (the perineum and the upper part of t thighs), using first soap and boiled water and then repeating t ablution with the antiseptic lotion already prepared.

Article 4.—She will then prepare another litre of the antiseptic solu tion, pouring half of it into a clean basin for again washing the hand and then proceed without drying them to make the vaginal examina tion. The washing of the hands in the antiseptic solution is to b repeated each time in the further course of the labour that it i necessary to explore the vagina.

Article 5.—The vaginal examination must not be repeated oftene than is absolutely necessary, whilst on the other hand, auscultatio should be practised frequently, especially after the membranes hav ruptured. The midwife must place nothing in contact with th genitals except carbolised or sublimated cotton-wool, or pieces of line freshly washed and soaked in the antiseptic solution. She must neve use sponges. Not even to facilitate the labour should she let th fingers remain in the vagina and she must not anoint the nails wit greasy substances.

Article 6.—The labour having terminated the midwife is to examine the placenta and membranes attentively and in case they are incomplete to keep them for the inspection of the doctor. She will then practise a vaginal irrigation with the antiseptic lotion, remove the soiled linen from beneath the patient, directing it to be taken out of the room and finally see that the floor of the room is also thoroughly cleansed of all extraneous matter.

Article 7.—During the first eight days the midwife will visit the patient if possible twice daily taking her temperature each time and ascertaining the condition of the lochia and watching carefully the course of the puerperium.

Article 8.—During the first five days she must wash the external genitals carefully with the antiseptic solution and in cases of suspected lochia also wash out the vagina with the solution, calling in the doctor in terms of Article 3 of the regulations. Either the irrigator or pieces of freshly washed linen or antiseptic cotton-wool soaked in the antiseptic solution should be used for the washing. She should also see that the linen worn by the patient is always fresh from the wash when put on.

Article 9.—The eyelids and the parts around the eyes of the new born infant are to be washed by the midwife with the antiseptic solution and if any inflammation of the eyes should develop later the doctor should be called immediately, frequent use being meanwhile made of the boric lotion.

Article 10.—When any cases of puerperal fever break out in the locality where the midwife is practising or in the neighbourhood she must attend with the most scrupulous care to these regulations and instructions.

Article 11.—A midwife who has come in contact with a puerperal patient suspected to be suffering from puerperal fever or from uterine inflammation must in terms of Article 6 of the present regulations abstain from the exercise of her profession for five days. In case of absolute necessity this period may be shortened with the permission of the local medical officer, given in writing. During this time she will change her clothing and the linen she wore while with the patient and disinfect them by immersion for ten minutes in boiling water. Further she will repeatedly wash the hands and forearms with the antiseptic solution according to the rules laid down in Clause 3 of Article 2 of these instructions. In commun [illegible] the midwife will consign to the [illegible] wore when in attendance on the [illegible] they may be disinfected.

Article 12.—The instruments used by the midwife must be cleansed and disinfected every time they have been in use by immersing them in water brought to the boiling point and then allowing them to remain in the antiseptic solution. For gum-elastic instruments it will be sufficient to wash and to immerse them in the antiseptic solution

THE FEES OF MEDICAL WITNESSES.

THE report issued by the departmental [illegible] appointed by the Home Secretary to inquire into the allow ances made to prosecutors and witnesses in criminal ceedings was discussed in THE LANCET of July 18th, 1903, p. 182. The regulations since made by Mr. Akers-Doug as the result of that report came into force on Dec. 28th, 1903, and apply to all criminal prosecutions—that is, petty sessions as well as to quarter sessions and assizes. far as they affect medical men giving professional evidence they are as follows: "There may be allowed, for atte to give evidence in the town or place where the residcs or practises, if the witness attends to give in one case only, not more than one guinea per diem; if witness gives evidence on the same day in two or m separate and distinct cases not more than two guineas. attending to give evidence elsewhere than in any town place where the witness resides or practises, whether in or more cases, not more than two guineas per diem. In regulation 'town' means municipal borough or urban trict and '*place*' means the area within a radius of miles from the court at which the witness attends to evidence. There may be allowed to expert witnesses allowances for attending to give expert evidence as the c may consider reasonable, including, where necessary, an allowance for qualifying to give evidence."

The following general regulation applies to all witnesses and so affects medical men: "No full-day allowance shall be paid unless the witness is necessarily detained away from his home or place of business or employment for at least our hours for the purpose of giving evidence. If the time during which the witness is necessarily detained away from his home, or place of business, or employment, be less than our hours, he shall receive not more than one half of the allowance which he would have received had he been detained for the full day."

The regulations quoted are not characterised by perfect lucidity and it is not impossible that disputes may arise as to their construction or that different practices may prevail where costs are taxed by different officials. It seems clear, however, that the medical witness in one case at petty sessions should now receive a guinea where he resides or practises within three miles of the court, an additional guinea if he resides beyond that distance, and not more than half these fees should he be detained for less than four hours. This latter condition is very objectionable in that the medical witness never knows beforehand for how long he will be wanted and his detention for three and three-quarter hours must necessarily dislocate his work for the whole day in addition to the necessity which he may feel for making provision for a whole day's absence. This is the case at assizes and at quarter sessions more than when the case is to be heard at petty sessions. Beyond this the new regulation is a gain to the medical profession so far as petty sessions are concerned, as the maximum fees before were half a guinea if the witness resided within two miles of the court and a guinea beyond that distance. We believe that at some petty sessional courts no fees have been paid to medical witnesses. This condition should cease now that fresh regulations have been issued clearly sanctioning their payment in all cases. The regulation says that "not more than" the sums named should be allowed but medical men will resist any attempt to curtail fees which in most cases will be insufficient to recoup them

It seems clear also from the regulations quoted that the medical witness who proceeds in due course to give at assizes or at quarter sessions evidence relating to one indictable offence will receive a guinea per day while waiting and a guinea or half a guinea, according to circumstances, on the day on which he gives evidence and that he will receive two guineas instead of one when he resides or practises more than three miles from the court. What is to happen, however, when he attends a court to give evidence in two or more distinct cases is not quite so plain but apparently he will be allowed only one guinea per day until all the cases in which he appears are concluded, with the exception that if by chance two or more of them are heard upon the same day he will then be paid two guineas. The rule as to residence or practice at a distance will help him to the extent that he may receive two guineas a day instead of one, but that sum will not be exceeded for any day in however many cases he may have to give evidence. This regulation is a gain to the medical profession in that under the old system of payment it was not possible for a medical witness to receive more than a guinea for any one day, in however many cases he was heard or from whatever distance he came. It is insufficient and unjust in that it still leaves the witness who has to give evidence in more than one case without extra remuneration unless a purely fortuitous incident happens—that is to say, unless two of his cases are tried upon the same day. He has the anxiety inseparable from giving evidence [illegible] where the liberty, perhaps the life, [illegible] t stake, imposed upon him owing to [illegible] aber of a certain learned profession. That anxiety is multiplied by whatever number of cases he may be concerned in and yet, except on the happening of the contingency mentioned, he is still to receive no addition to an already inadequate compensation. On the other hand, the fund from which the fees which should be his are drawn is to profit to the extent sometimes of many guineas wherever chance directs that the same medical witness shall appear in more than one trial instead of different medical men being called in each.

With regard to travelling allowances, the new regulations applicable to all witnesses are as follows: "There may be allowed to witnesses attending court to give evidence from a distance of more than two miles their railway fares actually paid or (where a railway is not available) reasonable expenses of conveyance actually incurred: provided (1) that the railway fare, except for special reasons allowed by the court, shall be third-class fare and that if return tickets are available only return rates shall be allowed; (2) that the expenses of conveyance otherwise than by railway shall not in any case (except where a special conveyance is required for a witness suffering from serious illness) exceed 1*s.* a mile one way. Such expenses shall be allowed separately as mileage." This means that in the majority of cases third-class railway fares and no more will be allowed to medical witnesses where railways are available. We have before us in addition to the regulations a memorandum issued by the Home Office to those who are to administer them and upon this head the following observation is made: "The question whether a railway fare in excess of third class is to be allowed in any case will mainly depend on what may be reasonably supposed to be the witness's ordinary habit and practice First class fare should not be allowed even to a professional witness unless there is reasonable ground for supposing that he ordinarily travels first class." This, we maintain, is not just to the professional witness who as a general rule is a medical man. Without discussing the "ordinary" habits of medical or of other professional men, we would point out that few of them would care to travel to and from an assize town in third-class carriages, crowded with police and other witnesses for the prosecution or defence, with accused persons on bail, and with prosecutors, male or female, whom they have examined for the purpose of giving evidence and to whom they are well known by sight. First-class fares should be paid without question to all professional witnesses, or, indeed, to all witnesses for whom they are reasonable in the circumstances described. The new regulations take the place of a mileage of 3*d.* each way so that they show a decrease of allowance where railway fares are necessary and an increase where railways are unavailable.

With regard to the expenses of professional witnesses detained for the night away from their homes, the regulations are silent while they provide for those of other witnesses. This means that the medical man will not in future on such occasions be allowed the ridiculous sum of 2*s.* 6*d.* to which he has been accustomed but will have to pay his hotel bill out of the extra guinea which he receives when his residence is more than three miles away. This is a gain to a certain extent but here again chance is left to determine the amount which the witness is to have. In other words, where the trains happen to be so arranged or the distance chances to be so great that the medical man is kept from returning home (to his own increased inconvenience) he will further have to spend a large proportion of the amount paid to him by way of compensation in defraying the cost of his necessary board and lodging.

One more matter remains for comment. It will be observed by those who study the new regulations that a recommendation of the committee which considered the conditions until recently prevailing has been ignored. This was that "for a medical examination in cases of sexual and kindred offences there may be allowed a special fee of one guinea for each person examined in addition to any allowances for giving evidence." An explanation is to be found in the memorandum to which we have already referred and we are glad to have it before us. The memorandum says: "Were this fee inserted in a table of fees to witnesses it would, of course, be payable only where the examination leads to a prosecution in which the medical man who made the examination is called as a witness. It appears to the Secretary of State to be wrong in principle that a medical man should be placed in the position of earning a fee if he recommends a prosecution and of receiving nothing if his report negatives the institution of proceedings. In such cases the medical man makes the examination as the adviser to the police or to the prosecutor, and he is entitled to receive an appropriate fee whether the examination is or is not followed by criminal proceedings.' The difficulty which arose not long ago in Suffolk in obtaining any medical man to make an examination in connexion with an alleged sexual offence was largely responsible for the appointment of the departmental committee which made the recommendation quoted above, and we would suggest that all medical men likely to be summoned to make the examinations referred to should note the terms of the Home Secretary's memorandum and should consistently decline to make such examinations whenever they have reason to believe that they will not be paid a separate and adequate fee for doing so.

We shall observe with interest the application of the new regulations to medical witnesses in petty sessional courts and at quarter sessions and assizes during the year which has now commenced. The medical profession perhaps gains more by them than does any other profession or employment but even when we admit this we are entitled to say that the gain is not great and that assisting the cause of justice in the criminal courts will remain in many instances an unpleasant duty involving considerable anxiety and trouble, together with pecuniary loss, for which but inadequate compensation is provided.

THE REGIUS PROFESSORSHIP OF MEDICINE AT OXFORD.

A MEETING of the medical graduates of the University of Oxford was summoned at very short notice for Tuesday afternoon last to consider the question of the appointment of a successor to Professor Sir John Burdon Sanderson who is retiring from the Regius Professorship of Medicine. Sir WILLIAM S. CHURCH, President of the Royal College of Physicians of London, took the chair, and 40 out of 60 specially invited graduates, practically all of whom are engaged in teaching, were present, the names representing some of the best known members of the medical staffs of the metropolitan hospitals. Sir William Church made a brief exposition of the situation, showing that it was intended to recommend Dr. J. Ritchie, the present Reader in Pathology, to the vacant post. The following statement, after some discussion, was then agreed to and signed by all present save two or three:—

> We learn that it has been suggested by certain teachers in Oxford that the present Reader in Pathology should be appointed Regius Professor of Medicine. We understand that the chief argument in favour of that proposal is that in this way the emoluments of the chair of medicine might be made to supplement the income of the Reader in Pathology. We beg leave to protest very strongly against this proposal for the following reasons:—The work of the medical student of Oxford falls into two parts; the first part is preparatory and done in Oxford, the second part is clinical and done elsewhere at the large clinical schools. The first part is represented in Oxford by the professors of the various sciences; the second part can only be represented by the Regius Professor. The Regius Professor is responsible for the organisation, direction, and conduct of the final examinations in Oxford, which give the licence to practise, and should himself take part in them as the Regius Professor used to do. He has also to adjudicate and advise the University upon the theses presented for the M.D. degree. The Regius Professor ought, therefore, to be a physician of great experience in clinical work and clinical teaching; he ought to be thoroughly familiar with the system of instruction at the large medical schools and with all the details of the student's clinical work. [illegible] fully conversant with the requirements of the [illegible] bodies and of the Medical Council. He ough [illegible] knowledge to enable him to guide wisely the deliberations of the board of the faculty of medicine in these respects and to bring into harmonious relation the work of the student of medicine in Oxford with his work in the clinical school. As the Regius Professor is the representative of the University in medicine, not in Oxford only, but in the world at large, he ought to be a man of established reputation in medicine and one who could worthily uphold the dignity of the University in the estimation of the profession and of the public. He ought to be a man who could be accepted as the leader and representative in Oxford of the medical graduates, and one to whom they would all with confidence give their loyal support, for without this support the medical school in Oxford cannot prosper as it should. On these grounds we think it desirable that the Regius Professor should, if possible, be an Oxford man. The proposal to convert the Regius Professorship of Medicine into a professorship of any single branch of medical study is a question of vital importance to the status of medicine in the University and to the welfare of the medical school. We do not ourselves think this change desirable, but it is, at any rate, a question not lightly to be decided. The Regius Professor has important practical duties to discharge in Oxford. He alone is in a position to coördinate the various departments forming the medical curriculum, a task for which technical knowledge and wide clinical experience are essential.'

The following two motions were passed:—

> (1) That in the opinion of this meeting the Regius Professor of Medicine should be a physician who is representative of medicine in its widest sense. (2) That it would be detrimental to the best interests of medicine in Oxford if the Regius Professorship were converted into a professorship of any one branch of medical study.

A deputation has been appointed to wait upon the Chancellor of the University, with whom Sir William Church is already in private correspondence. This deputation will express the views of the meeting of medical graduates. The question of suggesting any person to fill the appointment, it is agreed, shall be left to the discretion of Sir William Church. Throughout the meeting no name was mentioned and no personal references whatever were made to Dr. Ritchie, the objection to his appointment being wholly upon public grounds.

THE ANNUAL REPORT OF THE CHIEF INSPECTOR OF FACTORIES AND WORKSHOPS FOR THE YEAR 1902.

PART I. REPORTS.

FIRST NOTICE.

THE annual report of the Chief Inspector of Factories and Workshops for the year 1902 consists of (1) The general report on the factory department during the year with eight appendices which deal respectively with: (i.) Laundries connected with religious and charitable institutions. This is a circular addressed to the managers of these undertakings asking if they wish to receive visits from the factory inspectors or from a woman inspector. It may be here said that various answers were returned and it was found in the institutions which were visited that the management was usually satisfactory. (ii.) Ventilation: a digest of results of analyses of air in factories and workshops, based upon the Report of the Ventilation Committee. This is a valuable table showing in detail the effects of artificial ventilation in cases in which gas is and is not used. The air examined was taken from factories and workshops used for weaving, tailoring, cotton-spinning, and a variety of other trades. (iii.) The particulars of a prize given by the Society of Arts for a dust arresting respirator to be used in dangerous trades. The prize consists of a gold medal or £20 in cash and the details of the competition may be obtained by anyone who applies to the secretary of the society, John-street, Adelphi. (iv.) Sanitary accommodation orders dated respectively August, 1902, and February, 1903, with a circular issued on Feb. 16th, 1903. The latter is of interest because it gives a definition of what in the opinion of the Home Office is meant by the words "sufficiently lighted" when applied to sanitary conveniences. These words we are told do not require that a brilliant light should be provided "such as would be required for reading." In some cases the conveniences are now left in total darkness and this will [illegible] longer be allowed. (v.) "The suggested [illegible] for underground bakehouses" is a paper which contains useful rules in regard to the construction, lighting, and ventilation of underground bakehouses written for [illegible] guidance of medical officers of health in advising sani[illegible] authorities as to the conditions needed in order to conform with the requirements of the Factory and Workshops Act. The recommendations made in this paper were adopted [illegible] the Incorporated Society of Medical Officers of Health [illegible] their general and uniform acceptance throughout the [illegible] would prove of service to the community at large. (vi.) [illegible] circular was issued to the manufacturers of earthen[illegible] and china in April, 1902, and a copy of this is given [illegible] the report. The determined fight made against the [illegible] Office draft rules is now a matter of history. (vii.) [illegible] regulations in regard to file cutting. (viii.) A synopsis of requirements of "particulars" to be supplied by manufacturers in regard to piecework in various industries. [illegible] the past weavers and hosiers have perhaps suffered most from the chicanery of their employers.

(2) The sectional reports (pp. 1–295). The reports made by the superintending inspectors of the five divisions into which Great Britain and Ireland are [illegible] by the principal woman inspector, the examiner of particulars, the inspector of humid textile fabrics, electrical inspector, and the medical inspector. The [illegible] of the last named contains appendices on anthrax [illegible] horsehair, and on the disinfection of horsehair—subjects [illegible] which attention will be given later,—on the Belgian [illegible] factories, and on the process of "vulcanising" by [illegible] carbon disulphide.

(3) Special reports (pp. 296–335). These are three [illegible] number and deal respectively (i.) with dangerous [illegible] injurious processes in the enamelling and tinning of [illegible] (ii.) methods of removing dust in iron foundries and mac[illegible] shops, and (iii.) ship-building accidents.

(4) Statutory orders (pp. 336–347). The orders

ring the year by the Board of Trade and the cal Government Board for Scotland make regulations regard to: (i.) Workshops used as sleeping places.) Newspaper printing. (iii.) The standard of ventilation be adopted in certain humid textile factories. (iv.) Form requisition to be used for obtaining birth certificates in otland when they are required for purposes of the Factory d Workshops Act. A similar regulation was already force in England but not in Scotland (for the power making the order was vested in the Local Government [illegible] as to lime washing [illegible] (vi.) Regulations [illegible] ive hours' spell." [illegible] l Sunday employ- ent in creameries. (viii.) Conditions of special exemption regard [illegible] gulations in regard to ertime [illegible] (x., xi., xii.) Regulations as [illegible] wages for labour on ains, anchors, cast gear, locks, and latches. (xiii.) Regula- ons as to night work in lead and zinc. During the year the llowing processes were officially certified as "dangerous" ith a view to the issue of regulations in regard to them; .) The manufacture of felt hats with the aid of inflammable lvent. (ii.) The process of file cutting by hand. (iii.) The ocess of loading, unloading, moving and handling goods , on, or at any dock, wharf, or quay, and the process of ading, unloading, and coaling any ship in any dock, arbour, or canal. This may be fittingly described as a large der. It will doubtless prove of use but anyone who has en a supe[illegible]pping will at once e that an [illegible] is in many cases solutely [illegible] loading of ships ith sand and ballast in river estuaries is a most irregular dustry both in point of time and of place.

The important part of the report which deals with the utine work of the superintending inspectors naturally cupies a large part of the book. On a former occasion me account was given in THE LANCET[1] of the way in which e country was partitioned into five great "divisions" each which is presided over by a superintending inspector and me reference was made to the distribution of the various ades which came within the purview of the officers of the oard. It is needless to travel again over the same ground nd it is impossible to refer more than briefly to the work hich has been accomplished during the time under review. here is less cause to regret this because in the present port for the first time the superintending inspectors' marks are grouped under distinct headings and it is erefore easy for any intelligent reader to find without reat loss of time any information contained in the ports which he wishes to learn. We must congratulate r. B. A. Whitelegge in having at length carried out n improvement on the necessity of which we have ad more than once to insist, and we may hope that his change will naturally lead to the further advance of iving a complete index which would greatly add to the value f the reports for purposes of reference. At the end of the ear 1902 there were 100,424 factories and 145,721 work- hops on the registers of the department and the number f visits paid to them by the inspectors amounted to mething like 350,000. It seems rather curious that lthough the Factory and Workshops Acts have been made r the protection of the workers yet in some cases the tter connive at, and even appear to encourage, irregu- rities or, to put it more strongly, illegalities which e practised by the employers. The most remarkable xample of this is the practice of "time-cribbing," as it is lled—a system by which machinery is run for a period in cess of that allowed by the law and in consequence of hich the wor[illegible] period in excess of e time allo[illegible] of the number of urs for wh[illegible] e referred to the atter before. It has proved that the paltry fines incurred the employers when they are convicted of the theft are ite inadequate.

It is interesting to note that of late there has been a ten- ncy to transfer large works from the Midlands to the coast order to save the great expense incurred in railway arges for transit and to escape from heavy local rates.

The number of accidents reported during the year was 395 and of these 1110 were fatal. The particulars of incidence of these are reserved for the second report.

The chief inspector of the north-eastern division, Mr. W. A. Beaumont, deals at length with the causation of some of the more common accidents. Only a few of the best chain makers, it seems, will guarantee the strength of the goods which they supply and it is suggested that "payment by piece encourages bad or slipshod work in chain making." As a result of his experience Mr. Beaumont has drawn up a number of suggestions in regard to prevention of accidents from the fracture of lifting tackle. The matter is one of such urgency and importance that it seems that some regulations [illegible] for all ropes and chains used in a factory; (2) that every chain should be numbered and a record kept of its use; that the user should also be informed of the safe working load for a chain or rope; (3) that every chain should be periodically annealed and examined and that a wedge-gauge may be used in each link to give an indication of the amount of wear—when this exceeds a certain allowance the link should be removed from the chain; and (4) that ropes should also be periodically examined and when they exhibit the least sign of deterioration they should be burnt to prevent further use.

The least satisfactory part of Dr. Whitelegge's report is that which deals with the impurity of the air of factories and workshops and with ventilation. It is evident from the report that the inspectors are encouraged to neglect, or at least to abstain from, taking specimens of air from workshops at all times. We are by no means prepared to admit that the standard of air (as judged by the amount of permissible impurity on de Chaumont's method) adopted as legal is too high. The fight against the legality of the continued existence of fœtid air in workshops and factories has been a long one. Thanks to the persistent efforts of those who had the good of the work-people at heart, and particularly to Sir Henry Roscoe, the statute-book was ultimately enriched by an Act the provisions of which rigidly carried out would have proved to be the greatest blessing. An attempt is apparently now being made by those appointed to carry out the working of the Act to evade its provisions, or, as Dr. Whitelegge calls it, "to deviate somewhat from the letter of the law."

The report of His Majesty's women inspectors of factories is much more diffuse than that of the other inspectors but it contains some interesting details. Amongst other things an account is given of modern dressmaking, from which it appears that Englishwomen are using more and more ready-made goods of foreign origin and that the more expensive of these goods come chiefly from Paris and from Vienna; whilst the cheaper are made in England. The London dressmaker is being ousted by factory work. "For good or for evil," and in the opinion of the chief woman inspector "on the whole decidedly for the good of workers and consumers, the great mass of our countrywomen of artisan and manual labouring classes and of the upper and middle classes are already being largely clad in ready-made dresses and mantles and millinery supplied by factory organisation."

A curious and interesting note is given on the decline of a very old industry—the manufacture of clay pipes. The increased use or abuse of cigarettes is, of course, one obvious cause of this but another is mentioned which would hardly have been suspected. It is said that the working of the Act prohibiting the sale of alcoholic drinks to children has had a great effect in the same direction. The youngsters whose former duty it was to fetch the evening beer were accustomed to beg for a pipe, and under the new law it is much to be feared that the instructive and pretty practice of blowing soap bubbles will become a lost art.

Electrical generating [illegible] stations were brought under t[illegible] Office under the Factory an[illegible] it may be remembered came into operation on Jan. 1st, 1902. Mr. G. Scott Ram was appointed as electrical inspector by the Home Office. He entered upon his duties in May and his first report therefore embraces a period of eight months. The increased and increasing use of electricity will make this new department an extremely important one and it may be useful to describe briefly the condition of things which Mr. Ram found on beginning his duties. In the first place it must be pointed out that from a legal point of view a distinction must be made between electrical stations which supply energy for public use and sale and those which belong to industrial undertakings or to private individuals and which supply electrical energy for their own use. The "public" undertakings, as they may be called, are in general working under provisional orders of the Board of Trade and include the electric supply companies and not a few local authorities. Amongst the "private" undertakings are included engineering works, dock companies, factories, and railway companies—except those railways which use electrical energy as the motive power. It is, moreover, held that electrical stations which actuate traction do not come within the scope of the Act. There is, however, an increasing number of stations where the power is generated both for traction and for public supply and these naturally come under the inspection of the factory department.

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[1] THE LANCET, Jan. 31st, 1903, p. 325.

Mr. Ram commenced his duties by visiting a large number of representative types of generating stations in England, Ireland, and Scotland. He was chiefly concerned to notice what precautions were observed for the protection of the workmen, to find out the conditions under which the work was carried on, and to see whether he ought to advise for adoption any special regulations and, if so, what these should be. Mr. Ram considered that it was also of interest to ascertain how far the recommendations drawn up by the Board of Trade Dangerous Trades Committee (1897) "are now applicable in view of the advance made in electrical matters since that date." Professional electrical engineers as a body are strongly of opinion that a higher pressure than that recommended as a maximum shall be allowed and Mr. Ram appears to feel in no way bound by the recommendations of 1897.

The result of the general inspection of the stations visited showed that there were a great diversity of operation and an entire absence of any standard method even amongst the factories which were nominally worked on the same system. This state of things is said to be due to the rapid growth of a new industry and to the introduction into this country of large quantities of machinery of foreign manufacture differing in their modes of work from those previously in use here. Mr. Ram has classified and grouped, according to their electrical characteristics, the systems which he found at work in the course of his survey. It may suffice to say that he found four systems in use for the supply of the continuous current and nine in the case of the alternating current, and that he was able to summarise the distinctions as to the electric pressure of the systems into three groups: 1. Low-pressure system, in which the difference of electric potential is nowhere greater than 500 volts in the case of the continuous current and 250 in that of the alternating current. 2. High-pressure system, in which the difference may exceed the limits in Group 1 but does not exceed 3000 volts. 3. Extra high pressure in which the difference of electric potentials exceeds 3000 volts. Groups 2 and 3 are based on Board of Trade regulations, whilst Group 1 is formed "for convenience" but the term "low pressure" does not imply any degree or property of safety.

Amongst the methods of trade development which will require supervision it is evident that the use of superheated steam is important. It is now in use up to a temperature of 800° F. and a marked economy in the amount used is effected by its use at high tension. The new dangers evolved are evident. A leaky joint will with such a pressure be more serious, an explosion more terrible. The effect of continuous high temperature on the strength of materials will, Mr Ram says, "have to be carefully watched." This may be taken to mean that the danger is foreseen and the inspector has issued his warning. It is, naturally, not proposed that the President of the Board of Trade should personally watch such a boiler or have one on the premises at Whitehall, and should such a duty fall within the scope of his office it is not improbable that he would see the desirability of having a scientific investigation immediately made into so serious a matter. Under the existing conditions it seems not improbable that the question will receive no further notice until a ghastly explosion calls the "attention of the public" to it.

The number of accidents reported in connexion with electrical stations and electricity supply companies and local authorities during the year was as follows:—"Mechanical" (under which heading are included those which took place in connexion with steam engines, boilers, dynamos, and "various"), 106, five of which were fatal. Electrical accidents: burns, 19 cases, in three of which there was injury to the eyesight and one was fatal; and shock, 11 cases, four of which were fatal. In regard to the mechanical accidents the table given is not very complete for no less than 88 of the 106 cases are placed under the heading "various." In his next report no doubt the electrical inspector will insist on being supplied with more complete information and it would not be fair to him to be severe concerning the omission of details which may have been improperly withheld or carelessly noted by those responsible for the reports which were made to him.

In connexion with the increasing use of higher electrical pressures it may be remembered that at the present time the pressure of a supply which may be delivered to a consumer is limited to 250 volts, except in cases in which the express approval of the Board of Trade is obtained. "It is becoming increasingly common," Mr. Ram tells us, "for supplies of electrical energy to be given to consumers at from 250 to 500 volts for power purposes, presumably with the approval of the Board of Trade in each case."

Mr. Ram thinks that there is no objection to the use of the stronger current if the plant is thoroughly efficient and the conditions which are laid down by the Board of Trade are loyally carried out, but he points out that some companies are seeking to supply their customers at high pressure at the motor terminals in order to save the losses connected with the transformation of the current to lower voltages. The powers of the Board of Trade are limited, as we have seen, and the regulations which can be imposed apply directly only to the companies which give the supplies and a consumer may therefore transform the energy to as high a pressure as he pleases. There is, moreover, no legal limit to the pressure at which electrical energy may be generated in factories. In the early days of electric lighting a pressure as high as 2000 volts was often used in the circuits connecting arc lamps and Mr. Ram found that a certain number of these installations still exist and that many of them are in an unsatisfactory state.

The electrical engineer ends his report by giving a summary of conditions which frequently exist and have already caused accidents or which give rise to unnecessary risk. The list deals with switchboards, generating plant, and sub-stations, and, in conclusion, advice is given on questions of general management on the suggestions made. The attention now called to these dangers should prove of great service if the teaching they convey be not neglected. Mr. Wilson (inspector of factories for the Newcastle-on-Tyne district) points out that there is at the present time a feeling of general uneasiness among workmen as to the possible dangers of shock and this is quite natural. There is also, he says, a remarkable ignorance of the laws of electricity amongst all classes—"masters, managers, and men." From this he argues that regulations in regard to its use in factories would be welcomed both by the employers and the employed. It is to be hoped that that suggestion will be carried out.

The general report of the medical inspector is, as usual, of great interest and has the merit of containing for the first time a short but sufficient index. Of the four appendices two deal with anthrax, the third with the Belgian [illegible] factories, and the remaining one with the "vulcanising process (a translation of a decree of the German F[illegible] Council concerning the erection and management of industrial premises in which indiarubber goods are vulcanised by means of carbon disulphide and chloride of sulphur). It is satisfactory to note that the number of cases of lead poisoning has diminished in each of the 14 branches of industry in which notification is compulsory. The number of reported cases has, indeed, steadily diminished during the last four years, the figures being as follows: for 1899, 125[illegible]; for 1900, 1058; for 1901, 863; and for 1902, 629. It is hardly necessary in this place to quote the figures [illegible] the incidence of the poisoning in the various trades and it may be sufficient to mention that the diminution is [illegible] marked in the manufacture of electric accumulators, the smelting of metals, and in file cutting. It is [illegible] marked in coachmaking and in printing. Dr. T. M. [illegible] very justly points out that too much stress ought [illegible] to be placed on slight improvements which extend [illegible] so short a period as a year and it cannot be too strongly stated that lead poisoning is still much more prevalent [illegible] it should be. It is somewhat remarkable that alt[illegible] the notification of lead poisoning in house painters is [illegible] obligatory more notifications are, in fact, recorded of [illegible] employed in this trade than there are of persons [illegible] in any one industry which is registered under the F[illegible] and Workshop Act.

It is extremely doubtful whether the pernicious effect l on this large class is generally recognised, although it ully appreciated by those who have had a prolonged erience of the occupations and diseases of the patients ted in the metropolitan hospitals.

recent decree issued by the French Government is in ance of any measure which has been taken in this ntry for the protection of house painters. It provides that white lead shall not be used before it has already worked up in oil and (2) that it shall not be ipulated by hand; (3) that in processes of rubbing n and in all operations in which white lead is used the loyers shall provide overalls for the men, shall see that are washed and kept in good repair, and that they are n; (4) that articles necessary for insuring cleanliness to be provided for the workers at the place at which they working; (5) that the implements of work are to be t clean without dry rubbing; and finally (6) it is the of employers to post the notice containing these lations at the place in which the workers are engaged

oisoning by phosphorus has become rare and only one case was reported during the year. The patient was foreman of a "boxing" department, the part of the ory devoted to the packing of matches. The case was of necrosis of the lower jaw. Two patients died from eumonia accelerated by suppuration," the result of sphorus necrosis of many months' duration.

ight cases of mercurial poisoning were reported. Of e, two occurred in hatters' foremen—one was a chronic and the other a second attack. One case occurred in a tograph engraver, aged 23 years, who used perchloride of cury in the course of his work in which he had been aged for four years. Three cases occurred in electric re factories. There was one chronic case of a thermometer er and one of a man employed in an explosives factory re fulminate of mercury was used in manufacture.

oisoning by arsenic comes under the notice of the factory ectors in two distinct forms—(1) poisoning from niuretted hydrogen and (2) from arsenical salts. In first form of poisoning almost all the cases notified have contracted in factories and workshops in which there been a deficiency of ventilation, either because the ce used was insufficient or because the provisions made the removal of gases was inadequate. Poisoning from arsenical salts is caused by the work done in its action, in the manufacture of Paris or emerald green (a ll industry), and in the manufacture of sheep dip—a pound which contains arsenite of soda.

nthrax since its first discovery has always attracted a ree of attention out of all proportion to the mortality ch it has caused and it is indeed well that this is the case care bestowed on the preventive measures which have taken has been rewarded with considerable success. he writers on the diseases of animals are to be credited rax was one of the most common and one of the most ible of the epizootics of the Middle Ages and it is by no ns improbable that amongst men some of the epidemics ickness may have been due to the same cause. During year the number of cases of anthrax reported under the tory and Workshop Act was not very great. In the year it amounted to ten which occurred in trades in which manipulation of horsehair forms part and 12 in work- ple engaged in the woollen industry. 11 cases occurred ngst workers in trades connected with the dressing of s and skins and two cases occurred in porters engaged nloading oranges. Of the three remaining cases two rred in men who had been employed in unloading oes of grain and wool respectively, and one case was ibuted to the handling of buffalo-horns which had come China. Altogether there were 38 cases.

r. Legge points out that it is impossible to forecast with accuracy what may be the incidence of anthrax in the re and, anticipating the information which will be ished in the report on 1903, he tells us that during first two months of that year as many cases have been rted from the Bradford district as occurred there in the ious year. The columns of THE LANCET have more ntly recorded other outbreaks.

iere is at the present time no control over the [illegible] and it is therefore not pos [illegible] iterfere in the matter. A [illegible] ted with anthrax and ma [illegible] er to which he submits himself and his workpeople. state of things cannot be considered other than un- factory and it may be hoped that it will be altered.

There has in the past been some difficulty experienced in the disinfection of hair and of wool; some of the methods tried have proved to be inadequate and others have injured the goods operated upon. The present volume contains a valuable paper, the second of a series[2] by Mr. Albert Webb of Worcester, who employed Mr. Cecil Duncan, the Worcester county analyst, to carry out a series of experiments. These show beyond doubt the limitations of the use of steam disinfectors and it is to be hoped that the whole paper will meet with the recognition which it undoubtedly deserves.

MEDICINE AND THE LAW.

Burroughs, Wellcome, and Co. v. Thompson and Capper.

THE issues raised in this trial were of importance both to the plaintiff firm and to the medical profession. The former brought their action in order to establish their right to the exclusive use of the words "tabloid" and "tabloids" to describe goods of their manufacture, and as their trade-marks, and the defendants denied this right and sought to have the two words expunged from the register of trade-marks as having been wrongly placed there. The plaintiffs had expended energy, care, and skill, as well as capital, in building up a trade indissolubly connected with the word "tabloid" and many medical men had been accustomed to use that word in prescribing when they desired to specify the drugs of Burroughs, Wellcome, and Co. to the exclusion of all others. To the general public, particularly to those engaged in mercantile pursuits, the case is worthy of attention because it illustrates the defects of a system which allows a trade-mark duly registered in the Government office established for that purpose and used consistently ever since with the fullest possible measure of publicity to be called in dispute 20 years later and possibly to be removed from the Register altogether to the very serious injury of the trader who has expended his capital and his energy in connexion with it. A trade-mark must consist of at least one of certain essential particulars specified in the Patents, Designs, and Trade-marks Acts, 1883 and 1888. Under the latter Act there may be registered as a trade-mark "an invented word or invented words," this expression being substituted for "a fancy word or fancy words not in common use" which corresponded with it in the Act of 1883 The word "tabloid" was registered as a trade-mark in 1884, and the word "tabloids" in 1885, and therefore what the court had to decide was whether "tabloid" or "tabloids" was "a fancy word not in common use" at those dates. With regard to this there was not only the evidence of Mr. H. S. Wellcome as to the invention of the word "tabloid" by him and of those who had associated it only with his products but there was also the testimony afforded by dictionaries and literary works in which it was to be found after that date, whereas no appearance of it in print before could be shown, and it was further proved that where dictionaries had given "tabloids" as a word in common use and of general application in the manufacture of drugs the publishers had either corrected the error on having it pointed out by Messrs Burroughs and Wellcome or had undertaken to do so. With regard to this, the question of common use as distinct from that of general application to drugs, Mr. Justice Byrne observed in his judgment: "When the word 'tabloid' was first mentioned I quite thought it was a common dictionary word in the language long before 1884, but I am satisfied that this was really due to my acquaintance with the word as used in connexion with the compressed drugs of the particular shape I have described which have become so well known since the year 1884." In a later passage he observes: "Mr. Walter (counsel for the defendants) ingeniously suggested that the plaintiffs have sought to rob the English language by preventing its natural development, in endeavouring to appropriate such a word as 'tabloid,' which he puts as being a natural development of the word 'table' or 'tablet,' but I think it is more correct to say that the plaintiffs have made a gift such as it is to the language, while reserving a special use of it to themselves." There can indeed be no doubt that Mr. Wellcome was the inventor and first user of the word tabloid, which has been found expressive, or to use a slang expression has "caught on," and so has been adopted into the English language. With regard to this Mr. Neville, K.C. (counsel for the plaintiffs) submitted to the judge that "tabloid" was so clearly within the Act of 1888 and could so certainly have been properly registered as an "invented" word, had that Act been in force in 1884, that it should be allowed to remain upon the Register even if it did not comply with the requirements of the earlier statute. As, however, Mr. Justice Byrne was satisfied that "tabloid" was "a fancy word not in common use" in 1884 this point did not arise. In so holding he had to consider a number of decisions which have interpreted the expression used in the Act. In particular he had before him the case in which the court was asked to expunge the trade-mark "bovril" from the Register. In that it was laid down that the test was what an intelligent jury would say if they were asked whether the word bovril was a fancy word not in common use at the date upon which it was registered. In the Bovril case, as in that of "tabloids," the apparent derivation of the word was gone into and the question was raised whether it was too "descriptive" of the matter to which it was applied to be a good fancy word, but it was held that though "bov" might suggest an ox the word "bovril" at the time of registration was not descriptive and this decision was followed by Mr. Justice Bryne who said: "I think the case is near the line, but treating it as a matter of fact in the particular case I come to the conclusion that in March, 1884, the word was not 'really intelligibly describing the thing sold,' which is the way in which Lord Lindley in the Bovril case puts the form of direction to the jury."

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[2] The first report was printed on pp. 472–73 of the annual report of the year 1900.

To whatever extent the decision of Mr. Justice Byrne may be held to be one of law it is no doubt subject to revision upon appeal and, as it is possible that such appeal may follow, the law applied in it to the word "tabloid" has been stated above without criticism. With regard to facts held by the learned judge to have been proved, which include those relating to the "passing off" of other goods as those of the plaintiffs' firm, Mr. Justice Byrne expressed himself as perfectly satisfied with the evidence upon this particular topic. He drew special attention to those instances as to which evidence was given where the initials "B. & W." were added to the word "tabloids" in the request for the goods named. In this connexion his lordship said: "I have specially mentioned these three cases because there was a passing off where the goods were not denoted as 'tabloid' or 'tabloids' only but in such a way as to make it absolutely certain that the plaintiffs' goods were referred to by the use of their name or initials. There were nine other cases where the goods required were referred to as 'tabloid' or 'tabloids.' In all 12 cases were proved." The injunction which he granted with regard to the course of dealing thus shown to have been carried on by the defendants will be of value not only to the firm which has obtained it but to the medical profession at large and to their patients. It is not necessary to go into the reasons which may cause a medical man to specify the drugs of Messrs. Burroughs, Wellcome, and Co. or of any other firm in writing his prescription in order to say that he does so with good cause and that he should be able to do so with confidence that his direction will be carried out. On the whole, we have no doubt that the success achieved by Messrs. Burroughs, Wellcome, and Co. in their recent action will prove to be both to them and to others worth the anxiety, trouble, and money which it must have cost them. We may also be allowed to express the opinion that the state of uncertainty which affects a trade-mark even after it has been duly placed upon the Register is not satisfactory or desirable. Registration even after a number of years does not protect the mark from liability to be removed by the order of the court. Such statutes as those relating to patents and trade-marks are drawn by eminent experts in legal draughting and are no doubt subject to rigid scrutiny before they become law. It is, however, a matter of regret that the use of meagre and ambiguous phrases such as those which we have quoted with reference to trade marks consisting of words should leave the law in a state of uncertainty continuing for many years and necessitating for its elucidation the expenditure of thousands of pounds by private members of the community.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 9378 births and 5944 deaths were registered during the week ending Jan. 2nd. The annual rate of mortality in these towns, which had been 19 2, 17·8, and 15·4 per 1000 in the three preceding weeks, rose again last week to 20·6 per 1000. In London the death-rate was 21·1 per 1000, while it averaged 20·3 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 10 0 in Hornsey, 11·5 in King's Norton, 11·9 in South Shields, 12·7 in Handsworth, 13·6 in Coventry, 13 9 in Northampton, 14·1 in Leyton and in Derby, and 14 2 in Walthamstow; the highest rates were 24·1 in Stockton-on-Tees, 24·2 in Ipswich, 24·5 in Newport (Mon.), 24·9 in Brighton, 26·8 in Liverpool, 31·3 in Merthyr Tydfil, 32·4 in Preston, 33·6 in Wigan, and 35·1 in York. The 5944 deaths last week included 495 which were referred to the principal infectious diseases, against 423, 423, and 389 in the three preceding weeks; of these 495 deaths 152 resulted from measles, 135 from whooping-cough, 68 from diphtheria, 64 from diarrhœa, 38 from "fever" (principally enteric), 35 from scarlet fever, and three from small-pox. *No death from any of these* principal infectious diseases was registered last week in Tottenham, Hastings, Brighton, Bournemouth, Devonport, Burton-on-Trent, Grimsby, Derby, Wallasey, Warringt Huddersfield, Middlesbrough, Tynemouth, or Newp (Mon.); among the other towns the highest death-rates fi these diseases were recorded in Willesden, Birmingha Bootle, Wigan, Blackburn, Preston, York, and Stockton- Tees. The greatest proportional mortality from mea occurred in Willesden, Ipswich, Birmingham, Blackbu Preston, Leeds, Rotherham, and Cardiff; from sca fever in Wigan; from diphtheria in Reading; fr whooping-cough in Portsmouth, Walsall, Liverpool, Boo Wigan, Leeds, York, and Swansea; from "fever" Bootle; and from diarrhœa in Southampton, Rochdale, Stockton-on-Tees. Of the three fatal cases of sm pox registered in these towns last week one belon to Nottingham one to Bolton, and one to Sunderland. number of small-pox cases remaining under treatment the Metropolitan Asylums hospitals, which had been 26, and 27 on the three preceding Saturdays, had decli again to 26 on Saturday last, the 2nd inst.; four new ca were admitted during the week, against two, six, seven in the three preceding weeks. The number of sca fever cases in these hospitals and in the London Fe Hospital was 1632 at the end of last week, against 17 1654, and 1617 at the end of the three preceding wee 194 new cases were admitted during the week, agai 173, 188, and 142 in the three preceding weeks. deaths in London referred to pneumonia and disea of the respiratory system, which had been 417, and 271 in the three preceding weeks, rose ag last week to 404, and were 61 above the num in the corresponding period of last year. The causes 97, or 1·6 per cent., of the deaths in the 76 large tow last week were not certified either by a registered medi practitioner or by a coroner. All the causes of death w duly certified in West Ham, Leicester, Salford, Lee Hull, Newcastle-on-Tyne, and in 40 other smaller tow the largest proportions of uncertified deaths were registe in Handsworth, Grimsby, Liverpool, St. Helens, Barrow- Furness, Sunderland, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the princi Scotch towns, which had been 22·4, 20·9, and 20·8 per 10 in the three preceding weeks, increased again to 21·7 p 1000 during the week ending Jan. 2nd, and was 1·1 p 1000 in excess of the mean rate during the same per in the 76 large English towns. The rates in the eig Scotch towns ranged from 13 7 in Leith and 16·5 Greenock, to 24 6 in Glasgow and 27·9 in Perth. The 7 deaths in these towns included 26 which were referred measles, 21 to diarrhœa, 14 to whooping-cough, five small-pox, two to scarlet fever, two to "fever," and one diphtheria. In all, 71 deaths resulted from these princi infectious diseases last week, against 73, 61, and 73 in th three preceding weeks. These 71 deaths were equal to annual rate of 2·2 per 1000, which was 0·5 per 1000 ab the mean rate last week from the same diseases in

76 large English towns. The fatal cases of measles, which had been 34, 33, and 25 in the three preceding weeks, rose again last week to 26, of which 23 occurred in Glasgow and two in Paisley. The fatal cases of diarrhœa, which had been 15, 10, and 16 in the three preceding weeks, further rose to 21 last week, and included 10 in Glasgow, four in Edinburgh, four in Dundee, and two in Aberdeen. The deaths from whooping-cough, which had been 13, nine, and 16 in the three preceding weeks, declined again last week to 14, of which six were registered in Glasgow, four in Edinburgh, and four in Aberdeen. The fatal cases of small pox, which had been one, two, and four in the three preceding weeks, further rose to five last week, and all occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 192, 184, and 180 in the three preceding weeks, further declined last week to 177, but were 19 in excess of the number in the corresponding period of last year. The causes of 29, or more than 4 per cent, of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·6, 25 6, and 19 9 per 1000 in the three preceding weeks, rose again to 31·8 per 1000 during the week ending Jan. 2nd. During the 13 weeks ending on that date the death-rate has averaged 23·3 per 1000, the rates during the same period being 16 6 in London and 16 7 in Edinburgh. The 231 deaths of persons belonging to Dublin, registered during the week under notice, showed an excess of 86 over the number in the preceding week, and included 16 which were referred to the principal infectious diseases, against 11, 10, and seven in the three preceding weeks; of these, 12 resulted from whooping-cough, two from "fever," one from measles, and one from scarlet fever, but not any from small-pox, diphtheria, or diarrhœa. These 16 deaths were equal to an annual rate of 2·2 per 1000, the death-rates from the principal infectious diseases last week being 1·9 in London and 1·6 in Edinburgh. The fatal cases of whooping cough, which had been seven, four, and three in the three preceding weeks, rose again last week to 12 The deaths from measles, scarlet fever, and "fever" corresponded with the respective numbers in the preceding week. The 231 deaths in Dublin last week included 36 of children under one year of age and 60 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons were considerably in excess of the numbers recorded in the preceding week. 11 inquest cases and six deaths from violence were registered, and 82, or more than a third, of the deaths occurred in public institutions. The causes of nine, or nearly 4 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: A. F. Harper to the *Melampus* and W. G. Stott to the *President* for three months' study in civil hospital (dated Jan. 7th) and F. W. Stericker to the *Doris* (dated Dec. 31st). Surgeons: H. G. T. Major to the *President* for three months' study at civil hospital, A. E. Mereweather to the *Wildfire*, and R. Thompson to the *Aurora* (dated Jan. 7th).

ARMY MEDICAL STAFF.

Surgeon-General Sir W. D. Wilson, K.C.M.G, is placed on retired pay (dated Jan. 1st, 1904).

1ST LIFE GUARDS.

Surgeon-Lieutenant Basil Pares to be Surgeon-Captain (dated Nov. 14th, 1903).

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel W. J. R Rainsford, C.I.E, to be Colonel, vice J. F. Supple, C B., retired (dated Dec. 14th, 1903).

Colonel W. E. Saunders, C.B, is transferred from the Poona to the Meerut and Bundelkhund Districts, but will continue to officiate as Principal Medical Officer, Bombay Command, until relieved by Surgeon General Gubbins.

IMPERIAL YEOMANRY.

Westmorland and Cumberland: Surgeon-Captain J. E. Bowser to be Surgeon-Major (dated Jan. 2nd, 1904).

VOLUNTEER CORPS.

Royal Engineers (Volunteers): 1st Devonshire and Somersetshire: Surgeon-Major G. B. Fraser to be Surgeon-Lieutenant-Colonel (dated Jan. 6th, 1904).

Submarine Miners: The Severn Division: Surgeon-Captain W. L. [illegible]

Rifle [illegible] W. N. [illegible] Regiment, to be Surgeon-Captain, and to be borne as supernumerary whilst commanding the Bearer Company of the 5th London Volunteer Infantry Brigade (dated Jan. 6th, 1904). Supernumerary Surgeon Captain J. G. Fraser, commanding 5th London Volunteer Infantry Brigade Bearer Company, resigns his commission (dated Jan. 6th, 1904). 3rd (Duke of Connaught's Own) Volunteer Battalion, the Hampshire Regiment: Surgeon-Lieutenant G. F. Morley to be Surgeon Captain (dated Jan. 6th, 1904). 1st Volunteer Battalion, the Leicestershire Regiment: Supernumerary Surgeon Captain W. P. Peake, also commanding Leicester and Lincoln Volunteer Infantry Brigade Bearer Company, resigns his commission (dated Jan. 6th, 1904). 4th Volunteer Battalion, the Cheshire Regiment: Henry George Smeeth, to be Surgeon-Lieutenant (dated Jan. 6th, 1904). 5th Volunteer Battalion, the Cheshire Regiment: Surgeon-Lieutenant E. J W. Carruthers to be Surgeon-Captain (dated Jan. 6th, 1904). 1st Volunteer Battalion, the Royal Welsh Fusiliers: Captain J. E H. Davies resigns his commission and is re appointed Surgeon-Captain (dated Jan. 2nd, 1904) 4th Volunteer Battalion, the King's (Liverpool Regiment): Surg [illegible] commission (date [illegible] Volunteer Battal [illegible] Captain J. O. Wil [illegible] 1904). 1st (Inve [illegible] the Queen's Own [illegible] Colonel (Lieutena [illegible] resigns his commission (dated Jan. 2nd, 1904).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Manchester Companies: Captain J. W. Smith resigns his commission (dated Jan. 6th, 1904).

VOLUNTEER INFANTRY BRIGADE

Worcester and Warwick: Major W. J. Whitcombe, commanding Brigade Bearer Company, to be Brigade-Surgeon-Lieutenant Colonel whilst holding the appointment of Senior Medical Officer to the Brigade (dated Jan. 2nd, 1904).

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

East Surrey: Surgeon Captain (Honorary Captain in the Army) E. W. St. V. Ryan, from 16th Middlesex Volunteer Rifle Corps, to be Surgeon-Captain (dated Jan. 2nd, 1904).

NEW ARMY ORDER.

The following Army Order has been issued in India:—

> The Commander in Chief is pleased to empower principal medical [illegible] detail regimental medical officers of the Indian [illegible]
>
> [illegible] as at present.

THE MEDICAL DEPARTMENT OF THE UNITED STATES NAVY.

In the report of the Surgeon-General of the United States Navy, Chief of the Bureau of Medicine and Surgery, for 1903 the recommendation is made that as most of the naval hospitals were built many years ago modern systems of plumbing, heating, and ventilating should be installed and operating rooms and elevators provided in order to bring them up to date. It is also pointed out that the crowded condition of the hospitals renders it desirable that quarters occupied by the medical staff should be devoted to the accommodation of patients. It is stated that in order to meet the urgent need of the service for medical officers and to provide for the future Congress has authorised an increase of 150 officers in the medical corps At the same time by a wise distribution of the increase among the different grades and a re-arrangement of rank whereby rank for grade was established it placed the Bureau in a position to compete successfully with other Government services in attracting properly qualified physicians to the naval service. An important part of the report is that dealing with tuberculosis. The need of a naval sanatorium for the treatment of tuberculosis, says the report, has been demonstrated with increasing force during the past year. It had been necessary previously to 1902 to rid the service of its chronic consumptives by discharge to civil life, turning them loose to menace their home communities and to drag out their unhappy and short-lived existence as best they might. Last year arrangements were made for the admission of naval tuberculous patients to the Army General Hospital at Fort Bayard, and the Bureau is of opinion that the needs of the navy warrant the establishment of special sanatoriums as adjuncts to some of the most favourably situated naval hospitals. The experience of the past year emphasises the wisdom of the recommendations made by the Bureau for the appointment of skilled dentists at the stations where men and boys are assembled to be trained. In the report on recruiting it is shown that out of a total of 25,000 men examined 13,049 were accepted and 659 men were found to be colour-blind. The whole report shows the great progress which is being made in the medical affairs of the United States Navy.

DEATHS IN THE SERVICES.

Lieutenant-Colonel Edward Russell Cree, R A.M.C., son of the late Edward Hodges Cree, inspector-general of hospitals and fleets, R N., on Dec. 29th at Pinewood Sanatorium, Wokingham, in his forty-sixth year. He joined the army as surgeon in 1880, became surgeon-major in 1892, and lieutenant-colonel in 1900. He served in the Soudan Campaign of 1885, and was present in the engagements at Hasheen and the Tolfrek Zariba and at the destruction of Temai (medal with two clasps and the Khedive's Star) He also served in the South African War in 1899–1900, and took part in the relief of Ladysmith (mentioned in despatches).

SOLDIERS' MESSING.

With regard to the proposal recently advocated by a military correspondent in the *Times* to introduce a restaurant system of messing into barrack life, we are not informed how that system is to be carried out on field service in war. Without trained military cooks and some practical knowledge of cooking we do not see how the soldier is to be fed and his field ration cooked during a campaign, and, as it seems to us, a practical knowledge of this sort can only be acquired in time of peace.

THE MEDICAL BOARD, INDIA OFFICE

Colonel A M Branfoot, C.I E., I.M S., retired, has been appointed President of the Medical Board, India Office, on the retirement, which will soon take place, of Surgeon-General Sir William Roe Hooper, K.C.S.I.

PRESERVATIVES IN FOOD.—It is announced from New York that in the course of the practical experiments instituted by the Department of Agriculture to ascertain the effect of preservatives in food, the supply of food containing the preservative salicylic acid has had to be stopped owing to its injurious effects upon the subjects One individual, however, is stated to have benefited by taking food preserved with this acid inasmuch as the rheumatism from which he had been suffering disappeared. Food preserved with borax has also had ill effects It may be remembered that the departmental committee on food preservatives proposed to make the addition of borax compounds to cream and butter lawful so long as a certain proportion was not exceeded, and similarly it was suggested that salicylic acid should be allowed but not in a greater proportion than one grain per pint in liquid food and one grain per pound in solid food, its presence in all cases to be declared.

Correspondence.

"Audi alteram partem."

THE ADMINISTRATION OF CHLOROFORM TO MAN AND TO THE HIGHER ANIMALS.

To the Editors of THE LANCET.

SIRS,—In his letter in THE LANCET of Dec. 19th, 1903, p. 1757, Dr. W. J. Lindsay raises contentions which may be discussed with great advantage. That the administration of anæsthetics is fraught with danger in the hands of the unskilled few would deny at the present day, eve without the recent emphasis laid upon the point by Dr. A. Waller. When, however, it is suggested that such danger to be removed by improved apparatus we get upon debatable ground. The question revolves mainly around th administration of chloroform and to this I propose to confir my few remarks. Now, Dr. Lindsay's contention appears t be that safety must not depend upon the skill and care of th anæsthetist but upon the implement which he employs. Th giving of anæsthetics is mere empiricism, he says, in fac while one man can give them better than another. So long a the anæsthetist is guided by his power to estimate the exac condition of his patient, to vary the quantity of the drug h gives in accordance with the varying behaviour of the patien and the varying needs of the operation in progress, so long says Dr. Lindsay, the anæsthetist is a mere artist and not man of science. This position seems to me no more logica than it would be to maintain that surgeons are unscientifi because it depends entirely on their skill and care to wha depths the knife cuts. It might just as well be said that fo surgery to be a science the incising implement must cut t a definite depth and a definite length whenever it is applie to the skin It might be more scientific perhaps if th knife with which a surgeon opened the abdomen alway made a cut, for instance, two inches long and 10 centimetres deep whenever it was applied to the skin. Th result, however, in the case of thin persons would surel lead their friends to prefer the skill of a surgeon who wa something of an "artist" and not merely the wielder of a accurate implement. As a matter of fact such contention as this of Dr. Lindsay are not scientific because they ar based on false data. If Dr. Lindsay will guarantee tha every human being shall from the moment of inspirin an anæsthetic to the close of the operation carr on respiration in exactly the same manner, that hi respiration shall be unaffected by his physical condition by his mental nature, by the nature of the operation, or b the posture which it demands, then truly it will be scientifi to come forward with an instrument supplying perfectl regularly an unalterable amount of chloroform. Until this happens we must be able to vary our dosage within wide limits. Nothing but care, skill, and experience can enable us to be perfect in carrying this out. Those of less experience will be less unsafe no doubt if they handle an instrument that cannot supply a vapour of more than a certain strength. Such an instrument they already have in Junker's inhaler. Vernon Harcourt's is more accurate, and no doubt a modified form of Dubois would be an advantage. Yet such instruments as these do permit of variation of dosage within limits, and only experience can insure the proper use of this possible variation. The objection to their use is that in experienced hands they do not provide for as strong a vapour as may be required, in inexperienced they will insure comparative safety but only at the price of an often imperfect anæsthesia. Because the lower or even the higher animals can be very satisfactorily anæsthetised for laboratory work with these accurate instruments it by no means follows, and it is actually not the case, that they are equally satisfactory when applied to the various individuals upon whom surgeons operate. Safety and success with anæsthetics are to be found not in the apparatus but in the hands that employ it. Plenty of deaths have attended the use of Junker's apparatus. Plenty, even if fewer, may be safely predicted for any form of apparatus that is put into inexperienced hands, unless, indeed, a most imperfect form of anæsthesia is to be regarded as sufficient. The safety of the patient and the convenience of the surgeon will be better consulted if every man who undertakes to give anæsthetics is careful to acquire first a wide experience in their use and believes that if he arms himself with the most accurate and scientific instrument in the market nothing more is needed.

I am, Sirs, yours faithfully,
Cavendish place, W. J. BLUMFELD.

To the Editors of THE LANCET.

SIRS,—We note that your issue of Dec. 19th contains a letter from Dr. W. J. Lindsay in which reference is made to Mr. Vernon Harcourt's new chloroform inhaler. In connexion therewith we beg to state that we have acquired Mr. Vernon Harcourt's patent and shall be able to offer the apparatus for sale early in the new year. In the meantime we shall be pleased to show one of the inhalers to any of your readers who may call at our showrooms.

We are, Sirs, yours faithfully,
JOHN J. GRIFFIN AND SONS, LTD.
Sardinia-street, W.C.

THE BORDERLANDS OF INFECTIOUS DISEASES AND THEIR MANAGEMENT.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 26th, 1903, pp 1834–35, Dr. ement Dukes when referring to the statement contained the valuable contribution of Dr. Biss that "the constant eaking out of scarlet fever in the diphtheria wards and of [illegible] wards may be traced to some [illegible] of whose ailment had caused [illegible] oked" exclaims, "What an dictment against the management, or construction, of ese hospitals." I submit that it is merely the indictment a system and not of either construction or administra- on. Dr. Dukes does not believe in the existence of these omalous cases and asks for instances. Let me direct his tention to the report of Dr. L W. Darra Mair dealing with n outbreak of "sore-throat illness" which occurred at incoln in May, 1902. To begin with there was a division opinion as to whether the disease was or was not scarlet ver, the prevailing belief being that it was not. The pidemic claimed nearly 200 victims, of whom four died. linically a large number of the cases were scarlet fever, acteriologically none were. The disease was not contagious. r. E. Mansel Sympson thus classifies the cases which came nder his observation: (1) cases which were clinically in- istinguishable from cases of scarlet fever; (2) inter- ediates which presented sore-throat, fever, and some rash; nd (3) cases without rash.

In the first group there was peeling which took from four five weeks to complete In the second the rash was rticarial in character. In the third, in addition to fever here were sore-throat and swelling of the external glands. he complications were gastritis and rheumatism, the latter ometimes resembling rheumatic fever. The streptococcus carlatinæ was not discovered in the throat swabbings lthough other forms of streptococcus were found, but these ailed to produce any effect on animals. In three cases a [illegible] romycetes was found and to this [illegible] ak is believed to be referable.

[illegible] following year another outbreak [illegible] medical men were divided, the reponderance of opinion being this time on the side of carlet fever. On this occasion Dr. Klein failed to discover ither the streptococcus scarlatinæ or the enzyme, but umerous other streptococci were found, as were "diph- heroid" bacilli, which, however, were not pathogenic to nimals. Fortunately, very few indeed of these cases were "isolated" or Lincoln would have had an epidemic about he nature of which there would have been no question hatever. How are we to prevent the entry of anomalous ases into the wards of the "isolation" hospital? Can we ely on bacteriological diagnosis? In the case of diphtheria submit that the bacteriological test cannot be regarded as ntirely trustworthy. We are confronted by many difficulties. t has yet to be decided whether or not those organisms hich are classed as "pseudo-diphtheritic" are merely he attenuated forms of Klebs-Löffler bacilli which eed but favourable conditions to acquire virulence. Evidence, moreover, is accumulating that the Hofmann bacillus, although distinguishable from the Klebs-Löffler organism morphologically, culturally, and biologically, may become virulent by growth under favourable conditions. Again, the absence of any organism which might have etiological relationship to diphtheria cannot be taken as disproving a diagnosis of diphtheria[1] and the presence of diphtheritic bacilli in scarlet fever cannot be regarded as conclusive.

In the latter disease the point is still debateable whether or not the streptococcus of Klein is more than an associate. Difficulties (not errors) of diagnosis form only one of the objections to the aggregation of cases of infective diseases in large permanent hospitals, and I hazard the opinion that we are within measurable distance of the time when this system will be universally regarded as a blunder.

Dr. Dukes speaks of the "isolation" hospital as a "valuable institution." Now value is a demonstrable thing and the making of such a statement at the present time entails the obligation of furnishing the data on which he bases his conclusion. Those who have gone further afield than Dr. Dukes appears to have done in search of such evidence have generally been driven to an [illegible] not to be missed, [illegible] ître of the isola- [illegible] never yet been given to the world.

I am, Sirs, yours faithfully,
Nottingham, Jan. 2nd, 1904. EDWARD DEAN MARRIOTT.

To the Editors of THE LANCET.

SIRS,—The duty of carrying out an inquiry into the value of "isolation" hospitals rests upon the Local Government Board, for that [illegible] upon the [illegible] place. [illegible] while it [illegible] person from a crowded tenement is useless or even unneces- sary, all the evidence which has been accumulating since the appearance of Dr. Wilson's paper six years ago goes to show that the segregation of scarlet fever cases has been productive of no appreciable diminution in the prevalence or fatality of the disease. Is it not possible that an explanation of the paradox may be found in the hypothesis that scarlet fever, like diphtheria, may exist in a latent form and that it is by unrecognisable cases, mainly, that the infection is disseminated? Then, again, the good which it seems hospitals must do in some cases may be counterbalanced by the production of "return cases," which are probably more numerous than is supposed. For an infectious child on his return from hospital is more likely to spread infection among his school-fellows than at his home.

The experience of even one small town which has no fever hospital may be at least suggestive. In Windsor during the last ten years only two deaths from scarlet fever have occurred, that number giving a mortality-rate of 0·08 per 1000 of the child population (under ten years) and a *fatality*-rate of less than 1 per cent. of cases notified, and in only 11 per cent. of the houses affected did any further case occur after the first was notified (allowing two days for incubation). Surely, if such experience as this is general the provision of costly fever hospitals for country districts is a monstrous waste of money which is so much wanted for other and more fruitful uses.

I am, Sirs, yours faithfully,
EDW. CASEY,
Jan. 6th, 1903. Medical Officer of Health, Windsor.

ADMINISTRATION OF ANTIDIPHTHERITIC SERUM BY THE MOUTH.

To the Editors of THE LANCET.

SIRS,—A most interesting article on Diphtheria by Dr. F. Foord Caiger in THE LANCET of Dec 26th, 1903, p. 1771, induces me to mention a method of administering antitoxin which I have employed in several cases lately. This consists in giving it by the mouth. The idea occurred to me two years ago when I had a bad case of diphtheria miles off in the country. It was impossible to keep a close watch on the case and to inject the antitoxin when necessary, so I told the nurse to give it by the mouth if the temperature rose to a certain height or if symptoms seemed otherwise to indicate its use. Altogether 7000 units were given by the mouth and the patient, a youth aged 21 years, recovered without any after-effects. I have twice since given the serum in this manner and in both cases recovery has taken place. There is, fortunately, not much diphtheria in this district, so that cases are few and far between, but it struck me that, especially in children, the administration by the mouth would be much more agreeable and certainly less painful than by injection. Also, if one's case is far off it much simplifies matters and, so far as my small experience goes, may make all the difference to the result of the case.

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[1] It is a curious fact that the lowering of the fatality rate of diphtheria since the introduction of the serum treatment has not been accompanied by a proportionate reduction in the mortality from this disease.

Taken in water the serum is practically tasteless and gives merely the sensation of something oily going down the throat. I am, Sirs, yours faithfully,

Beverley. W. HERBERT GREGORY, M.D. Edin.

THE PHOSPHATES AND UREA OF URINE.

To the Editors of THE LANCET.

SIRS,—Mr. E. G. Clayton is too diffident, he forgets how much bio-chemists have done—although more perhaps in France than in England—for medical science. Was it not Pasteur who said that osteomyelitis was simply a boil in bony tissue, and was not Pasteur right in spite of the wise men of the Académie de Médecine who declared that only a chemist could make so foolish a statement? Bouchard, calling chemistry to his aid and especially the work of Duclaux, gave precision and extension to Beneke's idea of certain diseased processes being due to retarded nutrition, and it is mainly Bouchard's chemical assistants who, free from some of the preconceived ideas of the medical man, have endowed general pathology with some of the attributes of an exact science.

If Mr. Clayton follows the evolution of Beneke's idea he will find an answer to most of the questions he asks me in his letter in THE LANCET of Dec. 12th, 1903, p. 1688. This idea, I have just said, received marked development from Bouchard; the views of the author are contained in his masterly work entitled "Maladies par Ralentissement de la Nutrition." Robin, in his first thesis, making an exhaustive study of the urine in typhoid fever, introduced the method of calculating the intensity of nutrition by means of the urinary co-efficient of oxidation.[1] A large number of analyses made by Gautrelet, Huguet, Richard, Vieillard and others, either independently or under the direction of Bouchard and Robin, led to the definite conclusion that this co-efficient was invariably low (actually or virtually) in the diseases designated by Bouchard as due to slow metabolism and that a fairly constant figure (84 per cent.) could be established for normal nutrition. But how were those cases to be interpreted, and they were present in a certain proportion, when the co-efficient of oxidation was persistently high? Obviously by invoking the factor of accelerated nutrition. Such cases included the subjects of the pretuberculous diathesis, those in possession of the same disease, and those showing a marked liability to infection in general.

Here then we had a large number of pathological processes explained by an extremely simple bio-mechanical theory. About the same time, however, Lecarché published his well-known work on gout and attributed this disease to hyper-nutrition, itself the consequence of the hypo-alkalinity of the tissues, and later Robin detached diabetes from the category of diseases due to slow nutrition to place it in the opposite class. Could these conflicting views be conciliated? Here again the bio-chemist suggested a solution by investigating, as Gautier does in his "Chimie de la Cellule Vivante," the aerobic and anaerobic characters of cellular nutritional processes.

The latest practical outcome of Beneke's conception is the application by Robin and Binet to the products of pulmonary respiration of the theory involved in the co efficient of oxidation. I referred in the paper discussed by Mr. Clayton[2] to some of the highly interesting results arrived at by those writers. Since then I have used their apparatus in investigating the vicarious functions of the lung in cases of hepatic insufficiency, as in the case of alcoholics. I have found the expiratory carbonic dioxide increased in such conditions. May not this overwork of the lung, it may be asked, be a factor in inducing the tuberculous infection which is so frequent a termination of alcoholism?

I am, Sirs, yours faithfully,

Nice. A. W. GILCHRIST, M.D. Paris.

THE TREATMENT OF CERTAIN FORMS OF OBSTINATE CONSTIPATION BY ENTERO-COLOSTOMY.

To the Editors of THE LANCET.

SIRS,—I have been interested in your annotation on Mr W. Arbuthnot Lane's case and in Mr. C. B. Keetley's lette because I dealt with a somewhat similar case in September 1902. The patient was a widow, aged 38 years, who gave a history of an attack of "peritonitis" in childhood. Sh suffered severely from constipation, without any of the ordinary features of acute or chronic obstruction. Even with the use of aperients and enemata the bowels seldom acted more than once in from six to eight days, and towards the end of the period of constipation she was tormented with headaches severe enough to incapacitate her and which were only relieved when she had passed a motion composed of small hard masses of fæces, each piece of about the size of a small marble. In spite of treatment with drugs, diet, massage, electricity, exercises, &c., the constipation became more obstinate and the headache more persistent. Judging that the constipation was produced by adhesions and that the headaches were stercoral I decided to open the abdomen and to make an anastomosis between any convenient parts of the small and large intestine. The adhesions were apparently due to a former attack of appendicitis, for they were more dense in the right iliac fossa and involved the cæcum and many coils of the lower ileum. With some difficulty I was able to effect an anastomosis between the ileum above the adhesions and the lower part of the sigmoid flexure. The patient made a good recovery and both her constipation and her headaches have been cured.

Mr. Keetley's *a priori* consideration that inconvenience might be caused by the fluid contents of the small intestine entering the rectum has not been borne out in this case, for the motions passed are solid and well formed. In this case it would, as Mr. Keetley suggests, have been better to do an end-to side rather than a lateral anastomosis, for my patient from time to time suffers pain and distension in the regions of the transverse and descending colon, and at such times fæcal masses can be felt there through the abdominal wall. It may become necessary to close the ileum below the anastomotic opening. I can see no reason why such an operation should not be performed for cases of constipation such as Mr. Keetley describes, and I quite agree with the advisability of making the anastomosis outside the abdomen if possible. My excuse for taking up your valuable space is the experience afforded by an actual case on two points raised by Mr. Keetley.—I am, Sirs, yours faithfully,

Salisbury, Dec. 28th, 1903. GILBERT KEMPE.

To the Editors of THE LANCET.

SIRS,—If Mr. C. Mansell Moullin will do me the honour of glancing through the short paper published under the title of "An Effectual Means of Dealing with the Conditions of Chronic Obstruction of the Large Bowel resulting from the Adhesions which Develop in Consequence of Chronic Constipation" in THE LANCET of Jan 2nd, p. 19 (which also contains his letter), he will see that the apparently rare and somewhat obscure case of atony of the large bowel on which he operated so successfully is neither similar in its causation nor in its pathology to the comparatively common and simple definite condition of mechanical obstruction described by me. I am, Sirs, yours faithfully,

Cavendish-square, W., Jan. 2nd, 1904. W. ARBUTHNOT LANE.

A PATHOLOGICAL CURIOSITY.

To the Editors of THE LANCET.

SIRS,—May I bring to the notice of the many readers of THE LANCET an interesting fact which was disclosed at a necropsy at the French Hospital a short time ago. On examining the kidneys it was found that the subject possessed three, two on the left side and one on the right. The two on the left side were fused together, one being on top of the other, and externally showed two ureters springing separately from two distinct pelves and continuing separately along their whole length, opening into the bladder by two distinct openings, one being about a quarter of an inch above the other. On section there was a distinct demarcation of the two kidneys, which was not visible from the exterior. All three kidneys were normal in appearance and had no connexion with the cause of death. I should be glad to know whether this has often been found.

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[1] The ratio between the total nitrogen and the nitrogen of urea; this ratio is also called "rapport urologique."

[2] THE LANCET, Nov. 29th, 1902, p. 1456.

I am, Sirs, yours faithfully,
JEHAN M. BARLET,
Resident Medical Officer to the Hôpital et Dispensaire
Français, Shaftesbury-avenue, London, W.C.
Jan. 3rd, 1904.

*** A supernumerary kidney is very rarely met with. It is regarded as an extreme instance of segmentation of the kidney of one side. In its most typical form it lies in serial order with the kidney of its own side but is entirely separated. It is provided then with its own vessels and its own duct. The duct may fuse with that of the other kidney or remain separate as in the case quoted by our correspondent. Kidneys with two pelves are possibly less marked instances of the same abnormality. Even in these the ureters usually fuse so that it is rare to find two ureters entering the urinary bladder on the same side. Our correspondent will find references to the condition in Rayer's work (Traité des Maladies des Reins, 1840) and also in Newman's paper on Malformations of the Kidney (Transactions of the Clinical Society, vol. xxxi.).—ED. L.

THE LUNG REFLEX OF ABRAMS.

To the Editors of THE LANCET.

SIRS,—In affirming that I have in any way denied that the spiratory muscles are the chief agents in maintaining and gmenting pulmonary suction Dr. Harry Campbell is making entirely gratuitous assumption. How could anyone doubt e normal function of these muscles, albeit Dr. Campbell akes it appear as though he had expressly discovered it. hat I have maintained all along is that elastic recoil of the oracic wall is an important factor and that the inspiratory uscles in normal breathing contribute to pulmonary suction a different manner relatively to the lungs than they do when almonary tension is abolished, as in excessive emphysema in the initial stretching of the child's lung. In the latter ase Dr. Campbell is, to say the least, unguarded in labeling y statement as "untrue," as what I referred to was e stretching of the lung by the inflation of the collapsed veoli which occurs before the actual stretching of the astic fibres. I also oppose Dr. Campbell's oft repeated and ovel plea that the inspiratory mucles are "ever busy" and moment by moment" keeping up the pulmonary tension, r the very obvious reason that these muscles are not acting uring expiration, and as expiration lasts longer than inpiration the inspiratory muscles instead of being "ever busy oment by moment" are in fact idle the greater part of the me.

It is instructive to note Dr. Campbell's attitude in gard to passive recoil and the extension of the pleural argins of the lungs. In the former case he carefully vades reference to the particular words to which I ave several times taken exception, and in the latter ase he adopts what, without any discourtesy, may be ermed the subterfuge that the "confines" of the pleuræ ay be interpreted in his previous letter, not as representing heir normal boundaries (as was undoubtedly implied therein) ut as including any space into which the pleuræ can be tretched. In directing attention to the fact that in addiion to the complemental pleural spaces there existed what may term an extra reserve space, it was merely to show hat there was no physical impossibility, as supposed by r. Campbell, in the lungs being stretched beyond the leural boundaries. But as regards a displacement of the wer borders of the lung in excess of that produced by a eep inspiration, it is by no means necessary to suppose hat this extra reserve space is utilised when the lung eflex is induced, because the fact is that by ordinary deep

be filled by the
pleural space if
kes the strongest
nspirations he can. It may here be added that in the disension which follows on the induction of the lung reflex phenomenon after passive recoil of the chest has done its part the diaphragm (specially) and the other inspiratory muscles contract in obedience to the requirements of the pulmonary relaxation. I think it will be seen from the foregoing considerations that the "impossible position" of Dr. Campbell is once more disposed of.

Hitherto not a few of Dr. Campbell's criticisms have been ingenious and serviceable in the elucidation of the lung reflex phenomena, but certainly his comments on the reflex of contraction are peculiarly unfortunate. He believes that sudden bronchial contractions in a limited area of lung will have the effect of distending the pertaining alveoli and actually cites as analogous the case of the asthmatic paroxysm. If Dr. Campbell will take the trouble of observing the most ordinary laboratory experiment on vagal stimulation inducing bronchiolar contraction he will see that the result is an almost immediate diminution in lung volume. It is only when the bronchiolar contraction is persistent that the air gradually gets imprisoned and inflates the alveoli to distension. In this connexion it is interesting to note that recently Aufrecht[1] announced that by means of the Biondi-Heidenhain stain he has succeeded in demonstrating a longitudinal layer of muscular fibres in the bronchial tubes, to the vermicular contraction of which the expulsion of air and secretion is largely due. I should consider it likely that in the circumscribed lung contraction which succeeds to focal concussion of the thorax such function of the longitudinal fibres is not rendered altogether invalid, whereas in the asthmatic paroxysm the retention and accumulation of air are more fully explained by the persistent local contractions of the circular fibres throwing the longitudinal fibres out of action. In regard to the new consideration introduced by Dr. Campbell at the end of his letter, I have not as yet heard of its being mooted either by Dr. Abrams or his "disciples" that the margins of reflexly expanded portions of lung move more extensively than normal. Reasoning from what takes place in emphysematous conditions generally I should have imagined the very opposite to be the case.

I am, Sirs, yours faithfully,
Henrietta-street, W., Jan. 4th, 1904. A. G. AULD.

LONDON HOSPITALS AND CENTRAL CONTROL.

To the Editors of THE LANCET.

SIRS,—The question of the possibility of submitting the London hospitals to some form of central control, organised

diture and of economising
casually into the field of
ngaged in procuring funds
for their support, and has again been brought into prominence by a letter from a manifestly well-informed correspondent of the *Times*, which appeared in that journal on Dec. 26th and which takes a somewhat alarmist view of the future of hospital finance. The writer of the letter believes that unless the now constantly increasing demands of hospitals can be systematised and checked by some central board or other body constructed for the purpose, and possessing the confidence of the public, the patience of donors will be exhausted, and that the institutions themselves must either cease to discharge their functions or must become dependent upon the rates and subject to municipal administration. In the discussion of this subject members of the medical profession have hitherto taken only a small part, but it is so intimately connected both with professional education and with general professional welfare that it seems to be quite worthy of all the attention which can be bestowed upon it. It is easy to understand that physicians and surgeons intent upon their own work, and sufficiently burdened by their own responsibilities, may hesitate to approach those which seem to belong more properly to treasurers and committees, but the connexion between the two is so close as to be practically inseparable, and the financial errors of a committee can never be without influence upon the government of the wards or upon the treatment of the sick. On this ground, and by reason of the enormous importance of the hospital system to the community, it seems eminently desirable that the profession should contribute its special knowledge towards the solution of problems which, at the present time, appear to weigh chiefly upon the shoulders of non-medical philanthropists,

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[1] Deutsche Archiv für Klinische Medicin, Band lxvii., H. 5 and 6.

and to be on the verge of reducing many members of that useful and estimable class to the borders of despair.

When viewed with reference to the only two questions of paramount importance, the advancement of medical science and the treatment of the sick poor, it is impossible to deny that the London hospital system, regarded as a whole, affords an extraordinary example of misdirected and overlapping energy and of obsolete arrangements. The localisation of the great general hospitals bears no discoverable relation to that of the patients for whose benefit they are supposed to exist and to be maintained, while the smaller ones are scattered as aimlessly as if their seeds had been sown by birds or by the wind. A large proportion of the numerous special hospitals have arisen at the bidding of practitioners desirous to obtain some advantage from them, and were originally planted wherever a house not too far from the residence of the founder could be obtained, or wherever a local philanthropist could be induced to identify himself with the rising institution and to take its fortunes under his wing. There is probably not one London practitioner in a hundred who could say offhand how many hospitals for any particular specialty are in existence within a mile of his residence, or by what physicians and surgeons they are officered, and there are unquestionably many of such hospitals which are not regarded as sources of any especial light and leading with reference to the departments of practice which they profess to make their own. The most that can be said in favour of them, in a general way, is that they furnish the members of their staffs with opportunities of operative and other practice which may eventually be turned to the advantage of patients outside their walls, and that for various reasons they obtain support from donors who might not be reached by the appeals of more important charities, and who, if they did not give to these, might possibly not give at all. To their discredit must be placed the enormous evil of an unnecessary overlapping of appeals and of an unnecessary multiplication of establishments and of paid officials, all requiring the diversion to other purposes of money which ought to be devoted to the treatment of the sick, and this to such an extent that in all probability a central board free to reorganise at its pleasure, to suppress, to establish, to remove, and to amalgamate, would be able to carry on a complete hospital system for London at far less expense than is now required for an incomplete one. Is it quite beyond hope that some such board may ultimately be obtained?

I am, Sirs, yours faithfully,
Hospital Surgeon.

THE NEW REGULATIONS FOR THE INDIAN MEDICAL SERVICE.

To the Editors of The Lancet.

Sirs,—May I trouble you with a few lines relative to the letter of "Veteran" in your issue of Nov. 14th last, p. 1396? His penultimate paragraph may if not corrected raise false hopes in the breasts of intending candidates for the civil branch of the Indian Medical Service. It is true that before the introduction of the new rates of pay the pay of a second-class civil surgeoncy was Rs. 50 per mensem less than that of an officer in permanent charge of a regiment, yet this is not now the case, as I know from experience. The pay remains the same as before and is consequently now Rs. 100 a month less than that for permanent charge of a native regiment, so that his remarks regarding the chance of private practice should be carefully noted by all intending candidates. It is very rare for any civil surgeon of a second-class station to make anything approaching this sum (Rs. 100) in private practice; 30 to 50 rupees a month would give a fair average of the takings from private practice.

Comparing the pay of the Royal Army Medical Corps and the pay of the Indian Medical Service (new rates) the advantage is all in favour of the Royal Army Medical Corps, their pay being brought up by "charge allowance" to above that of the pay of corresponding ranks of the Indian Medical Service, and there is no increase of pay to compensate the Indian Medical Service for continual service in India and many other disadvantages. I could give many instances showing the inadequacy of the new memorandum but will not trespass on your space to do so; my object is to point out that the civil surgeon does not yet benefit by the revised rates, rather is his position relatively worse. We must, however, be thankful that a move has been made in a right direction, a move which inspires us to hope that the civil branch (the bait that attracts, or attracted, men to the Indian Medical Service) will shortly receive the much needed improvements.

I am, Sirs, yours faithfully,
S. I. M.

Spiral Formations in Relation to Walking, Swimming, and Flying.—A letter from Mr. Theodore A. Cook, whose name was freely introduced into Professor Bell Pettigrew's paper on this subject, was received too late for publication. It will appear in our next issue.

LIVERPOOL.

(From our own Correspondent.)

Sleeping Sickness in Liverpool.

Two cases of presumed sleeping sickness in the first stage sent by the authorities of the Congo Free State arrived at Liverpool on Dec. 28th, 1903. These cases have been sent to the Liverpool School of Tropical Medicine in order that a study of the disease may be made in England as well as in Africa. The change from tropical Africa to these northern latitudes has had a tonic effect on both natives; one of them who was in a weak condition when he left the Congo now shows much more vigour. The other patient has never shown any serious symptoms, and it is only the presence of the trypanosome in the blood which indicates that he has been attacked by the disease. Both are now under observation by Professor Ronald Ross, the director of the Liverpool School of Tropical Medicine.

Infectious Diseases in Liverpool: Question of Hospital Accommodation.

The medical officer of health (Dr. E. W. Hope) reported to the health committee of the city council on Dec. 31st last that there were one case of small-pox and 334 cases of scarlet fever under treatment in the corporation hospitals. In reply to Alderman W. Roberts who asked if there happened to be an increase of scarlet fever patients whether there would be hospital accommodation, Dr. Hope replied that the city was exceptionally free at present from all forms of infectious disease; indeed, it had not been so free within the past ten years. At present 474 patients were in hospital, but inasmuch as there were 900 beds, only about one-half of the hospital accommodation was in use, so that the state of things was very satisfactory.

Prevention of Malarial Fever.

At the monthly meeting of the Liverpool Chamber of Commerce held on Dec. 29th last a letter was read from the Glasgow corporation stating that as a result of the visit to that city of Professor Ross of the Liverpool School of Tropical Medicine it and other bodies in Glasgow had decided to join with the authorities of other towns to bring pressure to bear on the Government to take steps to investigate the ravages of malaria. Professor Ross said that all were agreed that the Government should move quickly. Manchester, Newcastle, and Sheffield were also prepared to join and the Liverpool School of Tropical Medicine proposed to draw up a plan of action to be taken after the return of Sir William MacGregor from Lagos.

Scholarship in Dermatological Research at the University of Liverpool.—Proposed New Lectureships.

Dr. George G. Stopford Taylor has offered to the medical faculty of the University of Liverpool a scholarship of the value of £100 a year for five years for the purpose of original research in the study of dermatology. The scholar who will be appointed will act as clinical assistant in the out-patient department of the Liverpool Skin Hospital and will also devote a portion of his time to research work at the Thompson-Yates laboratories. The offer awaits the sanction of the council of the University. The medical faculty has also recommended to the council the institution of two new clinical lectureships, one in dermatology and the other in laryngology.

Jan. 5th.

The Death of Professor Karl von Zittel.—The death is announced as having occurred at Munich Tuesday last of Professor Karl von Zittel, the palæontologist and author of a "Manual of Palæontology."

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Cardiff Small pox Hospital.

THE hospital in which small-pox patients are at present isolated in Cardiff consists of corrugated iron structures which were erected many years ago upon land adjoining the permanent buildings provided for other infectious diseases. The site is on the outskirts of the town and is bounded on two sides by railways, so that it cannot be built up to very closely. The small-pox buildings have over and over again be [illegible] an outbreak of the di [illegible] initial case, but the [illegible] existing wards by mor [illegible] Government Board, however, refuses to sanction a loan for the erection of a small-pox hospital in proximity to the general isolation hospital. There does not appear to have been at any time a transfer of infection from one institution to the other. In this connexion it is of interest to note that there is a well-equipped hospital on one of the islands in the Bristol Channel for the purpose of isolating cases of plague or cholera. This hospital, which has a crematorium attached to it, is for the use of the Cardiff, Newport, and Barry port sanitary authorities.

Housing in the Rhondda Valleys.

In 1902 the Rhondda urban district council promoted a Bill before Parliament, one of the objects of which was to provide a system of electric tramways within its district. A strong argument in favour of the measure, and one which evidently had some weight with the Parliamentary committees before which the preamble of the Bill was proved, was the relief which the proposed tramways would give to overcrowded areas - It was stated in evidence that in certain districts surrounding collieries which were in full work there was a dearth of houses, so that two, and even three, families often occupied one house, whereas in other parts only a few miles distant empty houses were frequently found and that, as the overcrowded and less crowded areas were not constant but varied in accordance with the activity of the particular colliery concerned, a complete system of tramways would enable the colliers to reach their work, even though they lived at some distance from it. The district council has- not yet provided the tramways which it considered were so urgently needed in 1902, but the Taff Vale Railway Company has instituted a service of motor-cars which may do a great deal to lessen the overcrowding complained of. The cars will run upon the existing lines of railway which traverse both the Rhondda valleys but will stop to pick up and to set down passengers at many fixed points between the regular stations. Each car is self-contained, resting on four pairs of bogey wheels, and is worked by a small steam motor in the front. There is accommodation for 16 first class and 40 third-class passengers, each compartment opening on to a central platform, from which steps can be let down when the car stops elsewhere than at a station. The gradients in some parts of the line are heavy but they are easily taken by the cars and full speed can be attained very quickly.

Remuneration of Colliery Surgeons.

An unsuccessful attempt has been made to alter the arrangements existing between the colliery surgeon and the managers of the Powell Dyffryn collieries and ironworks at New Tredegar (Mon.). For many years past a poundage has been deducted from the workmen's wages and handed to the surgeon but a few men desired to have the deductions handed to a committee of themselves and to pay a fixed salary to a surgeon or surgeons and to defray the cost of the practice. A representative meeting of the men was held on Dec. 14th, 1903, when the whole question was discussed and eventually 67 voted for the continuance of the present system and only 29 in favour of the proposed change.

Cleanliness of Milk-supplies.

A slight outbreak of milk-borne scarlet fever in Bristol was reported upon by the medical officer of health (Dr. D. S. Davies) on Dec. 15th, 1903, and in the course of his report Dr. Davies said that the outbreak helped to emphasise the repeated [illegible] dirty habit of [illegible] ooked milk. Tl [illegible] o discussed at a meeting of the West of England and South Wales Branch of the Incorporated Society of Medical Officers of Health, held at Exeter on Dec. 17th, when Dr. W. H. Symons of Bath suggested that evidence of fæcal matter and other deleterious substances in milk should be considered as adulteration and should be punishable by fine or imprisonment.

Hospital Sunday Fund at Plymouth.

Oct. 25th was observed in Plymouth as Hospital Sunday when the collections at the various places of worship amounted to £808, which sum has now been handed to the committee of the South Devon and East Cornwall Hospital, Plymouth. The Sunday schools collection in aid of the children's ward of this hospital during 1903 amounted to over £62.

Jan. 5th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

The Vacation and Measles in Glasgow.

THE Christmas and New Year vacation of the universities and the extramural schools of medicine in Glasgow is now passed, the classes having resumed work on Jan. 5th. The public schools in the city, however, on the recommendation of the medical officer of health of the city of Glasgow (Dr. A. K. Chalmers), have received a more extended holiday than usual—a period of 18 days—in the hope that this will have some influence in staying the progress of an epidemic of measles which has been affecting school children for some time.

Small pox in Glasgow.

This disease is still on the increase. On Jan. 1st nine cases were admitted to Belvidere Hospital, making 184 cases under treatment on that day. The total number of cases discovered since the beginning of the epidemic is 306, of which 24 have died. The public, however, does not appear to be much disturbed and its apathy has increased the difficulties of the sanitary authorities in obtaining more general revaccination. Experience shows that this only becomes possible in a community like Glasgow when the epidemic assumes alarming proportions and a certain degree of scare is produced urging people to a course of action which has been long pressed on them and at a period when more successful results would have followed. The efforts, nevertheless, of the local authorities in this and other directions in staying the progress of the disease are untiring.

The Western Infirmary, Glasgow.

A feature of this season of the year has been the annual gatherings in the different charitable institutions of the city. Those which have naturally attracted most attention were in connexion with the three principal infirmaries—the Western Infirmary, the Royal Infirmary, and the Victoria Infirmary. At the Western Infirmary on Dec. 29th, 1903, the managers and friends of the institution met the staff in the large conservatory where the formal part of the proceedings took place. Here the chairman of the committee of management (Mr. J. H. Dickson) in a short address referred to the encouraging support which the public was giving to them in their efforts to extend the infirmary. The new dispensary, which will be one of the finest in the kingdom, is fast approaching completion and the managers trust that the subscriptions which at present are being obtained will enable them to extend the hospital by the erection of a new wing. This is, indeed, urgently required. The hospital is constantly overcrowded and at present there are over 300 cases awaiting admission. One reason for the demand for more accommodation is the increase of industries in the neighbourhood and the consequent larger number of accident cases which require immediate admission. There is need for three times the accommodation for these cases that was required a few years ago.

The Royal Infirmary, Glasgow.

The gathering at this institution took place on New Year's Day and the Lord Provost (Sir John Ure Primrose) presided. Much interest was taken in the statement of the chairman of the house committee (Mr. J. D. Hedderwick) to the effect that the managers were beginning to see their way clear for making a start in the rebuilding of the old institution. No pains have been spared to make the scheme perfect. Plans have been adopted by the executive committee of subscribers and by the managers which have been amended to some extent at the instigation of the staff. One condition agreed upon has been that the outside walls of the present building shall remain, but it is believed that the reconstruction can be accomplished perfectly even under this condition.

The Victoria Infirmary, Glasgow.

A similar gathering took place at the Victoria Infirmary, at which the treasurer made the pleasing announcement that a New Year's gift had come in the form of a cheque for £1250 from Mr. William Buchanan, of Glasgow, for the endowment of a bed in one of the wards.

Jan. 4th.

IRELAND.

(From our own Correspondent.)

Queen's College, Belfast.

The council and corporate body of the Queen's College, Belfast, have passed a series of resolutions calling upon the Government to grant to the College an amount of financial assistance in accordance with its requirements. It is pointed out that the existing arrangements are absolutely inadequate and the fact that the public have subscribed generously to an equipment fund constitutes a still further argument for Government aid. The only reason for the continual postponement of any measure providing for the requisite equipment of the College must be the difficulty of finding a practicable scheme for settling the general university question, but to insist that this difficulty should be permitted to stand in the way of the development of higher education in Belfast would be unjust to those who have acted in response to the Treasury's request for evidence of local support. Moreover, postponement for such a reason would introduce conditions which have not in any way been created by the College and over which it has no control.

Health of Belfast.

At a meeting of the corporation of the city of Belfast held on Jan. 1st an important discussion took place in reference to the treatment of consumption. The medical officer of health, Dr. H. Whitaker, recommended (1) that suitable open-air spaces should be provided in the city for those suffering from this disease; (2) that a properly equipped sanatorium for 100 patients should be provided; and (3) that phthisis should be made a notifiable disease. The adoption of these suggestions was proposed and seconded by the chairman and vice-chairman of the public health committee, but an amendment to pass the minutes of the public health committee and to refer further discussion to the council in committee for consideration and report was carried; in other words, to shelve the whole question again. It is indeed deplorable to have to state it, but it is nevertheless the fact, that in questions affecting public health there is in the corporation of Belfast really no healthy opinion. They "care nothing for such things." Attention may be drawn to the fact that the improvement committee has actually recommended that a plan should be approved for several houses with no back passages on the extraordinary ground that "the committee find it impracticable to procure a back passage to the houses." Strong objections were taken to the retrograde proposals, some of the councillors protesting against the committee attempting to overrule the objection of the surveyor, and ultimately this matter was also referred for consideration.

Retirement of the Chairman of the Public Health Committee of Belfast.

Alderman J. Graham, M.D.R.U.I., chairman of the public health committee of Belfast, is about to retire from this office. He moved for the last time on Jan 1st the minutes of the committee of which for a lengthened time he has been chairman. He referred with satisfaction to the comparatively good state of the health of Belfast, the death-rate for the year being only 19 8—the lowest on record. It will be gathered from the previous paragraph that Dr. Graham's successor will not find his task a grateful one, for he will have to deal, with no real support from the rest of the corporation, with such questions as the milk-supply, the consumption problem, the infectious diseases hospital, and the drainage of the city. Your readers know how much despite a comparatively low death-rate, remains to be done for the public health of Belfast

Rainfall in Belfast in 1903.

At Queen's College, Belfast, 42·33 inches of rain fe
compared with the average of 33·55 inches for 38 years.
Springfield, near Belfast, it was 47·23 inches, or 6 35 a
the average for 27 years (40·88), and at the Linen
Library, in the centre of the city, it was 40·78, five in
more than the total of 1902 The rain-gauge at the Col
is 68 feet, at the Linen-hall Library 17 feet, and at Sp
field 150 feet above sea-level. The fall was greater in
when it was 44·51 inches, but for sheer persistent rainfal
year 1903 makes a record in Belfast, as rain fell actuall
269 days, the only years approaching it being 1877
1900, with 216 and 212 days respectively. Not a single
in October was without rain, 6 82 inches at Queen's Co
and 7·30 at Springfield falling, in both cases being pr
cally double the average. In Ulster, outside Belfast,
rainfall has also been remarkably high; and at Seaf
co. Down, the register was 48·69 inches for the
against 42·68 for 1902, or the heaviest for many years
Rain fell on 244 days, as against 201 in 1902; whil
October the gauge registered 7·43 inches. Last
exceeded the average at this place for the past 18 yea
over ten inches.

Jan. 5th.

PARIS.

(From our own Correspondent.)

Lumbar Puncture in Diseases of the Ear.

At the meeting of the Academy of Medicine hel
Dec. 29th, 1903, M. Babinski announced that he had tre
a certain number of disorders of hearing by puncture of
spinal canal. It is found that there is a relation bet
the pressure of the cerebro-spinal fluid and the pres
of the fluid contained in the labyrinth of the
Instances of vertigo have been remarkably bene
(21 recoveries in 32 cases). Tinnitus was some
less obviously influenced (30 recoveries or instance
improvement in 90 cases). Deafness was generally resis
especially when unaccompanied by tinnitus or vertigo.
this class of cases there were only 13 which were impr
in a total of 100, but some of the successes which
obtained were remarkable. For instance, after lu
puncture a lady who had been deaf for ten years was
to hear whispering at a distance of six feet. The treat
seemed to be free from inconveniences beyond
temporary malaise.

The Lazaret at Frioul.

At the same meeting of the Academy M. Josias read
conclusions of the report which he had communicated to
Academy at its meeting held on Dec. 8th, 1903, relati
the steps required to be taken with respect to the lazar
Frioul. The lazaret ought to be fitted up with more regar
health and comfort; it ought to include an infirmary
separate rooms for ordinary patients and a hospital
patients suffering from virulent epidemic diseases, suc
plague, cholera, yellow fever, and the like; and it o
to be provided with every available means for the
vention and treatment of such ailments. The meas
for the disinfection of a ship before unloading
for the destruction of rats, ordered by the recent de
of Sept. 21st, 1903, should be applied effectively. T
conclusions gave rise to an interesting discussion.
Monod, director of the public health service and
the Assistance Publique at the Ministry of the Inte
was the first to speak. He said that the administra
agreed with the opinion of M. Josias that the old lazare
the Ile Ratoneau was in a deplorable state, and the rebu
ing of it has always been first on the list of refo
to be undertaken at Frioul. Inadequate grants of mo
have been a cause of delays and difficulties but
deficiency has been provided for in the Budget of 1904
recent conference held in Paris has modified the conclus
arrived at by the Venice conference by shortening the pe
of observation of suspected cases and by occasionally
pensing with processes of disinfection. But this relaxa
of quarantine precautions would have to be supplemented
a rigorous application of the law of 1902 which w
lead to the general hygienic improvement of Fra
One of the great difficulties in the organisation of
Frioul establishment consisted in this, that the buildi

which were too large in ordinary circumstances would be inevitably too small in the event of an epidemic M. Monod also maintained that the places ought to be furnished comfortably enough to prevent the persons detained there from making complaints. M. Vallin spoke in opposition to a view which has been held for the last two years—namely, that large sums would be required for the carrying out of the modifications proposed by the Academy. This, he said, was a mistake. In European ports severe epidemic diseases did not present themselves many at a time, so that it was unnecessary to provide accommodation for great numbers of persons. It might be sufficient to provide from 25 to 50 well-appointed places in the departments allotted to observation and treatment. The sanitary certificate would be of great use as soon as rigorous supervision was exercised, whereas at present it was a farce. It was also necessary to calm the fears of the people in the seaport towns in order to avoid the panics which were caused even now by reports of cases of plague. M. Brouardel pointed out that all the terms of a convention must be fulfilled by the contracting parties and that France was consequently bound to carry out the scheme adopted by the conference which had just been held in Paris. All the efforts of the representatives of France were required to secure some relaxation of quarantine precautions in opposition to the representatives of other nations who were [illegible] uarantine. There must be no [illegible] bservation of individuals in [illegible] a sanitary certificate and a large staff would be required in order that the observation might be effectual. It was necessary that every precaution should be taken and that the sanitary organisation should be complete, for if an accident unfortunately happened the Powers in favour of quarantine would use it as an argument against the comparatively mild system recommended by France. M. Laveran then drew attention to the necessity of destroying rats on shipboard. M. Roux said that these measures were of the greatest importance, but when the cargo on board was such as to require careful handling it might be damaged by the processes necessary for disinfecting the vessels and killing the rats. It was therefore advisable to make the following addition to the paragraph authorising disinfection previously to unloading: "Except in certain special cases in which it—i.e., disinfection—may be carried out after unloading." Both this modification and the conclusions of the report of M. Josias were approved by the Academy.

Jan. 5th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Medical Academies.

THE scheme of the Government for creating medical [illegible] ant provincial towns apart from [illegible] exion with the great provincial [illegible] time a subject of discussion in the medical and lay press. The idea appeared to be somewhat obscure, as notwithstanding manifold appeals the Government did not think it advisable to give particulars as to the organisation and the object of the projected academies. It must be remembered that medical education has hitherto belonged almost exclusively to the universities, of which the medical faculties and their laboratories, clinics, &c., are an integral part. The system is therefore different from that which exists in England where medical study is partly carried on in the medical schools attached to the great hospitals. The plan to found academies would thus have been a fundamental reform if indeed they were destined to copy the English system of medical training. The intentions of the Government are, however, far from being so radical. I learn that it will be the object of the new academies to deal not with medical study in the strict sense of the word but principally with post-graduate study, with the training of specialists, and with the so-called practical year which according to the new [illegible] hospital of 1000 beds will be built in connexion with a medical academy. According to this Bill the medical academy will consist of five divisions: for surgery, for clinical medicine, for obstetrics, for hygiene and infectious diseases, and for pathological anatomy and forensic medicine. With the first two divisions subdivisions for the special branches for diseases of the eye, the ear, the skin, the nerves, and for children's diseases will be connected. The teachers of the academy, to whom the title of professor will be granted, are the chief physicians and surgeons of the hospital who are appointed by the municipal authorities but must be authorised by the Government. It is explained in the Bill that the academy will be charged with the instruction of specialists for the reason that a great many medical men have assumed the title of specialist without a proper special training and after having taken only a few courses of some weeks. In future only those will be recognised as specialists who have been trained in their special branch by academical teachers and who can produce certificates of competence. Another object of the academy is the arrangement of post-graduate courses free of charge for the medical men of the district, after the pattern of the courses and lectures of the Central Committee for Post-graduate Study in Berlin and other towns. Moreover, the academy will deal with the training of nurses, with popular lectures on first aid, and with general hygienic matters. The cost of the Düsseldorf new hospital will be 5 500,000 marks (£275,000) and several years will of course be required before the buildings are finished. Meanwhile the Government Medical Department will probably enter into negotiations with the municipal authorities of other large towns where the existing hospitals are suitable. The plans of the Government concerning Düsseldorf are only known by a paragraph in some lay journals and neither the medical press nor the medical profession has had an opportunity of expressing any opinions in this matter. Obviously some of the particulars are rather objectionable and will not fail to become an object of controversy, such for instance as the appointment of the hospital physicians and surgeons. Hitherto the municipal authorities were at liberty to make appointments at the hospital under their jurisdiction entirely at their own discretion. In the case of a medical academy connected with the hospital the Government will be entitled to interfere with the appointment of the medical staff which has to act also as the teaching body of the academy; also the exclusive right of training specialists will certainly be much discussed. Although certain anomalies in this respect unquestionably exist it is wrong to say that specialist training must be valueless unless guaranteed by certificates of an academy or a university. Many of our leading specialists have not acquired their knowledge at an official university clinic but as assistants to a senior private specialist or by studying abroad. Moreover, to prohibit medical men from calling themselves specialists would be accomplished only by altering the laws on medical qualification with the approval of the Imperial Parliament and not by a mere governmental decree. Concerning the practical year it would be impossible to let all the students go to an academy as the number of places would obviously be too few to receive there all the young men coming from the universities, even if some six or seven academies were established. Only a small number of them would be admitted to an academy, whilst the remainder would have to go to other hospitals not in connexion with an academy, so that from the beginning the profession would be divided into two classes, a first and a second.

The Frequency of Appendicitis in Germany.

It is generally believed that appendicitis has become much more frequent during the last few years than at any previous time. Opinions, however, differ as to the causes of the increase and in Germany it has been alleged that it might have some connexion with the use of enamelled cooking vessels. It is supposed that when the enamel gives way pieces may be mixed with the food and produce inflammation. This opinion is contradicted by *Dr. Villaret*, surgeon-general at Posen, who denies that appendicitis has at all increased. He explains that the alleged increase is due to improvement in diagnosis, as many cases which formerly were registered as peritonitis and gastric and hepatic diseases are now registered as appendicitis. He quotes from the excellent statistical tables of the German army, comparing the numbers for the periods 1873–74, 1885–86, and 1900–01, and states that whilst appendicitis has increased by 70 per cent., hepatic diseases

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[1] THE LANCET, June 7th, 1902, p. 1650.

have decreased by 64·2 per cent., peritonitis by 70·2 per cent., and gastric diseases by 79·9 per cent. These four groups of diseases in 1873–74 attacked 4·79 men in every 1000, but in 1900–01 they attacked only 2·66 men in every 1000, so that in the aggregate they have decreased by 44·5 per cent. The alleged increase of appendicitis is thus only an apparent one.

Jan. 5th.

SWITZERLAND.

(From our own Correspondent.)

Medical Societies and Medical Defence in Zürich.

In Zürich there are two medical societies, the older one of which is called the Medical Society and was founded half a century ago; it has 130 members in all, the total number of medical men in Zürich being 162. Ten years ago a few members took the view that the old medical society, although excellent in a scientific respect, nevertheless neglected the practical interests of the profession and they consequently founded the Society of Medical Practitioners, which now counts 45 members, the majority of whom are members both of the old and the new society. The younger society has done good work, not only in its scientific meetings, where lectures on practical subjects and demonstrations are a feature, but also in those meetings where the material interests of the profession had to be considered. Hospital abuse, cash practice, and fees paid by insurance companies were among the subjects which have been discussed and committees were appointed the labours of which have been successful in different directions. Six months ago a Society for Medical Defence was formed for the purpose of providing its members with legal assistance and also for the collection of unpaid accounts in as unobtrusive a manner as possible. The Swiss laws do not protect the medical practitioner even as well as the English law does and abuse is rife everywhere. The Society for Medical Defence had not long to wait before its services were in request. A large socialistic workmen's union sent circulars to a number of medical practitioners inviting them to become medical officers of the union in question and in these circulars there was a paragraph the meaning of which was that no distinction would be made between medical practitioners and persons who had obtained a diploma from a physical health society. The Medical Defence Society immediately called a meeting of all the medical men in Zürich to protest against this paragraph and obtained from 160 of them—i.e., from all but two—a verbal or written consent to a request for the cancelling of this paragraph. A committee of 12 medical men was appointed to carry on negotiations with the workmen's club and to settle terms and now an agreement has been made conformable with the requirements of professional ethics. This success, due to an almost unexpected amount of unity among the medical men, is of all the more import, for a public vote will soon be taken on the question whether members of "physical health societies" are to be allowed to practise "non-medicinally," as they have carefully worded their petition, in the canton of Zürich.

Zurich, Jan. 1st.

EGYPT.

(From our own Correspondent.)

The Egyptian Lunatic Asylum.

Dr. J. Warnock's annual report[1] on the only hospital for the insane in Egypt has just been published. A second hospital or greatly increased accommodation in the present one is urgently necessary, for in order to keep down the numbers at all the Government is obliged to discharge all lunatics who are not absolutely dangerous and no case can be admitted unless it is certified as being dangerous, a point difficult to determine in a country where very few of the native medical men are trained in mental diseases and where fear of responsibility and sympathy with the lunatic are guiding influences. The public, as in other countries, obviously requires protection from discharged lunatics and many of the discharged but insane patients have no difficulty in remarrying and begetting children whom they are unable to support and to whom their father's insanity may be transmitted. The customs regulating marriage and divorce are so easy that marriage is often resorted to by the natives as a method of trying to cure the early symptoms of insanity. As an example of the need of protection required by the lunatic himself, a case is mentioned of a woman suffering from acute mania, who was admitted to the asylum with a compound fracture of the bones of the forearm, gangrene of the arm, general septicæmia, and numerous bruises and wounds of the head; these lesions had existed for some days, during which time the patient had been wandering about the streets. Among the year's improvements are electric light which has been installed and which is an immense improvement on the former petroleum lamps, for it is now possible to keep many of the dormitories almost in darkness at night and thus quiet and sleep are promoted. It is satisfactory to note that mechanical restraint is practically never used except in surgical cases, the treatment depending entirely on the vigilance of the attendants and the isolation of excited patients when necessary. Many readers will remember that all violent patients in this asylum were heavily chained to the walls less than 20 years ago. The number of paying patients is gradually increasing every year and during 1902 the relatives of the better class lunatics contributed £1520 to the expenses of the asylum, so that after deducting all receipts the net cost per patient per annum is £21. Although the water bill for the year is as high as £214 there is an insufficient supply for baths, and the arrangements in case of fire are still far from ideal when it is remembered that nearly all the inmates love cigarette smoking. The area of the asylum grounds urgently requires extension, for the public can talk to the patients through some of the windows abutting on the roadway of the desert and it is to be hoped that some day a railway line for carrying stone from the desert hills will be removed to a distance greater than 20 yards from the asylum. Mats, baskets, and cloth are manufactured by the patients, but the necessity of discharging lunatics almost as soon as they are sufficiently tranquil to engage in an industry prevents much being done. It is, indeed, often difficult to find enough quiet patients to work in the kitchen, the bakery, and the laundry, for all the cleaning of the hospital is done by patients and they also undertake the care of the buffaloes for milk-supply, the sewage disposal, the distribution of food, and the gardening. The average number of resident patients was 488 and during the year 104 former cases were re-admitted. The total admissions included 133 cases of mania, 72 of hasheesh insanity, 31 of pellagrous insanity, and 14 of alcoholic insanity. General paralysis accounted for 15 patients, or 3·7 per cent. of the total admissions, and seven of them were known to have suffered previously from syphilis Ten of them were Egyptians, including two females, besides two Turkish women, two Italians, and one Austrian. Ten of the 67 deaths were caused by general paralysis tuberculosis and dysentery each accounting for seven There is no lunacy law in Egypt for criminals or others and there are several points which require to be settled, such as the liability of relatives for the cost of maintenance in the asylum and the procedure to enforce payment, the imposition of special penalties for the ill-usage of lunatics by their attendants, the duty of the local authorities to report cases of ill-usage of lunatics, the inspection of lunatics existing in charitable and religious establishments, and the means of preventing neglect and cruelty in such places. The greatest reform during the year has been the appointment of Dr. H. W. Dudgeon as deputy superintendent and he has already done much useful work. What is now wanted is money to provide for an English storekeeper or steward and for an English matron to control the female side.

Dec. 30th, 1903.

NEW YORK.

(From our own Correspondent.)

Alleged Discovery of the Cause of Scarlet Fever.

Before the Boston Medical Society on Dec. 15th Dr. Frank B. Mallory, associate professor of pathology at Harvard University, described a microbe which he believes to be the cause of scarlet fever. It is not a bacterium but a protozoon found in the epithelial cells of the skin and tongue and in the superficial lymph vessels and spaces of the corium. The protozoon is said in some respects to resemble that of malarial fever but is larger. It is found in two forms—either as a radiated rosette or in a granular form with knotted reticulum. Dr. Mallory does not claim that this organism is definitely proved to be the cause of scarlet fever but he thinks that further research will substantiate the validity of his conclusions.

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[1] A short notice of this report has already appeared in our columns.

New York State Anti-Sanatorium Bill.

A Bill termed the Goodsell-Bedell Bill was enacted at the last session of the New York Legislature and signed by the governor of the State. This Bill to all intents and purposes prohibits the erection of sanatoriums for consumptives by any city in New York State outside its own limits. From the first medical men were strongly opposed to the passing of such a Bill and protests to this effect were sent to the governor. This action, however, was of no avail and the Bill became law. The New York Society of Medical Jurisprudence met recently and motions deprecating the course taken by the governor and legislature were introduced by Dr. S. A. Knopf. The motions requested the governor to repeal the law, "which, if it should remain on the statute books and be enforced, would involve the loss of thousands of lives and increase the spread of tuberculosis within the crowded districts of the cities and towns to an alarming degree." He declared that the Bill paid undue attention to property interests with no regard for the consumptives of the State.

Anti-Mosquito Convention in New York City.

A convention to devise the most efficient means of fighting mosquitoes has recently been held in New York city. The governor of New Jersey presided and Mr. Robert W. De Forest, of the Charity Organisation Society and president of the Tenement House Commission, was chosen permanent president. Motions were adopted recommending that a provisional committee be appointed by the convention to consider the formation of a central organisation of national character with which local bodies might coöperate in conducting a crusade against mosquitoes.

Antiseptic and Germicidal Properties of Glycerine.

Dr. M. J. R[illegible] the United [illegible] has for som[illegible] antiseptic and germicidal properties of glycerine. Glycerine be found to possess a distinct though exceedingly feeble germicidal action. His opinion was that it cannot be depended upon to purify vaccine lymph or other organic matter containing spores of tetanus.

The Abolition of the Canteen in the United States Army.

Army officers are almost unanimous in the opinion that doing away with the canteen has been productive of much vil. At the meeting of the American Public Health Association held in Washington in October Dr. George McKober read the report of the committee on the canteen n armies. In it was sketched the history of the system ince its institution at Vancouver Barracks in 1880. The anteen was officially recognised in the United States Army n February, 1889. Only light wines and beer were allowed o be consumed. The committee finally stated its belief hat the sale of alcoholic liquor in canteens under rational gulations, rather than its total prohibition, will best serve e interests of temperance.

Dec. 26th, 1903.

THE FURIOUS DRIVING OF MOTOR-CARS.—Several ses have occurred during the first week of the new Act of otor-cars being driven in London in such a way as to danger the public. One defendant, in answer to a mmons, pleaded with some success that he did not ow the pace at which he was travelling In another se the summons was dismissed, as there was some ubt about the police evidence, although in the magiste's opinion a technical offence had been committed. ere are, it is said, many motor-cars on the roads which are t licensed and numbered in accordance with the Act, the chinery of the Act having proved unequal to cope with e demands put on it. If this be so it behoves owners of tor-cars to be doubly cautious in their procedure; ignorce must not be regarded as an adequate excuse and the petrator of technical offences must expect to be punished, wever guiltless he may have been of wanton carelessness. e public must be protected.

Obituary.

JOHN KNOWSLEY THORNTON, M.B., C.M. EDIN.,

CONSULTING SURGEON TO THE SAMARITAN FREE HOSPITAL FOR WOMEN, MARYLEBONE-ROAD, LONDON, N.W.

John Knowsley Thornton, who died on Jan. 3rd, was the son of the Rev. John Thornton, curate of All Saints, Northampton, afterwards headmaster of Kimbolton School and for 30 years vicar of Aston Abbots. Born on Jan. 15th, 1845, he was educated at Rossal and spent some years in teaching and clerical work before he began the study of medicine; hence, he was 26 years old when he graduated in the University of Edinburgh. After serving as Lister's house surgeon there, he practised for a short time at Ford, in Northumberland. In 1873 his friend Dr. William Thomson, now of Algiers, was compelled to leave London on account of his health, and through his introduction Mr. Thornton became surgeon to the Samaritan Free Hospital and also assistant to the late Sir Spencer Wells in his private work. Being an enthusiastic admirer of Lister he at once began to apply the principles of the antiseptic system to abdominal surgery and for nearly 20 years his methods were practically those taught by Lister before he left Edinburgh, even the spray being retained for a considerable period after it had been discarded as unnecessary by most surgeons. It was not long before Mr. Thornton established a reputation as one of the most successful operators of the day, especially in regard to ovariotomy and other operations requiring abdominal section, and he gradually became an authority on all [illegible] His writings on the surgery o[illegible] bladder, and the spleen wer[illegible] largely to advance knowledge of the surgical treatment of these organs. Unfortunately he was subject to frequent attacks of gout which began when he was only 18 years old and which frequently interrupted his work. Principally on this account he gave up hospital practice in 1891 though for some years later he carried on a large private practice. But gout and gouty complications of influenza laid him aside more and more frequently until in 1896 he had a severe and painful illness which stopped all work for more than six months, and in 1898 he retired.

Mr. Thornton's work was characterised by great thoroughness in detail and he also seemed to have an intuitive knowledge which was seldom at fault as to the nature of a patient's disease and the most suitable treatment. During an operation complications seemed only to stimulate him, and if there was a way out of a difficulty he was sure to find it. These characteristics gained for him the confidence of a large section of the profession and of the public and there can be little doubt that if his health had been good his practice would have been measured only by his own wishes.

In addition to his appointment at the Samaritan Hospital Mr. Thornton was surgeon to the Grosvenor Hospital for Women and the New Hospital for Women, and his practice did not leave him much time for literary work. The writings to which we have alluded took the form of communications to the *British Medical Journal* or our columns, or of articles in well-known compilations. For example, Mr. Thornton wrote the articles "Ovariotomy" and "Hysterectomy" in Heath's "Dictionary of Surgery," and the article "Hysterectomy" in Allbutt's "System of Medicine." He also contributed many papers to the Transactions of the Royal Medical and Chirurgical, Obstetrical, and Medical Societies, of which last body he served as president.

Since his retirement Mr. T[illegible] Hall, Cambridgeshire, one [illegible] care of his garden. His h[illegible] had been subject to attacks from his old enemy and during the greater part of last year he suffered much from peripheral neuritis which gradually exhausted his strength. Mr. Thornton married twice and leaves by his first wife a son and two daughters and a daughter by his second wife, a sister of Lord Windsor, who survives him.

SIR GEORGE THOMSON, K.C.B., M.B., C.M. ABERD.,

LATE SURGEON-COLONEL, I.M.S.

Surgeon-Colonel Sir George Thomson, K.C.B., late of the Indian Medical Service, died suddenly on Dec. 21st, 1903, at Leeford, Mowbray-road, Upper Norwood, aged 60 years. Sir

George Thomson was a native of Aberdeen and was a son of the late Mr. James Thomson. He was educated first at the old grammar school in Schoolhill and then at the grammar school known as "The Barn" in Old Aberdeen. He was a student of the University of Aberdeen and graduated M.B., C.M. in 1864. After leaving the University he entered the Indian Medical Service, in which he remained for 30 years, retiring at the end of that period. He became surgeon-major in 1877, brigade-surgeon in 1889, and deputy surgeon general (afterwards surgeon-colonel) in 1893. His record of service is a long and distinguished one. He was at one time civil surgeon in the Punjab and medical adviser to the Maharajah of Patiala and for several years he was principal medical officer of the Lahore military district. He served during the Afghan war of 1878–79, being mentioned in despatches and thanked by the Indian Government and receiving the medal. He was principal medical officer on the lines of communication of the Chitral expedition in 1895, for which he was created C.B. He was attached to the Malakand Field Force in 1897 and later in the year he served in the Tirah expedition as principal medical officer; for his valuable services in this expedition he was promoted to the rank of K.C.B. Sir George Thomson was married to a daughter of the late Mr. John Ferguson of Aberdeen. He leaves a widow and three sons. One of the brothers of the deceased, Major Thomson, is also in the Indian Medical Service.

CHARLES FREDERICK MOORE, M.D. GLASG., F.R.C.S. IREL., &C.

Dr. C. F. Moore died at his residence, 10, Upper Merrion-street, Dublin, on Christmas Day, 1903. Dr. Moore received his medical education in Dublin and in Glasgow. In 1842 he became a Licentiate in Midwifery of the Rotunda Hospital and in the following year a Licentiate of the Apothecaries' Hall of Ireland. A year later he qualified for the M.D. degree of the University of Glasgow and became a Licentiate of the Royal College of Surgeons in Ireland, receiving the Fellowship of that College in 1865. He received the Licence of the Apothecaries' Society of London in 1853. He was a Fellow of the Irish Royal Academy of Medicine and at one time acted as president of the State Medicine Section of that Academy. He had also held the post of president of the Dublin Sanitary Association and of vice-president of the British Association of Certifying Factory Surgeons. Of this latter association he was honorary secretary for Ireland. He was formerly an examiner in materia medica at Queen's University and of the Conjoint Board of the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Ireland. He contributed many articles of interest to the medical press.

ROBERT VICARS FLETCHER, F.R.C.S. IREL., L.R.C.P. IREL., &C.

Mr. R. V. Fletcher, the resident medical superintendent of the District Asylum, Ballinasloe, Galway, passed away on Dec. 17th, 1903, after a lingering illness following an attack of influenza which he contracted last winter. The deceased gentleman was born in the year 1840. He received his medical education at Dr. Steevens' Hospital, Dublin, and in 1865 became qualified. In the following year he was appointed assistant resident medical superintendent of the District Lunatic Asylum, Downpatrick, and in 1872 became resident medical superintendent of the District Lunatic Asylum, Waterford. In 1874 he was appointed resident medical superintendent of the District Asylum, Ballinasloe, which post he held until the time of his death. A little more than 12 years ago Mr. Fletcher, who had already considerably improved the organisation and administration of the asylum, induced the governors of the institution to add a new block of buildings containing a hospital and special ward for acute cases. The institution now contains 1100 beds and the position which it holds among similar institutions in Ireland is due in no small measure to the unremitting labours of its late superintendent.

ROBERT MANSFIELD TAGERT, M.D. GLASG., F.R.C.S. IREL.

Dr. R. M. Tagert died at his residence, 12, Vesey-place, Kingstown, on Dec. 27th. He took the degree of M.D. of the University of Glasgow in 1837 and in 1845 became F.R.C.S. Irel. He was formerly medical officer to the union workhouse and dispensary at Carrickmacross, also to Farney Baronial Fever and General Hospital. For the last few years he lived at Kingstown and was a well-known and much esteemed member of the township. He was considered to be the oldest medical man in the county of Dublin, for he had reached the patriarchal age of 91 years.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Kiréleff, *privat-docent* of midwifery and gynæcology in the St. Petersburg Military Medical Academy.—Dr Delotte, professor of internal pathology in the Limoges Medical School.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE. — *Berlin:* Dr. Paul Schultz, *privat-docent* of Physiology, has been granted the title of Professor.—*Bonn:* Dr. Schöndorff, *privat-docent* of Physiology, has been granted the title of Professor. —*Kieff:* Dr. Muratoff, Extraordinary Professor, has been promoted to the Ordinary Professorship of Midwifery and Gynæcology.—*Naples:* Dr. Giovanni Petella of Turin has been recognised as *privat docent* of Ophthalmology.—*Rio de Janeiro:* Dr. T. V. Pecegueiro do Amaral has been appointed Professor of Medical Chemistry in succession to the late Professor Ferreira dos Santos.—*St. Petersburg (Military Medical Academy):* Dr. B Petroff has been recognised as *privat docent* of Medicine.—*Vienna:* Dr. Florian Kratschmer, *privat docent* of Hygiene and of Medical Chemistry, has been granted the title of Professor. Dr. Dominik Pupovac has been recognised as *privat-docent* of Surgery and Dr. G. Alexander as *privat-docent* of Otology.

SOME NOVEL PATENTS.—An American inventor has patented a hen's nest which consists of "a receptacle for the hen and her eggs and a trough surrounding said receptacle, said trough being designed to hold an insecticide to prevent vermin from crawling into the nest and to catch the same." Another inventor has patented a mask intended to serve for prevention from drowning. The essential feature of this mask seems to consist in "openings covered with wire-netting or gauze, said openings being encompassed by short tubes upon the inside of said mask and said tubes having automatically closing valves." Descriptions and drawings of both these contrivances are to be found in the Official Gazette of the United States Patent Office issued on Dec. 22nd, 1903.

MIDLAND MEDICAL UNION.—The annual meeting of this union was held on Dec. 8th, 1903 at the Hotel Portland, Chesterfield. The retiring President, Dr. J. Goodwin Shea, J P., of Chesterfield, presided and was supported by Dr. George Booth, J P. (the President-elect), Mr. R. G. Allen, Mr. J H. Booth, Mr. A. Chawner, Dr. E. Wearne Clarke, Dr. W. Duncan, Mr. F. Edmunds, Dr E. B. Ffennell, Dr. J. A. Goodfellow, Dr. A. Green, Dr. E H. Houfton, Mr. B J. Lee, Dr. G. G. Macdonald, Mr J A Magee, Dr. W. M. Oldham, Mr. A. M Palmer, Mr. C. J Palmer, Mr W. W. Robinson, Mr A. W. Shea, Dr. G. T. Tate, Dr. S. Worthington, and others. Letters of regret for inability to attend were received from Dr. F. R Cassidi, Mr. J. H. Cox, Mr. G. W. Crookes, Mr. W. B. Crorkery, Dr. A. Fulton, Mr. E G Leary, Dr. F. R. Mutch, Dr. W. B. Ransom, and several others. A vote of thanks was passed to Dr. Goodwin Shea for the valuable services he had rendered to the work of the union during the three years he had held the office of President. The secretary read the report of the council setting out a summary of the year's work. Dr. Clarke proposed: "That the Midland Medical Union cordially approves and supports the claim which is at present being made for the establishment of a university in Sheffield." The motion was seconded by Dr. Goodwin Shea and carried unanimously. The meeting was followed by the annual dinner. After the Royal toasts had been proposed by the President (Dr. Booth) and loyally honoured, that of "The Midland Medical Union" was proposed by Mr. Simeon Snell who is one of the honorary secretaries of the committee for the establishment of a university in Sheffield. Mr. Snell in the course of his remarks referred at considerable length to the efforts which were being made in support of the movement and for raising funds for this object. Dr. Macdonald, the Vice-President, responded on behalf of the union. The toast of "The Guests" was proposed by Dr. Clarke and responded to by Dr. A. J. Hall.

LITERARY INTELLIGENCE.—"Proposed Sterilisation of Certain Mental and Physical Degenerates" is the title of a work by Dr. R. R. Rentoul which the Walter Scott Publishing Company have in the press.

THE ANGLO-AMERICAN FOOD COMPANY.—A vendor of meat extracts, trading under this title, was fined at Liverpool on Wednesday last £5 and 10 guineas costs for selling as extract of beef, labeled as consisting solely of the juice of the finest beef, matter containing half its weight of yeast extract.

BRISTOL DISPENSARY.—The annual report of the Bristol Dispensary for 1903, which has just been issued, states that during the year 10,874 new cases were treated. 582 midwifery cases were attended. The financial statement showed that the income amounted to £2329 and the expenditure to £3337; the deficiency was met by taking a sum of £1016 from the investment account.

VACCINATION EXPENDITUR[illegible] the Barnstaple (Devon) board of [illegible] it was reported that during the [illegible] previous to the passing of the recent Vaccination Act, 2653 vaccinations were performed in the Barnstaple union at a cost of £616, but that during the four years, 1900 to 1903, subsequent to the enforcement of the Act the vaccinations numbered 3004, the expenditure amounting to £1906.

THE ROYAL PORTSMOUTH AND GOSPORT HOSPITAL.—A searching inquiry was made on Monday afternoon last by the coroner for the borough of Portsmouth, Mr. T. A. Bramsdon, into the accuracy of certain allegations made by the relatives of a patient against the management of this institution. As a result it was conclusively found that the patient, who had died shortly after leaving the hospital at her own wish, had been treated correctly and humanely throughout.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—Mr. Alfred James Barker, M.D. St. And., late of Beaulieu Villas, Green-lanes, N., has recently retired from practice on account of advancing age. His friends and patients have taken occasion to present him with a farewell letter of address engraved in a beautiful illuminated album and accompanied with a purse. Dr. Barker has been in practice in the neighbourhood for between 40 and 50 years, and such a recognition of local esteem must give him much pleasure.—Mr. [illegible]. O. Shann, M.R.C.S. Eng., L.R.C.P. Edin., who recently retired from his position as medical officer of the York Union Workhouse, has been presented by the officials of that institution [illegible] jug and a silver fruit knife.—Mr [illegible] D. Edin., was on Dec. 22nd prese[illegible] an illuminated address as a token of esteem by his numerous friends and patients. Mrs. Morris was also presented with a tea service and Miss Morris with a gold demi-hunter watch. As a joint gift to Dr. Morris and his wife the people of Llanarthney presented them with a marble clock. Dr. Morris has left [illegible]antgaredig for Mardy, Glamorganshire, where he has accepted a medical appointment in connexion with the collieries.

DONATIONS AND BEQUESTS.—In addition to the gift of a site of 12 acres for the new buildings of King's College Hospital in South London from the Hon. W. F. D. [illegible]mith, M P., Messrs. W. H. Smith and Son have given a donation of £1000 towards the removal fund and promise a similar amount in 1905.—Lord Amherst has given to the [illegible]rth Eastern Hospital for Children £100 towards the deficit of £1100 carried over from 1903. This hospital has also received an anonymous donation of £500 towards the extension of the buildings, for the completion of which a sum of [illegible]4 000 is still required.—The Evelina Hospital for Sick Children has received from the "Zunz Bequest" £5000.—An anonymous donor has given £3000 towards the endowment fund of the Hospital for Sick Children, Great Ormond-street.—The treasurer of Charing Cross Hospital has received a donation of £1000 from Mrs. Jane Gabriel for the endowment of a bed in the new wing of the hospital in memory of her husband.—Under the will of Mr. J. Lewisohn of the firm of Messrs. Lewisohn Brothers and Co., £750 are left in trust for distribution among such London hospitals as the executors may choose.—Mrs. H. A. Dodds of Cheltenham has under her will bequeathed £100 to the Bristol Royal Infirmary, £100 to the Bristol General Hospital, and £50 to the Bristol Blind Asylum.

SCHOOL BOARD FOR LONDON.—The annual report of the school management committee has just been published. It is packed with interesting details concerning elementary training of the young in the metropolis and we recommend its perusal to our many readers who now make a study of educational questions.

CENTENARIANS.—Mrs. Carew-Wilson of Clifton, Bristol, has just celebrated her hundredth birthday.—*The Times* of Jan. 7th announces that Mr. Charles Green, who died at Brighton on Jan. 6th, was born at Selsey, near Chichester, on August 22nd, 1794, and was therefore in his 110th year. He was the son of a farm labourer and worked on farms in the neighbourhood of Chichester until he was 90 years of age. When no longer able to work he went to live with Mr. and Mrs. Hall, his son-in-law and youngest daughter, at Brighton. In this narrative of longevity nothing is said as to the verification of the date of Mr. Green's birth, and it is now found to be possible that he was 11 years younger than he believed himself to be.

THE PLUMBERS REGISTRATION BILL: MEETING AT THE MEMORIAL HALL, FARRINGDON STREET.—On Dec. 29th last a meeting of registered plumbers in London was held at the Memorial Hall for the purpose of the annual election of members to serve on the London Registration Committee, Mr. Charles Hudson, Past-master of the Worshipful Company of Plumbers, being in the chair. It was stated that there are now upon the register some 12,000 or 13 000 masters and operatives and it was announced that a petition to Parliament was in course of preparation in favour of the national registration of plumbers, on lines approved by the Local Government Board, as a means of distinguishing competent workmen. The desirability of some such Bill has frequently been urged in THE LANCET, for though much good has already been done by the Plumbers' Company, the promoters of the movement, it has been unable to do more than touch upon the fringe of the question, the necessary stimulus being wanting to induce the bulk of the men to join a movement which entails responsibility and expense for but little apparent advantage to themselves. If the Bill became law the case would of course be entirely altered and a proper control would be placed in the hands of the executive over the members, the numbers of whom would be vastly increased.

Appointments.

Succ[illegible] Public Institutions, [illegible] this column, are [illegible]ected to the Sub- [illegible] morning of each [illegible]

BONNEY, W. VICTOR, M.S., M D. Lond , F.R.C.S., M.R.C.P., has been appointed Tutor in Practical Midwifery in the Middlesex Hospital Medical School

BUSH, PAUL JAMES, M R C S , L.S.A., C.M.G., has been appointed Medical Officer to the Bristol Post Office. (Corrected notice.)

BROWN THOMAS, M.D , Ch B. Vict., has been appointed Resident [illegible] to the Public Dispensary, Leeds.

[illegible] appointed [illegible]

[illegible] L.S A., D P.H Lond., has [illegible] H.M. Prison, Dartmoor.

JONES A WEBB, F.R.C S , has been appointed Honorary Surgeon to [illegible]

MA[illegible] L.S A., [illegible]

MU[illegible]ifying [illegible] of the [illegible] county of Fife.

PORTEOUS, HERBERT LLEWELLYN, L.R.C.P. Lond , M R C S., has been re-appointed Medical Officer and Public Vaccinator for the S[illegible] District of the Cirencester Union.

[illegible] S., has been appointed Certifying [illegible] for the Works of Messrs. Boyd and [illegible]y of Somerset.

[illegible] Medical [illegible]

VAUGHAN, E[illegible] Physician [illegible] Free Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ARMY MEDICAL SERVICE.—Examination of Candidates for not less than 30 Commissions in the Royal Army Medical Corps.

BETHNAL GREEN INFIRMARY.—Assistant Medical Officer. Salary at *rate of £100 per annum, with board, lodging, and washing.*

BIRMINGHAM GENERAL HOSPITAL.—Casualty Assistant Physician. Salary £50 per annum.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S W.—Clinical Assistants for three months.

CHELTENHAM GENERAL HOSPITAL. — House Surgeon, unmarried. Salary £80 per annum, with board and apartments.

CROYDON GENERAL HOSPITAL.—Honorary Member of the Junior Staff.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £20, with board and residence.

HULL ROYAL INFIRMARY.—Fourth House Surgeon. Salary £50, with board and apartments

LINCOLN COUNTY HOSPITAL.—Senior Male House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

LEEDS GENERAL INFIRMARY.—Ophthalmic and Aural House Surgeon. Board, lodging, and washing.

LEICESTER INFIRMARY.—Assistant House Surgeon. Salary £80 per annum, with board, apartments, and washing.

LIVERPOOL STANLEY HOSPITAL.—Second House Surgeon. Salary £80 per annum, with board, residence, and washing.

METROPOLITAN HOSPITAL, Kingsland road, N.E.—Surgeon.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.—Registrar. Honorarium of 50 guineas.

NEW HOSPITAL FOR WOMEN.—Surgical Assistant, Clinical Assistants, Two Senior Assistants, and Assistant Anæsthetist.

ROCHDALE INFIRMARY.—Resident Medical Officer, unmarried. Salary £100 per annum, with board, residence, and washing.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Clinical Assistants.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, E.C.—Honorary Surgeon. Also Honorary Assistant Surgeon.

STOKE ON TRENT, NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—Assistant House Surgeon for six months. Honorarium of £25, with board, apartments, and washing.

TIVERTON, DEVONSHIRE, INFIRMARY AND DISPENSARY.—House Surgeon and Dispenser. Salary £80, with board, residence, &c.

UNIVERSITY OF LONDON.—Examiners—Two in Medicine, Two in Surgery, Two in Pathology, One in Materia Medica and Pharmaceutical Chemistry, and One in Mental Diseases.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—House Surgeon, for six months Honorarium of £25, with board and lodging.

WEST HAM AND EAST LONDON HOSPITAL, Stratford, E.—Resident Medical Officer for six months. Salary at rate of £120 per annum, with board, residence, &c.

WESTMINSTER GENERAL DISPENSARY.—Honorary Surgeon.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon. Terms £70 per annum, with rooms, board, and washing.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeon under the Factory Act at Rothbury, in the county of Northumberland, and at Dublin, in the county of Dublin.

Births, Marriages, and Deaths.

BIRTHS.

CADDY.—On Dec. 11th, 1903, at [illegible], the wife of Arnold Caddy, F.R.C.S., of [illegible]

CHIENE.—On Jan. 2nd, at Alv[illegible] of George L. Chiene, F.R.C.S. Edin., of a son.

KENNEDY.—On Wednesday, Jan. 6th, 1904, the wife of Angus Kennedy, L.R.C.P., M.R.C.S., L.S.A., of a son, at Plaistow, E.

DEATHS.

CREE.—On Dec. 29th, 1903, at Pinewood Sanatorium, Wokingham, Edward Russell Cree, Lieutenant Colonel R.A.M.C., aged 45 years.

HUE.—On Dec. 24th, 1903, at Dresden, John William Hue, M.A., F.R.C.P. in his 84th year.

HUNTER.—On Dec 28th, 1903, at Lavender-hill, S.W., Frederick John Hunter, M.R.C.S., L.R.C.P.

PEIRCE.—On Dec. 31st, 1903, at S. [illegible] M.D., aged 59 years late Port Health [illegible]

THORNTON.—On Jan 3rd, at Hi[illegible] John Knowsley Thornton, M.B., C.M., J.P., in his 59th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE DIRTY RAILWAY CARRIAGE.

A GREAT many people have travelled in trains during the past fortnight and many must have noticed the dirty state of the seats in not a few of the carriages, especially where they are upholstered. On some companies' lines the carriage seats are fairly clean, while on other lines by tapping the seat only softly and with the palm of the hand clouds of dust arise. Why do not our railway companies adopt the methods of cleaning by compressed air which are so much in vogue in the United States of America or the excellent method of cleaning by vacuum? It would surely pay the railway companies and would preserve their rolling stock and might attract fresh passenger custom to the superior classes, as no one, especially no lady, cares to contemplate sitting upon a plush-covered dust bin and paying extra fare for the accommodation. They appear to do some things better in the United States. An independent expert who was commissioned to go out from this country not many months ago inspected several large railways there and among other things reported that he was particularly struck with the cleanliness and the excellent way in which all American cars were maintained. He did not see a dirty or untidy car, and one could go into a lavatory in any car and be sure of finding a row of clean towels and plenty of soap. Heavy carpets and hangings as well as plush seat coverings were almost universal and, notwithstanding the dirt-collecting qualities of these fabrics, they were all kept as clean as a new pin by means of compressed air brushes. The expert also seems to have been able to travel 400 miles during the day without arriving in clothes that were full of cinders. Here his experience must differ from that of many travellers in the United States. On many lines it is impossible to keep the dust out, but the car attendants in such cases are most obliging in helping passengers to brush themselves thoroughly before leaving the train.

MEDICAL MEN AND THE INCOME-TAX.

To the Editors of THE LANCET.

SIRS,—Recently I had the honour of being invited to travel a dozen miles to the county town and have a little conversation with the Income-tax Commissioners on the state of my finances. I had been informed that if I sent a detailed account this might not be necessary and having had a business training in my youth I was able to do this to a sixpence. I gave the cost of working under the following heads: expenses; rent, assistance, drugs, stabling, and sundries.

Nevertheless, the invitation came. It was the Christmas week and as the roads were bad I had to set off very early. On arrival I was shown into a room with other victims, where we spoke in awed sepulchral tones, and I had leisure to recall the funking-room at the college in the days of my youth. After an hour or so I was called into the examination room and nothing could exceed the courtesy of my reception. The examiners were polished gentlemen, but the explanation of their wish to see me was too ludicrous. As you see, I had used the word "stabling" as an adjective, qualifying expenses and implying straw, hay, corn, harness, repairs of carriages, blacking, &c. Someone had read it as a substantive, meaning *a building*, and I had been called to explain my extravagance over stable hire. It had not occurred to the clerks that if my horses were lodged so palatially they would also require something to eat and that there would be a column for food.

In a few minutes everything was satisfactorily arranged and I was at liberty to return to my practice and make the best excuses I could to my patients. As this all occurred in the middle of an extensive outbreak of influenzal bronchitis it was a serious matter to me. Can you urge upon the *dii majores* who rule these events that if the country medical men are to be harried in this way it might be in the summer when work is little and roads are good instead of in the midst of their poor little harvest? I am informed by a friend in the service that there is to be a special whip-up for medical men and publicans.

I am, Sirs, yours faithfully,

Jan. 5th, 1904. A COUNTRY SURGEON.

THE MOTOR-CAR IN MEDICAL PRACTICE.

IN the *Car* of Dec. 30th, 1903, which is described as a journal of travel by land, sea, and air, Dr. F. P. Wightwick sets forth the advantages of a motor-car as compared with the brougham, the victoria, or other horse-drawn vehicle. Every busy medical man knows the difficulty of so arranging his list of visits that the same ground is not traversed more frequently than is necessary, a difficulty that is increased when urgent cases, which must be seen early, are situated in widely separated directions. To those who use a motor-car this is a factor of little consequence for, as Dr. Wightwick points out, the motor-car is never tired and there are no horses to consider. Again, each journey is made in much less time and two or three hours a day are saved, giving an opportunity for a reasonable amount of recreation without diminishing the average quantity of work. Another advantage is that the motor-car can be used either as an open or closed carriage and the same vehicle is therefore to all kinds of weather. With regard to cost, the initial expense is undoubtedly heavy, but not more so perhaps than the buying of two [illegible] necessary stable appliances. [illegible]uble-cylinder petrol car built [illegible]d. It has a brougham body with extended roof and glass front, similar to the French limousine car, and is fitted with pneumatic tyres. The windows of the brougham let down in front, at the sides, and at the back, so that the amount of air can be regulated to admit almost as much as there is in front of the car, or to make it the same as a completely closed carriage. The annual cost, the writer thinks, is difficult to compare accurately with that of a carriage, since the amount of work done with a motor-car is so much greater. On an average his carriage expenses formerly came to rather more than £400 a year. The expense of his first year with a motor-car, which is based upon an actual experience of nine months, the remaining three months being calculated on the same ratio, amounts to just over £300; but this is rather a high estimate, he says, as the expenses of the remaining three months are not likely to be so great since the first nine months include the summer months and holidays, when, of course, the mileage is greater and the wear and tear are more severe. Further, the second and subsequent years will probably be less expensive as a considerable amount of experience has to be bought by the novice. The article concludes as follows. "It comes then to this, that while doing three or four times more mileage with infinitely greater comfort and marked improvement to health I spend £100 a year less, and this saving could be increased considerably by taking smaller stables in a less expensive neighbourhood (the distance from home being of little moment to a motor) and, of course, by using solid instead of pneumatic tyres, although this could hardly be advised. Another item, which is almost a necessity in London, is the heavy premium for insurance against fire, accident, and employer's liability. This sum, of course, is included in the estimate of annual expenditure above given." It should be mentioned that the writer says that he has travelled over 10,000 miles without a serious breakdown.

THE SELF-CONSUMING CIGARETTE.

To the Editors of THE LANCET.

SIRS,—I have been smoking Wills's gold flake cigarettes for some ears (those sold in packets, not tins) and I notice that when a lighted igarette is put down it burns itself away after the manner of an gyptian cigarette. This used not to be so. Evidently something as been lately added—quite lately. I am anxious to know if this new ded matter is prejudicial to health.

I am, Sirs, yours faithfully,

Jan. 1st, 1904. T. W. W.

* We have examined the cigarettes in question and no new ingredient has been added. The observation of T. W. W., however, is quite an accurate one. The explanation depends probably upon variations in the amount of fusible salts. Tobacco that has been damped may lose a certain amount of its fusible salts and consequently tends to self-consumption. The cigarette made of such tobacco is not abnormally prejudicial to health.—ED. L.

"DUMP."

To the Editors of THE LANCET.

SIRS,—No one can fail to notice the increased use of the word [illegible] THE LANCET. I have [illegible] ssed in a "Dictionary [illegible] published in Boston [illegible] 1877 (fourth edition) and by Messrs. Trübner and Co. in London, [illegible] which is evidently a standard work, that "the word is used [illegible] Devonshire in the sense of to knock heavily, to stamp; hence [illegible] bably its American application." So probably the victorious [illegible] ater is, after all, a prodigal son who has returned to the [illegible] erland unrecognised on account of being wrapped in the Stars [illegible] Stripes. It is inevitable that this sort of thing should [illegible] pen where two nations have a common stock and a common [illegible] guage. The famous air of "Yankee Doodle" is said by many to be [illegible] old English air called "Nankey Doodle" and to have originally [illegible] n attributed to Dr Shack- [illegible] while others say that the [illegible] old Dutch harvest song. [illegible] sidering the early connexion of New York (formerly New Amster- [illegible]) with Holland neither origin is improbable. To return to the [illegible] "dump," the shortest intelligible explanation of the word which [illegible] ve yet seen is "thump," with which word it seems etymologically [illegible] nected.

I am, Sirs, yours faithfully,

[illegible] ndon, Dec. 19th, 1903. "H. DUMPTY."

A MANUFACTURER OF MECHANICAL LIMBS.

[illegible] James Gillingham, surgical mechanist, of Prospect House, Chard, [illegible] s forwarded to us some photographs similar to those recently [illegible] epted from him by Her Majesty the Queen showing a few of the [illegible] ients to whom he has supplied artificial limbs. Mr Gillingham's [illegible] ry is interesting to readers of THE LANCET. From his account, [illegible] ich accompanies a portrait of one William [illegible] s wheelbarrow, we le[illegible] the late Viscount I[illegible] t while ramming home a charge at the cannon's mouth, at [illegible] celebration of the wedding of the King, on March 10th, 1863. An arm was devised by Mr. Gillingham, a bootmaker, of Chard, and presented to the keeper by the inventor. When the late Sir William Fergusson saw the arm he remarked, "The ingenuity that devised and made this arm can make a leg." These words turned Mr. Gillingham from a boot manufacturer to a surgical mechanist. His original invention was favourably noticed in THE LANCET of Oct. 13th, 1866. We find, on referring to our files, that we gave full particulars of this accident to the gamekeeper with two figures of him with and without the apparatus, showing that he could make practical use of the artificial arm which several makers in London had said they could not contrive. We are glad to think that surgical instrument makers are more ingenious now than they were then, for the firm of Gillingham and Son is only one of many in the kingdom whose mechanical skill proves of incalculable value to the surgeon. This does not alter the fact that in 1866 Mr. Gillingham seems to have "wiped the eye" of the best of them. Sir William Fergusson's words appear to have fallen upon fruitful ground.

RED OR BLACK INK FOR PLACARDS?

A CORRESPONDENT writes as follows:—

> "For some time past I have noticed the curious tendency of placards printed in red ink to fade within a short time under the influence of exposure to light considerably quicker than those printed in black ink. I have noticed, for example, that the placards of the National Association for the Prevention of Consumption which are posted in the carriages of various railway companies become after a comparatively short time scarcely readable, even at a distance of 12 inches from the observer, and the difficulty of discovering what the placard says is a good deal more at night under artificial illuminants. I am of opinion that good black ink is far preferable for such placards, being more durable, economical, effectual, and less trying to the eyes. I am quite sure that many persons must have noticed the curious effects presented sometimes by words, especially names, which have been printed or painted with the first letter of each word in red ink and the rest in black. After a time, at a distance of a few yards, such names as Box, Clark, and Blake become apparently Ox, Lark, and Lake. I have observed many comical effects of this sort. I can only say, beware of red ink, especially of red capital letters."

POOR-LAWS ON THE CONTINENT AND IN AMERICA.

To the Editors of THE LANCET.

SIRS,—Can you, or any of your readers, refer me to published books, pamphlets, or reports in which I can obtain information as to the working of Poor-law medical relief and sanitary administration in continental countries and America?

I am, Sirs, yours faithfully,

Jan. 5th, 1904. L. KIDD.

"THE WONDERS OF MODERN SURGERY."

UNDER this title Dr. C. W. Saleeby contributes to the January number of the *World's Work* a picturesque account of some surgical methods and appliances, but he must not expect members of his own profession to regard his article as a scientific contribution. Commencing with a sketch of the use of ether and chloroform in the production of general anæsthesia, he traces the development of antiseptic surgery, gives illustrations of its practical value, and forecasts its hereafter in the following peroration:—

> If there be radium in the sun, and if the human race may therefore expect a future of, say, 50,000,000 years, then for so long will antiseptic surgery be saving lives and limbs and eyes, averting pain and sorrow and reducing weeks or months of illness to days or hours. From King Edward VII. to the nameless aboriginal treated in a missionary hospital, and from 1870 to the year 3,000,000 or so, runs the host of those whom antiseptic surgery claims for the exercise of its beneficence.

The illustration of lectures with lantern pictures thrown on a screen and Dr. Doyen's representation of surgical operations by the agency of the kinematograph next come under review, followed by references to recent improvements in Cæsarean section and to the modern operation of suturing wounds of the heart. The facilities gained for brain surgery by raising portions of the skull with the flaps of the scalp and the safety with which other incisions in bone or compound fractures (as in osteotomy for knock knee) may be intentionally produced provide material for a column. Brain surgery leads on to excision of the Gasserian ganglion and laminectomy, after which the scene changes to gastrostomy and the feats accomplished by "ladies' doctors." The Roentgen rays naturally receive attention in a popular exposition such as this and the text is illustrated by skiagrams as well as by a picture of a patient under examination for renal calculus.

Dr. Saleeby has treated his theme in a satisfactory way, having regard to the fact that he is writing for the laity and bound by the *terms of his title* to give prominence to the apparently miraculous. But his memory has misled him in some points of detail—such, for instance, as the statement that antiseptic surgery was "born in Edinburgh during the memorable years (1869-77) ... .." Medical writers of articles for the general reader may also be indebted to him for some hints in happy phrasing. "Crisis of the maternal function" as a synonym for childbirth deserves commendation.

SUBSTITUTION UNMASKED BY THE ROMAN LETTER "M."

A CORRESPONDENT writes:—"With reference to your annotation 'Substitution Unmasked by the Roman Letter "M"' stamped on the bottom of a loaf of bread according to the Bread Acts of 1822 and 1836, I should like to warn some people who may be looking now for 'M' on the bottom of their loaves not to mistake the 'VV' which is the mark stamped on the bottom of their loaves by the 'Vis Vitæ' Bread Company for an 'M' which could easily be done. This bread is largely sold by small grocers and general shops to their customers and there are a great many of the purchasers who do not know what 'Vis Vitæ' may mean in full and when abbreviated to 'VV' they invariably take it to be an 'M.'"

THE VAGINAL DOUCHE.

To the Editors of THE LANCET.

SIRS,—Referring to this subject and to the letter of Messrs. Down Bros. I consider that the glass vaginal pipes should be made with one large hole at the end as it gives a better stream as a douche and should be used, if possible, through a speculum.

I am, Sirs, yours faithfully,
Welbeck-street, W., Jan. 2nd, 1904. HEYWOOD SMITH.

PATENT HYGIENIC UNDERWEAR.

WE have received specimens of underwear from a firm entitled the Doctor's Supply Company of Stockport, which appear to us to have much to commend them. They are soft and warm and elastic. The company are acting as agents for the Rasurel underwear, clothing made of wool and peat fibre blended, and inclose samples of these goods. We have already noticed the Rasurel underwear favourably in our columns, having had a report upon them showing that they are soft, comfortable, and do not shrink. The samples now offered for inspection, like the previous ones, are well made and finished. The address of the Doctor's Supply Company is 82, Wellington-road South, Stockport.

A SOAP TIDY.

THERE is no doubt that a considerable amount of soap is wasted in the soap dish as is obvious from the fact that much of the soap will be found in it, or below it in the case of a perforated tray being used, in a state of jelly. The "soap tidy" is designed to obviate this waste and to keep the lavatory basin and its accessories clean. It dispenses with a soap dish altogether. In the "soap tidy" the cake of soap is fastened to a strap wound on a wheel controlled by a spring. The wheel and the spring are inclosed in a neat copper box. The cake of soap may be placed in a netted bag or a cord with a ring attached may be imbedded in the soap. When the soap is required for use the cake is simply pulled downwards into the basin and after it has been sufficiently used it will return when released by the action of the spring to its original suspended position. In this way the soap readily dries instead of keeping wet and wasting. The principle is exactly that of a spring tape measure with a cake of soap tied to the end of it, the measure being fastened to the wall. The patentees are Messrs. Dean and Farrar, Well-lane, Halifax.

THE REMOVAL OF HOUSE REFUSE.

A CORRESPONDENCE is taking place in the *Times* on the evils of the present system of removing house refuse, a matter with which we have on several occasions dealt in these columns. Under the heading of "How not to do it" Sir Henry Thompson has called attention to the insanitary methods of dust collecting adopted by the local authorities in London and judging from the interest taken in the matter by other correspondents it would seem that public attention may at last be aroused to the fact that the present system of removing house refuse is a pernicious one. We hope that the London County Council and the municipal authorities of the City and the boroughs will lend a ready ear to suggestions for reform. The present Lord Mayor of London, when sitting on the bench at Guildhall recently, is reported to have referred to the opinion of Dr. W. Collingridge, the medical officer of health of the City, that loafers turning over the contents of dustbins constituted a danger to the public health, as "sanitary madness." Dr. Collingridge was, of course, perfectly right in insisting upon the risks to public health that follow upon the disgusting practice and we trust that Sir James Ritchie has now altered his opinion. Sir Henry Thompson points out that the transference of house refuse to the dust carts by means of coarse wicker baskets is a completely wrong method and suggests that the dust cart should give place to a vehicle containing light metal receptacles with covers, which receptacles should be filled from the house and taken directly to the carts. Another correspondent suggests that dust vans should be "light skeleton vehicles holding a number of covered galvanised iron bins and as the collection is made from house to house an empty bin should be left to take the place of the one removed." Such a system would have obvious advantages and the trifling additional expense entailed would be compensated for by the increased health and comfort of everyone concerned.

"DOODLE DASHERS."

THIS appears from a report of a recent meeting of the Torquay town council in this week's *Torquay Directory* to be the name given to certain paper brushes used on the Torquay pier on the occasion of fêtes. The brushes are poked into each other's faces by gay sojourners at Torquay, while even members of the Baths and P Committee are alleged so to disport themselves. In spite of su grave support, and of the statement made by a town councillor th "hundreds of visitors would be disappointed if they could not 'doodle dashers' in their innocent recreation," a recommendation the sanitary committee of the town council to prohibit the sale "doodle dashers" upon the pier was carried. It was shown that form of "innocent recreation" was dangerous and insanitary.

◆

Owen writes:—"I shall feel much obliged if any of your readers be kind enough to give me authentic information on the followi points: 1. Where can I refer to recorded cases of a permanent separate odontoid process of the axis or second cervical vertebra man? 2. Does the comparative term 'neurapophysis' apply on to the lamina of a vertebra, or does it include the correspondi pedicle as well?"

Recently Qualified.—The best course is to consult a practitioner of cognised standing in the neighbourhood. The circumstances detailed point to the advisability of not accepting the invitation contest the appointment.

Mr. G. P. James.—The address of the Medical Defence Union is Trafalgar-square, W.C.: secretary, Dr. A. G. Bateman. The addre of the London and Counties Medical Protection Society is 3 Craven-street, Strand; honorary secretaries, Dr. H. Woods an Mr. A. G. R. Foulerton.

M.O.H. will find the exact situation discussed in our pamphl "Difficulties under the Infectious Diseases (Notification) Act."

E. F. B. C. is recommended to pay no attention whatever to a pe fectly natural condition of things.

ERRATUM.—In our analytical notices last week, under the heading of "India Pale Ale," the name of the firm should have been given *Warwicks* and Richardsons. The former name was mis-spel "Warricks."

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.).

WEDNESDAY (13th).—St. Bartholomew's (1.30 P.M.), U (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P National Orthopædic (10 A.M.), St. Peter's (2 P.M.), (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Go (9.30 A.M.), Guy's (1.30 P.M).

THURSDAY (14th).—St. Bartholomew's (1.30 P.M.), St. T (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M. George's (1 P.M.), London (2 P.M.), King's College (2 P (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P St. Metropolitan (2.30 P.M.), London Throat, (9.30 A.M.), St. (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (1[illegible] Bartholomew's (1.30 [illegible] Thomas's [illegible] Cross (3 P [illegible] (2 P.M.), [illegible] Northern [illegible] Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 [illegible] Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), [illegible] (2 P.M.).

SATURDAY (16th).—Royal Free (9 A.M.), London (2 P.M.), (1.30 P.M.), St. Thomas's (2 P.M.), University College (9 Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and Central London Ophthalmic Hospitals operations are

SOCIETIES.

MONDAY (11th).—MEDICAL SOCIETY OF LONDON (11, C Cavendish-square, W.).—8.30 P.M. *Papers*:—The Use of other Inoculations in Pyogenic Infections: (1) Mr. W. G. Antistreptococcus Serum.—(2) Dr. A. E. Wright: Staphylococcus Infection.

UESDAY (12th).—SOCIETY [illegible] s of the Medical Society of [illegible] ish-square, W.).—7.30 P.M. [illegible] on the Pathology of Chr [illegible] F. [illegible] les.)

R [illegible] CIETY (20, Hanover-square, [illegible] Symes Thompson: Hyper- [illegible] (illustrated by the epidia- [illegible]

[illegible] Hæmorrhage.

DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—5.15 P.M. Demonstration of Cases of Interest.

HURSDAY (14th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Paper:—Dr. M. de Leon (Amsterdam): A hitherto not sufficiently recognised Source of Infection during Operations The President: Valedictory Address. (All Practitioners will be welcome.)

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY (Gt. Northern Central Hospital, Holloway road, N.).—9 P.M. Discussion on Recent Methods of Inducing Anæsthesia (opened by Dr. J. F. Silk).

RIDAY [illegible] OF LONDON (11, Chandos-street, [illegible] Discussion on Sleeping Sickn [illegible]

SOCIETY [illegible] CHILDREN (11, Chandos-street, W.).—5 P.M. Cases and Morbid Specimens will be shown by Dr. E. Pritchard, Mr. Brickdale, and Dr. G. Carpenter. 5 30 P.M. Papers [illegible] A Fatal Case of Streptococcus [illegible] Infant—Mr. J. H. Evans: Th [illegible] Intra-cranial Hæmorrhages in [illegible] (Brighton): Sequel of the Cas [illegible] he Provincial Meeting at Brighton.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

IONDAY (11th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC [illegible] M. Dr E. Dore: Clinique. (Skin.) [illegible] me Errors and Difficulties in the [illegible] London Hospital, Hammersmith-road, W.)—5 P.M. Mr. Baldwin: Practical Surgery.

UESDAY (12th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Dr. J. Taylor: Clinique (Medical) 5 15 P.M. Dr. E Cautley: Normal and Abnormal States of the Blood.

POST GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. S. Taylor: Diagnosis of Common Affections of the Spinal Cord.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—Dr. Ormerod: Friedreich's Ataxy.

VEDNESDAY (13th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Berry: Clinique. (Surgical) 5 15 P.M. Dr. W. Carr: Infant Feeding.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. S. Taylor: Diagnosis of Common Affections [illegible]

[illegible] oad, N.W.).— [illegible] emonstration [illegible] tenham Hos- [illegible] oints in the [illegible] ASES OF THE [illegible] Squire: Pul- [illegible] ost Graduate [illegible] POLYCLINIC [illegible]: Clinique. [illegible] ammersmith- [illegible] nts. [illegible] PTIC (Queen- [illegible]

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t is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II of 1903, which was completed with the issue of Dec. 26th, were given in THE LANCET of Jan. 2nd.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1903 will be ready shortly. Bound in cloth, gilt lettered, price 18*s*, carriage extra.

Cases for binding the half-year's numbers are now ready. Cloth, gilt lettered, price 2*s*., by post 2*s* 3*d*.

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METEOROLOGICAL READINGS.

(Taken daily at 8 30 a m. by Steward's Instruments)

THE LANCET Office, Jan. 7th, 1904.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radia in Vacuo	Maximum Temp Shade	Min. Temp	Wet Bulb	Dry Bulb	Remarks at 8 30 A M
Jan. 1	29 93	E	0 05	40	37	30	33	35	Overcast
" 2	29 96	S.E	0 05	50	46	32	33	34	Raining
" 3	29 82	S E	0 10	52	47	34	41	44	Overcast
" 4	29 62	S	0 05	59	46	40	40	40	Foggy
" 5	29 83	S E	...	56	45	40	43	44	Overcast
" 6	30 31	E	...	41	41	37	37	38	Overcast
" 7	30 10	S W	...	43	45	36	40	41	Overcast

During the week marked copies of the following newspapers have been received *The Hampshire Post, The Connaught Herald, Western News (Galway), Aberdeen Weekly Free Press, Carmarthen Journal, Westminster Gazette, Hertfordshire Mercury, Windsor and Eton Express South Wales Daily News, East Anglian Daily Times, Walsall Advertiser, Surrey Advertiser, Reading Mercury Mining Journal, Local Government Chronicle, Yorkshire Herald, Daily News Daily Mail, Daily Chronicle, Standard, &c.*

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An Address

ON

SOME FORMS OF CHRONIC ABDOMINAL SURGICAL DISEASE.

Delivered before the Bury and District Medical Society on Nov. 24th, 1903,

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MR. PRESIDENT AND GENTLEMEN,—In the first place, permit me to offer you, the members of this society, my sincere thanks for the honour you have done me by requesting me to appear before you to night and to deliver to you an address on a subject connected with my own special work, that of abdominal surgery. Your very courteous secretary made only one stipulation and that was that it should be one of general interest. I have endeavoured to comply with that proviso by asking your attention to certain points connected with some of the more chronic forms of abdominal disease.

Acute abdominal diseases with their lightning-like onset, their rapid course, and their often tragic endings appeal to that dramatic sense that is more or less present in us all. They arrest the attention and compel their study and the rapid growth of the surgery of this region has thrown great and almost complete light upon their causation, pathology, and treatment. Chronic diseases have none of this attractiveness. The commencement of any one of them is so gradual that it is often extremely difficult to fix its date within a period of weeks or months; its course is for a long time frequently associated with but indefinite symptoms and when at length it terminates fatally the final result is brought about by so many complicating pathological states that even a post-mortem examination may fail to apportion correctly the amount of damage done by the orignal factor. Perhaps for this very reason they deserve, and will repay, closer examination. Many of these conditions, moreover, are capable of efficient treatment and even cure by surgical means if they can be detected before such complications arise. Such cases are found especially in connexion with the digestive tract, either in this alone or in connexion with those two main accessory secretory glands, the liver and pancreas, and the tubes which convey their secretion into that tract.

Many researches, such as those of Bloch, Terrier, Gilbert, Girode, Lippmann, and others on the bacteriology of the biliary passages, go far towards legitimising the belief now very generally held that the formation of biliary calculi is greatly favoured, if it is not entirely caused, by the presence in the gall-bladder and ducts of micro-organisms which [illegible] bert and Lippmann[1] [illegible] not absolutely sterile, [illegible] but the organisms [illegible] naerobic, being the micrococcus ovalis of Escherich, the bacillus perfringens of Veillon and Zuber, and the bacillus radiiformis of Rist and Guillemot, none of which are pyogenic. Once only they found the staphylococcus albus and in two cases the colon bacillus. The same observers, however, found that the fluid obtained from the bile passages at the time of operations for biliary calculi was always fertile—that is to say, that when grown upon culture material it always showed colonies—and they say that whenever aerobic micro-organisms were present they invariably belonged to the species of the colon bacillus, the most frequent of all being the colon bacillus itself; this is, to use their own expression, "le grand envahisseur des voies biliaires." Gilbert, Fournier, and Domenici[4] found the bacterium coli in a certain percentage of gall-stones, whilst Chiari and Dufourt cite cases in which gall-stone formation apparently took place as a consequence of previous attacks of typhoid fever. Ochsner[5] also emphasises this connexion between typhoid fever and biliary calculi. He has noticed also a connexion with previous attacks of appendicitis. Other writers have suggested the effect of previous attacks of influenza, typhus fever, and some other infective diseases in assisting this formation.

Scott Carmichael's experiments on animals, on the other hand, appeared to him to justify the opinion that concretions can be formed in the gall-bladder without the presence of the bacterium coli or typhosi He introduced pebbles, glass beads, or balls of pith into the gall-bladders of dogs and found concretions of carbonate of lime deposited upon them, never of cholesterin, and this was not altered when, as in some cases, he injected cultures of typhoid fever or other organisms either at the same time or at a later date. It might be suggested in connexion with this statement that a more exhaustive examination should be made of all stones removed from the gall-bladder or ducts. The specimens I show evidently differ greatly not only in form but in composition, and it might be found that just as in the urinary tract we have three or four well-defined species of calculi which differ in appearance, seat of origin, and symptoms, so also here all biliary calculi may not be formed in the same way or in the same locality, as they certainly are not of the same material, and that this difference may have some connexion with the site of their formation. Thus, cholesterin stones are certainly more often found in the gall-bladder and might prove to be always formed there; bilirubin calcium stones are often found in the ducts and may prove to be usually formed in the liver, passing down the hepatic duct whilst of small size and gradually enlarging in consequence of deposits from the bile which would be constantly in contact with them, and so on. This might explain why in some cases we find single stones whilst the more frequent variety is multiple and faceted, why in some cases they are found only in the gall-bladder, in others in the common duct, and in still others, of which this is a good specimen, in which minute gall-stones were found in almost every duct in the liver besides the large one seen, which was impacted in the immensely dilated common duct.

Naunyn[6] perhaps sums up the question in terms which all may accept "The invasion of bacterium coli constitutes at any rate an occurrence to which stagnation of the bile can occasionally lead, and which is capable of producing cholangitis and cholecystitis, and these again may give rise to the formation of gall-stones."

When once cholecystitis has commenced it may end in suppurative cholecystitis, empyema of the gall-bladder, or gangrene of the same organ; the inflammation may spread along the pancreatic duct and produce acute hæmorrhagic pancreatitis or pancreatic sloughing and abscess, but these conditions are outside the purpose of this address; they are only mentioned in order to emphasise the untoward possibilities which may follow the entrance of infective material into the biliary passages. The main importance of them to us at present is the suggestion they carry that possibly a closer observation of patients who have at any time suffered from typhoid fever or any of the other infective diseases previously mentioned might bring to light earlier symptoms than those upon which we are accustomed to rely. Such early symptoms would be of very great value and would probably be such as would escape the patient's own notice or, indeed, that of any but the trained observation of the patient's own medical attendant.

If the symptoms produced by the presence of biliary calculi are reviewed they will be found to be very obvious in some cases but somewhat vague and confused in others. Repeated attacks of colicky pain more or less referred to the right hypochondrium with transient jaundice and absence of bile from the stools coincidently with its presence in the urine, are all old and well-known signs. But the last three are by no means always present. The difference between the older and later views on this subject is well shown by [illegible] of Surgery published [illegible] of a cystic tumour [illegible] means of diagnosis, especially with a [illegible] presence of calculi. No one, I presume, would suggest this now. Every operating surgeon knows that when calculi are present it is quite the exception to find any enlargement of the gall-bladder, much less one that could be felt. On the contrary, this viscus is usually shrunken and contracted and may be difficult to find, tucked away as it is under the right lobe of the liver, even when the abdomen is opened. Courvoisier[7] has formulated the law that in 80 per cent. of such cases there is contraction of the gall-bladder, whilst in 90 per cent. of cases of enlargement of the gall-bladder the obstruction is due to other causes. Of far more value is the painful point described by Robson,[8] which is found one inch above and to the right of the umbilicus, or to be exact at the junction of the upper two-thirds with the lower third of a line drawn from the ninth rib to the umbilicus and which, like the McBurney point in appendicitis, is painful on deep pressure. Another test, described by Murphy of Chicago,[9] is extremely useful. The patient is placed in the sitting position, bending forwards; the examiner, standing behind, insinuates his fingers beneath the edge of the ribs on the right side, the finger tips being bent upwards; when the abdominal muscles are sufficiently relaxed to permit the lower edge of the liver being recognised the finger tips are pressed as far as possible beneath its lower surface. The patient is made to take a deep inspiration. The diaphragm forces the liver down until the gall-bladder touches the examining fingers when the inspiration suddenly ceases as though it had been shut off. Whilst definite indications are of course of most value it is of equal importance that not too much weight should be attached to the absence of symptoms which the force of previous teaching may have led us to expect but which the later light obtained by operation has shown to be untrustworthy. Thus jaundice, even temporary, is only present when calculi block the hepatic or common duct. Its absence is no proof that the gall-bladder itself is not packed with calculi. The absence of bile from the stools or its presence in the urine has simply the same significance. The absence of the time honoured pain in the right shoulder I have so frequently noted that I have ceased to attach any serious importance to its presence or absence. In several of my cases the pain has been felt below, between, and over the scapulæ, especially the right, but it has seldom been felt higher. Its occurrence appears to mark only certain positions of the stone after that has entered the common duct.

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[1] [illegible] 718.

[4] Jc [illegible] ., p. 453.

[6] Loc. cit.

Passing now from diagnosis to the question of treatment at the outset a most important consideration arises. Since the formation of calculi presupposes—if we accept the evidence I have given above and other evidence which is available but which there is no time to detail—some amount of inflammatory sepsis in the biliary canals, which may lead to more acute and destructive changes, is it wise to delay the removal of these foreign bodies and the drainage of these canals until symptoms become imperative? In the parallel case of urinary calculi no such delay would be advised and the possible or probable advent of a chronic cystitis would be considered an additional reason for anticipating this by prompt removal of the foreign body. In all the cases which I have operated upon some amount of inflammatory change either in the walls of the gall-bladder and ducts or as evinced by the presence of pus in the contained fluid has been present, whilst in all but one the symptoms of auto-intoxication or inflammation have promptly disappeared within a few weeks of the cholecystotomy. Of course, in saying this, I am excluding those cases which were associated with carcinoma

Prolonged presence of biliary calculi has other and no less objectionable results. I have already referred to pancreatitis. This has been shown by Opie, Halstead, Lancereaux,[10] and Moynihan[11] to depend, sometimes at least, upon the presence of a stone in the ampulla of Vater, which damming back the current of bile from the common duct favours its entrance into the duct of Wirsung and so produces infection of that canal, gradually spreading further and further into the pancreatic tissues. Should that infection produce destruction of the islands of Langerhans glycosuria will result and the prospects of a successful operation be reduced almost to a minimum Short of this, impaction or lodgment of a calculus in the common duct will cause jaundice and its accompanying impairment of coagulability of the blood, greatly increasing the risk of prolonged capillary hæmorrhage during and after interference My first case, that of a woman, aged 52 years, in whom symptoms had only existed for 12 months, died from this cause. At the necropsy 11 days later no other cause of death could be found but a large quantity of clots in the peritoneal cavity. This case occurred in 1897 before the advantages of a preliminary dosing with calcium chloride were so well appreciated as they are now, owing to the advice and example of Mayo Robson. Even now, however, there is a great advantage in being able to anticipate if possible the occurrence of this complication.

Other consequences of the retention of calculi in the biliary ducts, whilst perhaps not so clearly demonstrable, equally merit attention. Papillomata of the gall-bladder, adenomata of the bladder and ducts, and especially cancer, have all been observed in connexion with these formations. How far the latter may be looked upon as a consequence of the continuous and prolonged irritation they produce is even yet a very debateable point. Robson says that as a primary affection of the ducts cancer is rare and that it is usually secondary to gall-stones or to extension from adjoining organs. Zenker[12] found gall-stones in 85 per cent. of all cancers of the gall-bladder and Musser fixes the percentage at 69 per cent., Courvoisier at 85·7 per cent., and Brodowski at 100 per cent. Naunyn believed that half of the cases of chronic jaundice diagnosed as cholelithiasis are complicated with cancer or are due to cancer alone.

That cancer does not always follow even very prolonged existence of biliary calculi is evident from numerous cases detailed by various operators. A case of my own may be of interest in this relation. In April, 1903, Mr. J. D. Willis of Manchester brought for operation a woman, unmarried, aged 48 years, with the following history. She had suffered from attacks of colicky pain in the epigastric and right hypogastric regions at intervals since she was 16 years old—i.e., for 32 years. When four years old she was taken to New Zealand, where she lived for 18 months. After her first severe attack which did not last long, she was free from pain for from four to five years, when she had a severe illness lasting about eight months. During this time she was jaundiced but had never been so since. In the course of this illness a suppurating hydatid cyst appeared and burst externally in the epigastrium. Since this time she had never been free for any length of time from attacks of pain. Five or six years ago the pain was very severe and more continuous for about 18 months. Some of these attacks had been associated with vomiting, but not all, and she attributed its occurrence to the morphia she had been given hypodermically. Her last attack was on April 10th and 11th, 1903. These attacks had been recurring every week or fortnight, but for the last few weeks they had come on as often as two or three times a week. They had nothing to do in point of time with the menstrual periods which had been regular until the menopause two years ago. The patient was of good colour, with no jaundice, but she had lately lost flesh. Each attack was described as beginning with a dull ache over the liver or a feeling of indigestion; the acuter pain sometimes started suddenly and sometimes remained subacute for a long time, gradually increasing. At times she felt a dull pushing sensation in the right hypochondrium; at times it made her jump by a shooting sensation. Aching also was felt across the back below the shoulder blades. It was worse on the right side, sometimes over the scapula, but it never went up to the acromion. There had never to her knowledge been bile in the urine or a want of it in the fæces. On April 19th cholecystotomy was performed and a single unfaceted stone was removed from the gall-bladder. Nothing was felt in the ducts. There was a long Riedel's lobe hanging down like the flap of a saddle for five or six inches below the general line of the liver. When this was drawn up the omentum was found firmly adherent beneath to it, to the pylorus, the stomach, the colon, and the duodenum. After these adhesions were separated the small contracted gall-bladder was found deep down in its fissure. Drainage was used as some muco-pus escaped on removal of the calculus. Ultimately the wound entirely closed and in October Mr. Willis reported that she was in perfect health.

Nevertheless, the frequent association of carcinoma with cases of long-standing cholelithiasis must have great weight in the prognosis and should, I conceive, add additional force to the indication for earlier removal of calculi when once their presence is demonstrated than has previously been the case.

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[7] Deutsches Archiv für Klinische Medicin, 1889.
[8] Diseases of the Gall-bladder and Bile ducts, p. 37.
[9] Medical News, 1903, vol. i., p. 827.
[10] Traité des Maladies du Foie et du Pancréas, 1898.
[11] Diseases of the Pancreas, 1902, p. 66.
[12] Deutsches Archiv für Klinische Medicin, 1889.

Although the tumour I show you is not connected with the presence of gall-stones its extremely rare character may render it interesting in any discussion bearing upon hepatic growths. I have not been able to find in the literature any description of a similar one nor, as I understand, has Mr. Mayo Robson, in the third edition of whose work, about to appear, it will be figured. It has already been described and figured in The Lancet.[13] It is, as you will see, the gall-bladder itself, transformed into a multilocular cystic mass, and was removed in December, 1900, from a woman, aged 42 years, sent to me by Mr. J. E. Harburn of Buxton, who had complained for 18 months of a sensation of weight with heavy, dull sickly pain. She had had two attacks of jaundice, the last eight years previously. There was a rounded solid body in the gall-bladder area moving with respiration and moveable to some extent from side to side. After removal, which was somewhat difficult owing to the presence of very large veins in the strongly adherent omentum, the intestine also being adherent, she recovered and went home perfectly well two months later.

Passing from this region I ask your attention to another large class of chronic abdominal complaints, those, namely, affecting the large intestine. Before anything is said as to the diseases which affect this viscus it is interesting to note Dr. R. W. Leftwich's views[14] as to the mechanism by which its function is carried on. Formerly its contents were believed to be equally under the influence of peristalsis, as are those of the small intestine—that is, that they were gradually forced onwards by a wave of muscular action in its own walls. It is evident, however, that if this is the case the process is carried on under conditions differing from those [illegible] estine is free [illegible] its two main [illegible] fibres of the [illegible] in the large intestine they are almost wanting except as three strong bands placed at an equi distance around. These fibres are not continuous with those of the small intestine, which end at the ileo-cæcal valve, but start afresh from the appendix, to which they are the best guide. The circular fibres of the small intestine form a well-marked and important coat which is pretty equally thick in its whole extent; the circular fibres of the large intestine are comparatively much more scanty and not so equably distributed. The canal of the small intestine is but slightly different in calibre in all its parts and any difference is gradually produced; the canal of the large differs widely [illegible] here [illegible] al is [illegible] the [illegible], are separated by a distinct valve which seems to emphasise their different functions. These functions are themselves very distinct, for whilst the small intestine performs a great part in the digestion and absorption of food and can only very secondarily be regarded as a sanitary apparatus the large intestine completely reverses this, and whilst absorption from it is but small, must be looked upon chiefly, if not entirely as the drainage system *par excellence* of the body. The small intestine with the stomach is the kitchen which pours its refuse into the slopstone and drain of the cæcum and colon.

Dr Leftwich points out the remarkable similarity of the large intestine taken as a whole to a syphon. "A syphon," he says, "consists of a reservoir, a sh[illegible] a long descending one. [illegible] reservoir is the cæcum, [illegible] long is the ascending co[illegible] consists of the descendi[illegible] and the rectum about [illegible] length being, therefore, about double that of the short tube and likely to act as a very efficient syphon. The sigmoid flexure has been left out of the account as its curves probably neutralise each other." But it is curious to notice that this acts like the S shaped trap in modern drains. In fact, the wh[illegible] e model upon which [illegible] sanitary appliances. [illegible] he brings forward in an extremely well reasoned paper which will well repay perusal Dr. Leftwich concludes that the contents of the large intestine are carried forward mainly by syphonage, although peristaltic action is also present to a subsidiary extent, and he justly adds that the light thus thrown upon a great natural process cannot fail to suggest many ideas for improved treatment; for example, in the treatment of fæcal accumulation by enemata the hips should be raised to prevent syphonage and too rapid regurgitation. The patient should remain quiescent for 20 minutes and then resume the erect position somewhat suddenly; in the treatment of diarrhœa the same elevation of the hips will tend to retard the too frequent emptying of the bowel, and so on.

Most morbid conditions affecting the large intestine are mainly chronic in character and extend in their whole course over long intervals of time, although many of them signalise [illegible] earlier symptoms to which I have already referred are so much to be desired. It is evident that here is a large gap in our knowledge which succeeding observers will probably be able to fill with immense benefit to those under their care and to the profession. In the majority of instances at present attention is first directed to them either by difficulties in evacuation, constipation, or by too frequent action —diarrhœa. To these fundamental symptoms may be added some peculiarity in the stools themselves—the passage with them or at other times of blood, mucus, or pus, the existence of pain, or the presence of some abdominal swelling. Later, especially in those cases characterised by constipation, distension of the abdomen may be produced and this may be local or general. This symptom is, however, always a late one and in any case which may require surgical interference it should, if possible, be anticipated as its presence greatly and needlessly increases the risk and signalises changes in the intestinal wall which militate strongly against a successful result. It is, of course, scarcely necessary to point out how immensely it hampers any thorough examination, especially bimanual examination.

Given a condition of difficult and painful defecation the attention should first be directed to the anus and rectum. Hæmorrhoids may be discovered and, if these are large, and especially if they are inflamed and tender, one is apt to be satisfied with their presence as a sufficient explanation. That this is not safe, even if the patient is comparatively young, is of course perfectly well understood but is very clearly emphasised by the following case. In June, 1901, I was asked to see a woman, aged 31 years, by a Manchester surgeon. For three or four years she had complained of pain in the anal region. 12 months earlier she suffered from influenza and for the first time noticed some loss of blood which had gone on ever since. She had always been constipated but this had become worse during the last 18 months. When this gentleman examined her he found several piles and removed them but the symptoms continued and increased. On complete recto-bimanual examination a circular nodular hard mass was found in the upper rectum which had caused a certain amount of invagination. Colotomy was performed and later the growth was excised by Weir's method. It proved to be, as expected, a cylindroma of the rectal wall. The patient died three days after the last operation.

Some obscure cases of pain in the rectum require very careful examination before the cause can be discovered. In October of this year my friend Mr. Harburn of Buxton sent to me a young married woman who complained of an intense burning pain after defecation some distance up the rectum. There was no fissure, no sentinel pile, and digital examination at first discovered nothing abnormal. The history given was that during her only confinement the bowels were moved with some pain and that ever since this suffering had been more or less present. At last a point was felt just at the upper edge of the internal sphincter on the right side which was extremely tender to touch. The description given by Bryant of ulcer of Morgagni's valve supplied the explanation. Evidently some portion of hard fæces had been forced past the child's head during the confinement which would be made to scrape the posterior wall of the gut. This, catching one of Morgagni's valves, had torn it slightly, sufficiently to expose a nerve end. Free dilatation of the sphincter showed the presence of a small ulcer which was cauterised by the electric cautery, with the results that all pain ceased and did not return.

A complete rectal exploration is therefore necessary in all cases before we can arrive at an accurate diagnosis. And opinions greatly differ as to what a complete rectal diagnosis means. Most surgeons, however, of the present day would hardly consider it complete until the possibilities of touch and sight have been exhausted. It is astonishing how much may be learnt by touch alone if both hands are employed. Recto bimanual examination will enable the examiner to make out very accurately the position and contents of all the organs in the pelvis, not only in the woman but in the male, and I have more than once diagnosed a carcinoma of the sigmoid flexure by this means which was so easily depressed into the pelvis from above that simple palpation of the abdomen utterly failed to detect it. Other conditions outside the bowel, such as enlarged prostate, impacted ureteral calculus, and most of the female pelvic disorders, which are so many that it is impossible even to touch them now, may be detected in this way, the latter often much more clearly than by the vagino bimanual method.

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[13] The Lancet, July 13th 1901 p. 72.

[14] Edinburgh Medical Journal, 1902, New Series, vol. xii., p. 536.

The work of Martin, Gant,[15] and of Hirschman[16] has demonstrated the importance of the rectal—Houston's—valves in producing when enlarged and thickened a train of symptoms which form a variety of constipation only to be cured definitely by their division or partial removal. Hirschman details these symptoms as follows: "Inability to defecate properly or comfortably. The patient is constantly straining at stool and passes nothing but small, hard, apparently broken-off pieces or a long ribbon-shaped stool, accompanied or not with mucus. The condition has lasted a long time. Cathartics have lost their effect Defecation does not give him relief; the rectum may feel hot and is constantly overloaded and stuffed. Defecation is infrequent, the patient going from two days to a week without a stool." In such a case digital examination may not recognise the condition, although these valves will usually be felt to be more rigid than usual. The greatest amount of information will be gained by the use of a fair-sized proctoscope, of course after an enema has cleared the parts, when the valves will be easily seen and their enlarged and rigid condition recognised. Should such rigid valves be present purgation and enemata are alike useless for the purpose of overcoming the habitual constipation produced by them. The only remedy is their division or removal to some extent. In these cases Gant has advised the use of small clamps which are applied through the proctoscope by a special holder. These clamps produce necrosis of the parts within their grip and drop off when this has been followed by separation of the sphacelated parts. Hirschman cuts off a portion of the thickened valve and unites the divided mucous membrane edges by sutures. I confess that I do not like to leave foreign bodies, either clamps or sutures, in a septic cavity such as the rectum if it can be avoided; it is impossible to be certain how far the necrosis produced by a clamp will extend. It is equally impossible to be certain that the sutures introduced may not act as setons, being impregnated with the rectal discharges. In these cases I have divided the valve by the electric cautery knife. This has the advantage that it leaves no foreign body behind; that the cauterised edges are protected by an aseptic slough, which permits no access of decomposing material until a granulating surface is produced in which are no open lymphatic orifices; and that cauterisation produces a sequent contraction in the remaining tissue which assists in widening the lumen, since the contraction is in a direction away from this It has in my hands been followed by the best possible results. And in this connexion much might be said of the advantage in all such cases of thorough dilatation of the sphincter. Almost all cases of proctitis and, indeed, of any intra-rectal irritation are associated with spasmodic contraction of this little muscle. This in its turn by preventing perfect evacuation tends to perpetuate the trouble and it is often astonishing how much may be done towards relief and cure of many troublesome cases in which there may be but slight organic mischief to be detected by the thorough dilatation of the anal sphincter This, however, must be dilatation, gentle and gradual, not divulsion

Passing higher up the bowel it is only possible to advert very briefly to growths in the sigmoid flexure. This is a very favourite site for cylindroma, the form of carcinoma most often met with in the large intestine Not all obstructive growths, however, are malignant, at least in their early stages. Here, for instance, is a pure adenoma which produced an intussusception of the sigmoid flexure and was removed by Maunsell's operation. In March, 1900, Mr J Wilde Smith of Manchester requested me to see with him a man, aged 43 years, who had noticed pain over the hypogastrium seven years previously after lifting some heavy pieces of cotton. Since that time he had passed blood and mucus from time to time with tenesmus. Both these symptoms were increasing and latterly had been so frequent that they were occurring ten or 12 times in the 24 hours. On examination an intussusception of the upper part of the rectum could be felt high up, its lower extremity being covered by a soft growth which bled slightly and broke down easily under the finger. Colotomy was first performed and a fortnight later, after thorough disinfection of the lower segment, the abdomen was opened in the middle line; the mass was easily found and removed by Maunsell's operation, the abdomen being closed without drainage. Three months later the permeability and sound healing of the lower segment being evident, the colotomy wound was closed. Mr. Smith writes on Nov. 20th, 1903 (more than three years after): "Although this man is leading a very reckless life, he is in very good health and has never had any symptoms of recurring obstruction."

A great difference of opinion exists as to whether it is advisable to perform a preliminary colotomy in such cases. To my mind there appears to be an immense advantage in having the area of operation and the line of union produced by suture of the large intestine free from fæces until such union is firm—after which the fæcal current can with safety be turned into its normal channel again by closure of the colotomy opening. In this case that was what was done and this illustration shows the result. There is only one difficulty. The two skin wounds are not far from one another and from one, the artificial anus, is more or less constantly issuing infective material. How is this to be prevented from contaminating the other wound? The fæcal fluid, if there is any diarrhœa, will soak into dressings and thus render them septic, often very soon after they have been applied. I have found that this can be thoroughly prevented by building a semi-circular rubber dam with gutta percha tissue moistened with chloroform in such a way as to interpose a damp-proof barrier between the two. The chloroform moistened gutta-percha adheres firmly to the skin and no fæces can pass it. It is also an advantage to seal the second wound, that through which the growth has been removed, by celloidin, which also offers an impermeable barrier to infection from without.

Appearance of abdominal wall ten months after operation.

The treatment of muco colitis, in its many forms with and without ulceration, which may be specific, gonorrhœal, simple, lupoid, herpetic, dysenteric, or cancerous, has been greatly assisted by the clearer ideas which have been gained of the actual condition of the interior of the gut since the more thorough use of the proctoscope and sigmoidoscope; the newer silver salts, especially protargol and argyrol, have supplied us with agents which are not rendered ineffective by the rapid formation of an inert albuminate as was the case with the older nitrate, but permit of far deeper and further reaching action upon the tissues and the micro organisms which have penetrated them. So large a field of new observations and new methods of treatment is present here that it would have been easy to take up all the time this evening by going over it alone. This was impossible but I must mention one. At last some use has been found for the appendix, that abortive organ which has been so much denounced as an entirely superfluous viscus. In certain cases of mucous or membranous colitis which relapse after all treatment apparently because local applications fail to reach the cæcum, the cæcum itself has been opened, an artificial anus has been made, and the large gut has been washed out from end to end. Weir[17] has proposed that instead of making a new opening into the cæcum the appendix should be found, brought through the abdominal wall, and fixed there. Its end being cut off, its lumen is utilised as the channel for injections. Of course care must be taken that this little tube is not ulcerated and that it is permeable. When once the tissues have returned to their normal state this can either be removed in the usual way or, which seems preferable, its minute opening can be closed, itself remaining ready for use again should the condition relapse. Weir, and following him Meyer,[18] have reported cases in which this method has answered admirably and it certainly appears to be a valuable addition to our operative resources in combating these at present often most unsatisfactory cases. In the one case in which I have used it the proceeding was perfectly easy to carry out and was most successful.

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[15] Boston Medical and Surgical Journal, April, 1903, p. 473.

[16] Medical Record, May, 1903, p. 767.

As was evident from the first, a large number of chronic abdominal surgical conditions have been necessarily excluded from consideration. To mention no others, there is a large field for description and discussion in growths peculiar to women, but sufficient has been said, perhaps, to emphasise the proposition with which I started—viz., the necessity for constant observation of chronic cases with a view to the discovery if possible of new symptoms which will throw light upon their earlier stages and which may act as danger-signals, so that effective surgical interference may be carried out whilst there is every reason to expect a successful issue and before dangerous complications have arisen, or at least before they have reached such a stage as to render all our efforts ineffectual.

It only remains for me to thank you for the patience with which you have listened to what, I am well aware, has been but a feeble and ineffectual attempt to place this question before you.

PHYSIOLOGICAL OR FUNCTIONAL ALBUMINURIA.[1]

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THE problem of physiological albuminuria from its clinical side presents itself thus. A patient has albumin in the urine without any sign of organic disease, what is its significance and importance? The difficulty here lies, as it does so often in medicine, in applying general rules to the individual case The cases of albuminuria fall into two groups according as the cause lies in the kidney itself or not. Where the kidney is not itself the organ at fault the cause may be found in the heart or in abnormal conditions of the circulation, in blood changes or other general conditions, and in each case alike the cause may be obvious or not obvious. In a third group of cases the urine is normal when secreted, the albumin being added to it as it passes from the kidney to the exterior. The following table makes the classification plain:—

Cis- or pre renal { Cause obvious—e g. [illegible]
Renal... ... ... [illegible]
Ultra- or post-renal—accidental, from urinary or genital passages, &c.

Physiological albuminuria might, therefore, be described, as this table suggests, as albuminuria in which the cause is not obvious. This makes plain the indefinite character of this group of cases and the difficulties which attend the diagnosis.

The first thing to be done clinically in a case in which albumin is found in the urine is to exclude all accidental contamination—i.e., to make sure that the albumin is not added to the urine after secretion on its way from the kidney. In women such contamination is common from the vagina and uterus but it can easily be eliminated by obtaining a clear catheter specimen. There remain, however, in man and woman alike other accidental sources which are not so easy to exclude—e g., discharges from the urethra, the prostate, the bladder, the ureters, and the pelvis of the kidney. The presence, for instance, of a small calculus in the pelvis of the kidney may lead by its irritation to the occurrence of albumin, as it does of blood, without other symptoms of its presence. This is especially true of an oxalic acid calculus and even of oxalic acid crystals too. An extreme instance of this kind is the copious albuminuria attending an acute attack of gout, when for the first day or two the urine may be loaded with albumin which disappears as rapidly as it came when the attack subsides. Some of these accidental causes are by no means easy to eliminate. Supposing this to have been correctly done the next step is to exclude all cases where there are obvious lesions in the kidney or morbid conditions elsewhere in the body sufficient to explain the albuminuria—e g., morbus cordis, fevers, certain conditions of the blood, &c. This is generally not a difficult matter.

There then remains a group in which no cause can be found to which the albuminuria can be referred. The patient, therefore, is assumed to be healthy and the albuminuria is called physiological or functional. What physiological or functional albuminuria then means is that every care has been taken to find a cause but without success. It does not, however, follow that because a cause has not been found no cause exists and that the albuminuria is but an accident of health. Physiological albuminuria, therefore, is a diagnosis based partly on fact and partly on opinion. The fact is certain. The opinion may be open to question and its value depends upon the care which has been bestowed upon the investigation of the case. It is a pity, therefore, to use a term which seems to beg the very question which has to be proved. The term "functional" seems to me even more objectionable than "physiological" as being still more indefinite and vague.

Other terms have been suggested such as intermittent, cyclical, postural, and dietetic, but they are all open to objection. I think it would be best to discard the term physiological or functional altogether and to speak of the condition as *albuminuria in the apparently healthy*. This shows where the difficulty lies, for it is often impossible to be certain that the patient is in fact healthy.

Whether it be called physiological or functional the first inquiry which the name suggests is this: Does albuminuria occur under normal or physiological conditions? It is stated that albumin may be demonstrated in the urine of everyone in some such way as the following. Urine, in which the ordinary tests have failed to show albumin, is concentrated and the residue is dissolved and carefully tested. Then a trace, very minute it may be but still sufficient, may be demonstrated by delicate tests The explanation of this seems obvious. There is a constant shedding of epithelium throughout the urinary passages. If this epithelium be concentrated, collected, and dissolved it will, of course, give the reaction for albumin. After all this question is of academic interest rather than of clinical importance, for no one suggests that albuminuria is ever physiological in the sense that albumin may be demonstrable by the ordinary means in the unconcentrated urine of any and every one.

Statistics showing the frequency of albuminuria in the apparently healthy differ widely. Thus examinations made in the ordinary routine of out-patient practice yield a percentage of 1, 2, or 3 as the case may be. More careful examinations made *ad hoc* raise the percentage several points, it may be to 10. Again, frequent examinations at different times of the day may show albuminuria present at one time and not at another. In this way by careful examinations frequently made and with varied delicate tests the percentage may be considerably raised.

For the purpose of the Lettsomian lectures in 1899 I had a long series of observations made by the late Dr. Levison which yielded one of the highest percentages obtained—viz, 42. The analyses of these results are very instructive. First, it may be noted that of healthy persons nearly 60 per cent. show not the slightest trace of albumin with any test at all. Of the 40 per cent., in nearly one-half the form of albumin was not serum albumin but nucleo-albumin, and that *only in very minute trace*. Of the 20 per cent. in which the albumin was serum albumin, in about one half the trace was so minute that it would have been overlooked in ordinary examination. Thus we arrive at 10 per cent. in which the albumin would have been discovered by the ordinary methods of testing—a percentage which is not far removed from that of ordinary experience. Finally, even in this residue of 10 per cent. the amount was in most cases extremely small. The frequency of albuminuria varies considerably at different ages. Of healthy infants 10 per cent., it is said, present albuminuria and among the somewhat older patients of a children's hospital it has been shown in about 20 per cent. The most abundant statistics are for the period of school life among boys—and after that for young adults—when the percentage may reach as high as 20 or so. Albuminuria stands at its lowest level about the age of 25 years and from that period continues to rise regularly and rapidly with the age.

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[17] Medical Record, August 9th, [illegible]
[18] [illegible]
[1] A paper intr[illegible] Society of London on Dec. 14th, [illegible]

Functional albuminuria is very often intermittent and varying in amount. It has sometimes been called cyclical but the regularity of its recurrence depends upon the regular recurrence of the cause—such as changes of posture from the recumbent to the erect position, as on getting up in the morning, exercise, diet, digestion, bathing, exposure to cold, &c. In most healthy persons, however, none of these conditions is competent to excite albuminuria. There must therefore be some other cause or peculiarity which determines it and careful clinical investigation will in many cases succeed in finding one. It is, of course, dangerous to make a diagnosis of disease upon a single physical sign. But the converse is also true and it is equally dangerous to assume that because no other abnormal sign can be discovered the one physical sign present can be disregarded and the individual pronounced healthy.

I now turn to some of the more special difficulties which arise in practice.

1. *The fact that albuminuria is intermittent, occasional, or cyclical is no proof that the kidneys are sound.* In a case which is convalescent from acute Bright's disease and presents no albuminuria while confined to bed, the albuminuria may return on getting up or be brought back by very slight causes, such as changes in diet, exposure to cold, &c. In fact, all the peculiarities of functional albuminuria may be reproduced. Here it must be agreed that the kidneys, though getting well, are not yet sound. Indeed, as convalescence proceeds the causes referred to fail to produce albuminuria and the recovery is regarded as complete. Of course, in most of these cases the albuminuria is associated with the presence of casts and cells, but, as stated, a few cells may be found in the urine of everyone and the real significance of a few hyaline casts is not yet agreed upon. Then, again, in granular kidney the albuminuria may be intermittent and may be absent for long periods of time and the urine contain few, if any, casts or cells.

2. Again, though in functional albuminuria the amount of albumin is tiny or but a small trace, this may be so in granular kidney; while in convalescence from acute nephritis, where convalescence is not complete, a small amount of albuminuria may persist without other symptoms for years. Even in functional albuminuria the amount is not always small. There are cases described, though they are rare, in which the amount was as much as one half or more.

3. Again, the clinical importance to be attached to the albuminuria varies greatly with the age of the individual. In newly born babies and infants albuminuria without obvious cause is by no means uncommon. The same holds good to some extent of older children. It is common experience that little children are easily upset by improper or impure food which, besides causing intestinal disturbance, rashes such as urticaria or erythema, and even fever, may lead to transient albuminuria. In fact, in young children all the functions are in a condition of instability. The organs and tissues are not seasoned and resistant; their condition is easily disturbed by slight causes which in older children and in the adult would produce little, if any, effect. On the other hand, the processes of growth and development are active and recovery is rapid and complete in children where in the adult it would be prolonged and often incomplete. Hence the experience in children cannot be applied without considerable qualification to more advanced periods of life.

4. It is between the ages of 15 and 25 years—that is to say, in boys at school and young adolescents—that functional albuminuria has been most frequently described. The statistics at these age periods are abundant and they prove that albuminuria is very common in apparently healthy young people. This is the time of rapid sexual development and naturally the albuminuria has been referred to this cause. The two facts are coincident but there is no reason whatever to believe that they are related. The same is true of masturbation; in this case, at any rate, what evidence is forthcoming is strongly opposed to such an explanation.

The boys at school who present what is called functional albuminuria fall into two groups: the one florid, full-blooded, vigorous lads with good or high pulse tension, the other pale, flabby, not well conditioned, and with low arterial tension. The two groups probably present differences in the pathology and prognosis and demand different treatment and management. The significance of these cases can only be determined by watching their subsequent history. Some, the majority, get quite well soon. In some the albuminuria persists for a time but ultimately disappears, in others it is persistent, while in the residue signs of organic kidney *mischief ultimately reveal themselves.*

Speaking generally functional albuminuria in boys raises serious questions, for though many seem perfectly well and others get quite well still the fact that others do not get well and the difficulty of deciding to which category any individual case belongs introduce factors of uncertainty in forecasting its future. The practical question which is certain to be raised in these cases is this: "Shall the school life of the boy be interfered with?"—a question of very great gravity to the boy and his parents and of great anxiety and responsibility to the medical attendant. Unless there are special reasons in the particular case—and each case of the kind has to be settled not upon general principles but upon its own merits—careful consideration and the balancing of all the *pros* and *cons* generally end in leaving the boy at school under the careful and constant supervision of his medical attendant. The risk has to be run by the boy and fortunately in most cases the risk proves to be slight and the result is satisfactory.

5. In the young adult, up to the age of 25 years or thereabouts, the questions are the same but of still greater importance, as the answer given may involve the loss of an appointment or of the power to effect a life insurance, upon which much may depend. At this age period—i.e., between 20 and 25 years—the frequency of albuminuria stands at its lowest. After the age of 25 or 30 years the frequency of albuminuria rises as age advances and its significance becomes more serious. Its gravity is also more easy to demonstrate, for statistics bearing directly on the question are available from insurance offices. In my Lettsomian lectures I referred to some experience on this point and I may be excused if I reproduce some of the figures I then quoted to prove the increased risk there is in these cases and the necessity of protecting the life offices against them. From the data stated a calculation was made for me by an actuary to show approximately the difference in mortality compared with healthy males.

Ages attained.	Rate of following year.		Ages attained.	Rate of following year.	
	Rate from figures given.	Rate for healthy males.		Rate from figures given.	Rate for healthy males.
30	—	—	50½	3·70	1·97
32	1·53	1·06	52½	2·64	2·20
34	3·27	1·11	54½	3·74	2·13
36	3·33	1·16	56½	7·13	2·69

The numbers are, of course, too small to lay any stress upon the actual percentages, but the figures show in a general way how largely the presence of albuminuria raises the mortality as well in those below 40 years of age as in those above. This introduces the question which runs through all the age periods alike but becomes most pressing after the age of 30 years—viz., the existence of latent kidney disease, in other words, the relation of these cases to granular kidney. That this relation must be fairly close, closer than is generally thought, is demonstrated by the diagram which shows the curve of granular kidney and that of albuminuria to be of the same character.

In granular kidney it is known that the albumin in the urine may vary greatly in amount; that it is often a mere trace; that it may be absent altogether, even for long periods; that it may not be associated with casts or renal cells; and that in its occasional and varying character it may present all the features attributed to functional albuminuria. Further, granular kidney is a very insidious disease which may lie latent or be undiscovered for years. It is a disease of long duration and, though the period of greatest mortality is in middle life, it must, running the chronic course it does, have existed for many years previously. In other words, the beginning of granular kidney has to be looked for in quite early life. Thus many cases of advanced or fatal granular kidney occur under the age of 30 years, some are met with under 20 years, and a few even in children. Granular kidney has been even described in infants, but as it is not in accord with our general pathological experiences to believe that advanced fibroid degeneration of any organ can develop in a few weeks these cases in infants probably have a different pathogeny and may be attributed to some intra-uterine or congenital defect of development. Interesting as these cases undoubtedly are they do not affect the general point at present under consideration—viz., the fact that the commencement of the pathological process which leads ultimately to granular kidney must be referred to early life, even to the period of adolescence or puberty, the very age at which functional albuminuria is most frequently described.

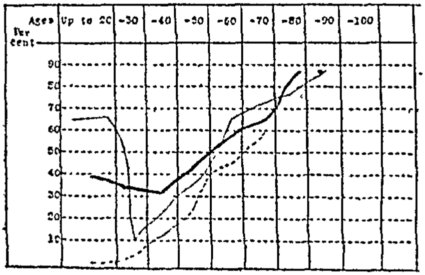

Diagram constructed from collated statistics given by Stirling (light line) and Levison (thick line). The dotted line shows the frequency of granular kidneys in proportion to healthy kidneys. It is drawn in accordance with Mahomed's figures.

If then there is no age at which granular kidney may not be present or be developing, it is evident that some of the cases of so-called physiological or functional albuminuria may be early cases of granular kidney in which the other signs of that disease are not yet developed, or in which that disease has been either not sought for or even overlooked. It is therefore important that in all cases of functional albuminuria careful search should be made for the signs of granular kidney. Of these signs, besides albuminuria, the most important is *arterial thickening (arterial sclerosis)*. Of arterial thickening there are two well-known forms—atheroma in advanced life and that associated with granular kidney in middle and early life. Besides these two there is no other widespread or general arterial sclerosis recognised. Arterial thickening is not uncommon in young people and it can hardly be due to atheroma. There is, however, in my opinion, one other form of arterial thickening which is met with in the young and lusty. This is probably a physiological hypertrophy. It is seen in athletes and is, I believe, due to a hypertrophy of the muscular coat of the larger arteries similar to that which occurs in the heart. I have seen not a few cases in which this seemed to be the only admissible interpretation. With this exception, however, so far as I know, arterial thickening in the young must always be looked upon with suspicion. Thickened arteries may suggest granular kidney when albumin is absent and albuminuria may be due to granular kidney when the arteries are not especially thick, but the association of the two conditions is very serious.

Thickened arteries are not sufficiently and systematically looked for in the young. If they were they would be more frequently found. In many of the statistics of physiological albuminuria no reference whatever is made to the condition of the arteries and this omission certainly goes some way to vitiate the importance of the figures given. If these con- [illegible] it conclude [illegible], the so- [illegible] appreciably increased risk to the life and that this risk increases rapidly with age. The rules which have been laid down are sound and fully justified—viz., to reject all such lives above the age of 40 years, to load them heavily between 30 and 40 years, to make some addition to every case under 30 years, and to wait awhile and to watch the cases in adolescence and youth. To which general rules may be added the still more important one to reject at once at every age those cases in which the albuminuria is associated with arterial thickening.

The conclusion of the whole matter may be summed up thus:—

1. Albuminuria may occur as a transitory symptom in persons who, except for this symptom, may be judged to be perfectly healthy, for they appear to be so at the time and remain so.
2. But it may also occur in persons who though they appear at the time to be healthy develop signs of disease subsequently.
3. It is difficult to distinguish at a given time between those who will remain well and those who will not.
4. It is difficult to exclude for certain many of the pathological causes to which the albumin might be due. In other words, though there may be no proof that these causes are present there is equally no proof that they are absent and in some cases the result shows that they were not absent.
5. Speaking generally, the larger the amount of albumin in the urine and the longer it persists the greater the probability of some permanent disease.
6. Continued observation of these cases shows that the so-called physiological albuminuria does very appreciably increase the risk of life and that this risk grows rapidly with every year of age after 30 years.

As the result of the foregoing proposition we are led to the general conclusion that functional albuminuria is never, strictly speaking, physiological at all, but that it is, on the contrary, always pathological though not necessarily renal.

Wimpole-street, W.

THE TERMINATION OF A CASE OF RECURRENT MAMMARY CANCER TREATED BY OÖPHORECTOMY.

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IN THE LANCET of June 11th, 1898, p. 1612, I published a report of a case of recurrent mammary cancer treated by oöphorectomy. The cancer was noticed and removed in October, 1890. At the end of 1896 it had recurred and had invaded the axilla and neck so extensively that removal of the recurrent growths was impossible. In March, 1897, the ovaries were removed. By September of that year none of the recurrent growth could be felt. The patient remained in good health until the autumn of 1901. During the greater part of September, October, and November she had evening pyrexia and perspirations, the cause of which was not found out although repeated careful examinations were made. In January, 1902, she again had evening pyrexia. In February she had an attack of pain in the region of the left kidney so severe as to need the injection of morphia. In March she began to suffer from epigastric pain after taking food. In October Dr. G. C. Tayler of Trowbridge, her medical attendant, discovered an oval, elastic, painless swelling in the line of the sagittal suture, near its anterior end, measuring about one inch by three-quarters of an inch. This increased slowly in size during the rest of her life. The epigastric pain continued and in January, 1903, she began to have dorsal pain. In March attacks of vomiting commenced and her feet became œdematous. There was then no albumin in the urine. Later fluid was felt in the abdomen. In May a little blood was twice present in the urine. Her breathing became so difficult that she could not lie down.

On June 1st she had retention of urine and Dr. Tayler was unable to pass a catheter because of her inability to lie down. The patient died on June 3rd. No necropsy was made but I think there can be little doubt that she died from recurrent cancerous growths in internal organs.

The result of oöphorectomy in this case was that it gave the patient four and a half years of good health. The cases in which up to 1900 oöphorectomy has been performed for inoperable recurrent mammary cancer have been brought together by Mr. Stanley Boyd. The broad result which they show is that in about one-third of the cases the patient obtained "more or less marked benefit," this benefit consisting of retrogression of the cancer and a period of a few months or years of good health. This is too much to be accounted for by chance.

A distinguished surgeon has said that he has "not the courage nor the faith" to propose this operation for inoperable mammary cancer. What he is afraid of I cannot imagine. The objections that I can understand being urged against oöphorectomy are three. First, the immediate risk to life. This in competent hands is very small; but even were it larger than it is the life of a patient with incurable cancer is not very valuable to herself. Second, the temporary suffering caused by the operation. Every abdominal section is followed by two or three uncomfortable days. This is not much in comparison with the possibility of benefit Third, the effect of removal of the ovaries on certain functions. This in a patient certain to die soon from cancer is not worth considering. Against these drawbacks we can tell the patient that there is one chance in three that the disease will retrogress and that she will have some months, perhaps some years, of good health. I agree with Mr. Boyd that in cases of inoperable mammary cancer oöphorectomy ought to be offered to the patient. The drawbacks and the possibility of benefit should be put before her and she should be allowed to choose. And I think that if she asks the surgeon to help her to decide he should advise her to have it done.

Harley-street, W.

THE PREPUTIAL OR ODORIFEROUS GLANDS OF MAN.

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AND
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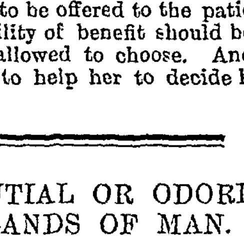
In a considerable proportion of males in whom some slight degree of hypospadias is present certain curious and symmetrical markings are to be seen on each dorso-lateral aspect of the prepuce. These markings, which are represented in Fig. 1, consist of two or more crescentic reddish lines which meet above at a dorsal angle or fornix and below towards the frænum of the prepuce at a ventral fornix. They may be styled from their shape and appearance "preputial ocelli." In the oval area between the reddish lines are elevated folds on which may be seen minute openings and frequently the short stumps of hairs. An occasion arose which gave us an opportunity of examining microscopical sections through one of thes preputial ocelli. We found it studded with large wide-mouthed sebaceous glands. A reference to literature gave us no clue as to their nature; all text-book agree in stating that the skin of the distal two-thirds i destitute both of hairs and sebaceous glands. From th regularity of their form and the frequency of their occurrence in conjunction with hypospadias (they were wel marked in the last nine cases of hypospadias with hooded prepuce examined at the Lock Hospital) we had no doub that these markings were neither accidental nor pathologica but were probably remnants of some structure or organ o which we were ignorant.

Fig. 1.



Dorsal aspect of a penis in a case of hypospadias, showing the ocelli on the prepuce.

The first real clue as to the nature of these preputia ocelli was obtained from the examination of the foreskins o rodents. On the prepuce of developing rats and mice,[1] long before that structure has risen into a fold to cover the glans a circular area of epithelium grows downwards into th subcutaneous tissue of the penis and in the course o development forms a compound sebaceous gland quite a large as a sultana raisin. When the foreskin rises into a fol the duct of the preputial gland opens just inside the fre margin of the foreskin. Its secretion gives rise to a peculia odour. This gland in mice and rats is evidently formed by the submergence of an area of sebaceous glands. In the pig a preputial gland is formed in the same manner. In th rabbit there is a series of sebaceous glands round the margin of the vulval orifice, but one of them in a recess behind th fold that represents the prepuce is especially large an secretes a substance with a characteristic odour. In the cat and in most members of that tribe the sebaceous glan which secretes the sexual odoriferous substance is derived from the circumanal and not from the circumvulval series, and lies inside the margin of the anus. A more extended research showed that throughout the mammalia, and to thi law man is no exception, there is a fringe of specialised sebaceous glands surrounding the anal and urogenital apertures, which are functionally odoriferous glands and ar connected with the sexual system. With castration, b these glands round the anus or round the urogenital openings, they cease to secrete their characteristic substances.

At first our search for the preputial glands in primates, animals much more nearly allied to man than those above cited, was disappointing; an examination of human embryos at all stages of development was also, at first, without result, because we did not know where or what to look for. The first real evidence we found of them was in certain South American apes and it was not in the males, but in the prepuce of the clitoris of the females that we came across the same markings and structures as we found in the prepuces of hypospadiac man. The skin of the penis in apes and anthropoids is covered with hair and ordinary sebaceous glands. We ought to have recognised that the correlation of the ocelli with hypospadias indicated that the condition was to be sought for in the female—for hypospadias is undoubtedly a partial inheritance of a female condition.

On turning to the condition on the prepuce of the female these ocelli, sometimes poorly marked, but frequently very distinct, were always to be seen (Fig. 2). On the lateral aspect of the prepuce, in the neighbourhood of the frænum preputii, an area of large sebaceous glands was constantly found on microscopical examination, although to the naked eye they may appear to be absent. They do not occur on the dorsal aspect of the prepuce or on the skin along the dorsal aspect of the clitoris Dr. Robert Keith found them to occur on both aspects of the labia minora, an especial group being situated at each side of the clitoris in the depression between the prepuce and the labium majus. They vary greatly in development in different women. The inner aspect of the labia majora is studded with them. In a series of cases kindly inspected for us by Mr. Charles Gibbs at the Lock Hospital the following conditions were observed.

Case 1.—The patient was a quadroon, married, aged 28 years. There was a well-marked preputial fold but no evidence of glands.

Case 2.—The patient was single, aged 20 years. The prepuce and anterior extremities of the nymphæ were united into a ridge. There was no evidence of glands.

Case 3.—The patient was married, and aged 38 years. The prepuce was well marked, the clitoris being small. The upper part of the vestibule beneath the clitoris showed two small blind holes in the mid-line, which represented the lacuna magna There was no evidence of sebaceous glands.

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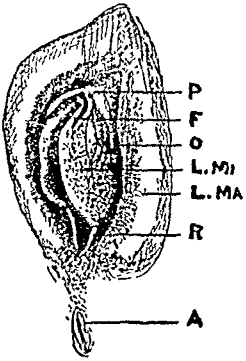
[1] Mr. C. B. Lockwood very kindly placed his splendid embryological collection at my disposal.—A. K.

CASE 4.—The patient was aged 22 years, single. There was a rudimentary clitoris. The prepuce and crura were represented by a slight elevation on each side, with a depression in the centre. There was no evidence of sebaceous glands.

FIG. 2.



Vulva of a human fœtus in the seventh month. The area is faintly stippled in which sebaceous glands are found. P, Prepuce. F, Frænum. O, Ocellus. L.MI, Labium minus. L.MA, Labium majus. R, Retinaculum. A, Anus.

CASE 5.—The patient was aged 23 years, married. There was a large clitoris; the crura and prepuce were well marked; no evidence of sebaceous glands was present.

CASE 6.—The patient was aged 24 years, married. The clitoris was well marked, the crura passing down into the nymphæ. There were a slight ridge under the pink mucous membrane and a hooded well-marked prepuce. Under the lens the appearance was like a ridge of sebaceous glands.

CASE 7.—There were two distinct rows of glands, six in the external, four in the internal row in the angle between the prepuce and the labium majus; all the genitalia were more greasy-looking than usual

CASE 8.—The patient was single, aged 22 years. In the angle between the prepuce and the labium majus were four well-marked glands on the left, not so obvious on the right.

CASE 9.—The patient was married, aged 24 years. The nymphæ were covered with sebaceous glands which extended to the prepuce. On the left side was a row similar to that in Cases 7 and 8. The whole [illegible]

CASE 1[illegible]

CASE [illegible] The sebaceous glands in the angles between the labium majus and the prepuce were continuous with those of the nymphæ.

CASE 12.—The patient was a half caste negress, single, aged 29 years. She had a well marked prepuce and clitoris. There was a large number of sebaceous glands on the nymphæ, extending to the edge of the prepuce; none were present on the prepuce.

CASE 13.—The patient was a blonde. There was no pigmentation about the vulva. No sebaceous glands could be seen. In brunettes they are better marked.

CASE 14.—The clitoris, prepuce, crura, and anterior extremity of nymphæ were united *into a curved ridge*. There were one or two depressions in the vestibule like the orifices of glands.

CASE 15.—There was a pale pink mucous membrane. No sebaceous glands could be seen.

CASE 16.—The same conditions were present as in Case 15.

CASE 17.—The patient was single. Sebaceous glands were present in the angle between the labium majus and the prepuce but none on the prepuce. The genitalia were very greasy.

CASE 18.—The patient was married. There were sebaceous glands extending up to the clitoris.

CASE 19.—The patient was married. The prepuce was well marked; there were no sebaceous glands.

CASE 20.—The patient was single and aged 21 years. The sebaceous glands were well marked in the angle between the labium majus and the prepuce, also on the prepuce.

CASE 21.—The patient was single. There were well-marked sebaceous glands from the hair of the mons Veneris to the prepuce. These were huge and arranged in parallel rows. She had an atrophied uterus and her breasts were wasted. One ovary was removed five years ago.

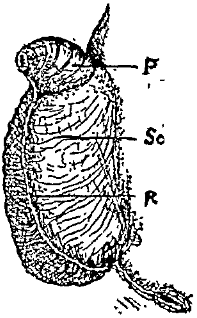
CASE 22.—There were a large prepuce and clitoris, with smegma. No sebaceous glands were to be seen on the prepuce.

CASE 23.—The patient was single and aged 22 years. There was a well-marked bunch of sebaceous glands extending to the prepuce.

In the male department out of 504 cases examined during the months of July and September, 47 cases, or 1 in 10·7, were found to have abnormally placed meatus. 13 of these showed two or more openings through which the urine was passed. Since the end of May we have seen nine cases as depicted in Fig. 1. One of the nine showed two well-marked ridges extending from the ventral fornices, downwards, to be lost behind the misplaced meatus urinarius.

With this knowledge of the distribution of the sebaceous glands in the female to guide us we found that there was constantly present in the skin of the penis a series of glands beginning in the ventro-lateral aspect of the prepuce (see Fig. 3) and stretching backwards along the ventral aspect on each side of the raphé and ending in the ordinary sebaceous glands at the root of the penis and base of the scrotum. This gave us a clue to certain vexed points concerning the homology of the labia minora in the male. In the male these folds grow together on the ventral (perineal) aspect *of the penis; the series of sebaceous* glands on the ventral aspect represents the glands of the labia minora in the female. The retinacula of the labia minora, shown in Fig. 2, are the only parts which directly assist in forming the floor of the male urethra. Thus the conclusion we were led to concerning the nature of the preputial ocelli, found in cases of hypospadias, is that they are, like the condition of hypospadias itself, inherited from the female. In the same manner the male inherits the nipple and breasts and the rudiments of a vagina and uterus, and further, that the circumvulval or odoriferous glands of man are similar in nature to the corresponding glands of mammals, but in him they are developed in the female and only represented as rudiments in the male.

FIG. 3.



Side view of the penis and scrotum of a child at full time. The area is faintly stippled in which sebaceous glands are found. P, Penis. SC, Scrotum. R, Raphé.

In the course of this research we failed to find any trace of Tyson's glands which have been described in every text-book of anatomy published since Tyson's time. *To quote from* the last edition of Quain's Anatomy: "Numerous sebaceous glands are collected round the cervix of the penis and corona glandis; they are named the glands of Tyson or glandulæ odoriferæ, their secretion having a peculiar odour." It shows the strength of the faith of anatomists that they have for nearly two centuries described glands which have not, and never had, an existence. Further, there is no written evidence that Tyson ever described or observed such.

On turning to a paper by Professor Tandler and Dr. Paul Döměny[2] we found that a number of leading continental investigators had denied their existence from time to time during the last 20 years; they, however, had failed to find sebaceous glands in the prepuce as well as in the corona of the glans or the neck of the penis. They describe, however, a number of cysts in the neighbourhood of the frænum preputii.

Whence, then, comes the smegma which is found beneath the prepuce? It certainly is not secreted by glands. Before discussing its origin it is necessary to turn to the development and nature of the prepuce. Rather more than two years ago Dr. D. Berry Hart published in the *Journal of Anatomy and Physiology* an excellent paper dealing with the morphology of the human urino-genital tract. In that paper he set forth quite a new view of the development of the prepuce. Up to the time he published his paper everyone regarded the epithelium which joins the prepuce to the glans penis as having been buried there by the growth of the prepuce forwards over the glans. He, on the other hand, regarded the epithelium as a solid ingrowth, which starting from the neighbourhood of the meatus urinarius, shelled off, as it were, a layer of skin to form the prepuce. One of us accepted that view and gave it prominence in a text-book on embryology. But on investigating the matter we found that the old account is the correct one—namely, that the prepuce is formed as a fold that rises up and grows forward like a hood over the glans. As the prepuce grows forward three changes occur: (1) a new epithelium is formed on its deep surface, the lining cells arising from the epithelium covering the neck of the penis; (2) deep ingrowths of epithelium take place during the last month of fœtal life into the free margin of the prepuce which is thus thrown into folds (if this process is arrested phimosis is the result); and (3) that in the lateral aspects of the penis ridges of epithelium grow into the prepuce and give rise to folds. In cases of hypospadias in the male, and as a normal process in the female, these ingrowths are few in number and limited in extent. It is these ingrowths which give rise to the red lines seen in the preputial ocelli. The epithelium which covers the neck of the penis and lines the prepuce is of a peculiar nature. It is clearly allied in structure and nature to the epithelium which forms the sebaceous glands. When the cells desquamate they are transformed not as are the cells of the skin into a corneous substance but into a substance closely allied to sebum—smegma.

The skin of the penis of man is peculiar in being destitute of hairs. In that man differs from every other primate. This we believe is due to the fact that the skin on the dorsum of the human penis is, comparatively speaking, an insertion or new growth that separates the prepuce from the skin over the symphysis pubis. The origin of the dorsal skin of the penis characterised by the absence of hairs and sebaceous glands may be related to the posture in which connexion is effected in man.

CARCINOMA OF THE DUODENUM; RESECTION; RECOVERY.

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Carcinoma of the duodenum is rare; according to Ewald out of 1148 cases of carcinoma of the intestine only 19 were in the duodenum. "If a malignant tumour is found obstructing the duodenum, resection is practically impossible."[3] The following case in which a constricting carcinoma of the duodenum was successfully removed is therefore of interest.

A man consulted me on April 3rd, 1903, complaining of "indigestion." He stated that his age was 40 years and his occupation that of a farmer; he was married and had four healthy living children; his wife was healthy and had had no miscarriages. He was perfectly well up to two years previously when he was suddenly attacked with a violent pain which he located to a point a little to the right of the mid-line of the abdomen just above the navel. He also vomited several times. The attack lasted for some hours and gradually passed off. Ever since he had felt a sense of discomfort after taking food. About 12 months previously he had had another attack of vomiting after drinking whisky, and on several other occasions the same thing happened, so he gave up whisky. Some six months previously he found that he vomited some hours after eating, his food being rejected partially digested no matter what its nature. He also felt pain and discomfort after food which were relieved when he vomited. These attacks of vomiting gradually increased in frequency until they occurred daily. He had no actual pain, had a craving for food, and had tried all kinds of food with the same result. The vomit had never contained blood or bile. His weight 12 months previously was 10 stones 8 pounds; now it was 9 stones 9 pounds. He was distinctly emaciated; no tumour could be felt in the abdomen and the stomach was dilated, with distinct splashing. The heart and lungs were normal. The urine was acid, of specific gravity 1018, and contained neither albumin nor sugar. The knee jerks and other reflexes were normal. The diagnosis made was pyloric obstruction probably due to malignant growth and operation was advised. The patient was most indignant at what he regarded as a "cold-blooded proposal" and declined to have anything done in spite of careful explanations.

On August 3rd he sent for me to see him. I found him in bed, extremely emaciated, and so weak that he could hardly stand. He had been trying all kinds of quacks and latterly had been under the care of a practitioner who had finally advised operation. I was still unable to detect any tumour. On August 5th he was anæsthetised with chloroform by Mr. A. N. McArthur. Assisted by Dr. D. M. Morton I opened the upper abdomen in the middle line. The stomach was dilated but otherwise appeared to be free from disease. Further examination revealed a hard thickening of the third portion of the duodenum, with infiltration of the adjacent glands; above the thickened portion the bowel was dilated. It was decided to remove the growth. Sterile gauze, wet with hot sterile saline solution, was packed round; clamps were applied above and below the growth, and then rubber-covered Kocher's clamps on healthy bowel farther away. The intestine was divided between the clamps and removed with the affected gland *en masse*. Bleeding vessels were caught in compression forceps as they were cut and subsequently ligatured with silk. The cut edges were cleaned with dry sterile gauze and then approximated. A continuous silk suture was passed through all the coats, uniting the edges, some little difficulty being experienced owing to the difference of calibre. The line of union was then invaginated with another continuous silk suture—seromuscular where the bowel had a peritoneal coat and muscular only where there was no peritoneum on the posterior surfaces. The abdominal incision was united with interrupted silkworm-gut sutures, including skin, aponeurosis, and peritoneum. A high enema of one pint of saline solution and one ounce of brandy was given on the table.

The patient rallied well and had no vomiting. He was fed with saline and nutrient enemata alternately for the first 36 hours. Thereafter sterilised water, brandy and water, plasmon, peptonised broth, and milk were given by the mouth in amounts of half an ounce every two hours. The amounts were gradually increased and given at longer intervals. Alternate sutures were removed on the twelfth day and all the sutures on the sixteenth day, when the wound seemed to be firmly healed. On the twenty-first day, however, the scar yielded and some omentum protruded at the lower part. The wound was re-sutured and eventually healed firmly. The patient gradually gained strength, resumed his ordinary diet, and returned to his home in the country. On Oct 30th he came to town and saw me The scar was quite firm with no sign of hernia, he could eat ordinary diet with no discomfort, and his weight was 10 stones 2 pounds.

The following report was received from the pathological department of the University of Melbourne. "The specimen consists of a portion of duodenum about three and a half inches long. At its centre it is constricted and thi [illegible] and above this the bowel is dilated and shows signs of chronic irritation; below the intestine is normal. The strictured portion is one and a quarter inches long and its wall is three-eighths of an inch thick. It is of firm consistence and there is practically no ragged ulceration in lumen. The peritoneum is thickened over the growth and an enlarged gland is adherent to the peritoneal surface which is much wrinkled and looks as if numerous adhesions had been torn through. Microscopically the central thickened part is invaded with columnar carcinoma down to the circular muscular layer. On each side the carcinomatous infiltration extends, gradually diminishing as it is traced up and down until the muscularis mucosæ becomes intact. The carcinomatous tissue occurs in large masses with an attempt at alveolar formation. The central part of the stricture has no epithelium on the surface, which is formed of a band of fibrous tissue (with epithelial cells just below) The nuclei of the connective-tissue cells in this part are elongated, *indicating long-standing disease. The epithelial cells are of* a low cubical type and do not stain well. The vessels are not numerous and are fairly thick-walled, especially the inner coat The most noticeable point in the section is the great development of connective tissue, causing the firmness of the stricture and probably indicating relative chronicity."

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[2] Wiener Klinische Wochenschrift, 1898, p. 555.

[3] Operative Surgery of Malignant Disease, Butlin, second edition, p. 268.

Melbourne.

ON THE QUESTION OF TRYPANOSOMA INFECTION IN MAN.[1]

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AND
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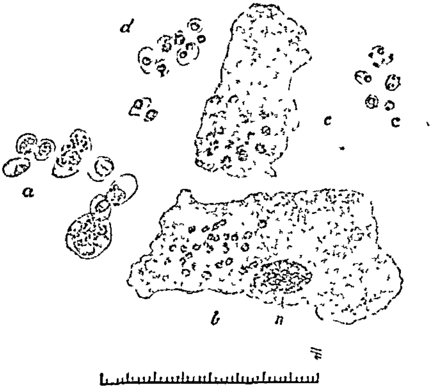
THE articles of Leishman,[2] Donovan,[3] and Ross[4] prompt us to make the following communication. At a meeting of the Medical Society of Leipsic on Feb. 3rd, 1903, *there were exhibited by one of us (Professor* Marchand) microscopical preparations of the spleen, the liver, and the marrow from a peculiar case of splenomegaly accompanied by anæmia which was discussed in relation to the so called Banti's disease.[5] The case occurred in a man, aged 23 years, who had previously been quite strong and had taken part in the Chinese campaign. During the course of the war, however, and for eight months after its close he had enjoyed good health. About the end of January, 1902, he was taken ill in Leipsic, his complaint being loss of appetite and weakness. Towards the end of February attacks of headache and sweating began to intervene, occurring in a regular fashion every morning and afternoon. These symptoms were succeeded about the end of April by hoarseness and cough, for which he sought treatment in the clinic for diseases of the throat. Under *suspicion of malaria* the patient on June 7th was transferred to the Internal Medicine Clinic of Geheimrath. Professor Curschmann (St Jacob's Hospital). Here the presence of an already extreme enlargement of the spleen was verified (its length being 23 5 centimetres) Repeated examinations of the blood with a view to the discovery of malarial parasites were always followed by a negative result. *In the meantime* the patient suffered continually from fever which was partly of a remittent and partly of an intermittent character but conformed to no regular type. Further, severe anæmia and diarrhœa set in. In the beginning of August tubercle bacilli were found in the sputum, a phthisical process in the left lung gradually developed, cystitis intervened and death followed on Dec. 12th.

At the post-mortem examination, which was performed in the Pathological Institute, there were revealed advanced disintegration of the left lung, dysenteric and tuberculous ulcers in the large intestine, cystitis, pyelonephritis, and *an extreme enlargement of the spleen (length, 28 centimetres; breadth, 15 centimetres; weight, 1750 grammes).* The latter was somewhat soft and of a dark greyish red colour, changing in parts to a lighter hue. The liver showed a reddish-brown colour and slight enlargement and the bone marrow was red. Film preparations from the spleen were unfortunately not made and the examination of the blood from the cadaver showed, apart from the anæmia no important changes.

All the more surprising therefore was the result of the microscopical examination of sections of the spleen, the liver, and the marrow after fixation in Müller's fluid with 5 per cent. formol and hardening in alcohol. In the cells of the spleen pulp were found an extraordinary number of peculiar bodies of about 1µ to 1·5µ in diameter and which stained intensely with nuclear stains (hæmatoxylin, carbol fuchsin, &c) These bodies at first sight reminded one of micrococci but under the higher powers of the microscope presented themselves in the great majority of cases as distinctly ring-shaped. Some of the pulp cells showed rather advanced degeneration of their nuclei. The portal capillaries of the liver contained very *numerous large cells of an amœba type which in many cases* completely blocked the lumen of the vessel. These large cells possessed in their interior besides their nucleus proper a very large number of the same small bodies above described which frequently lay in larger clumps in vacuoles of the cell protoplasm. Very often, too, besides the small bodies the protoplasm of these large cells included leucocytes, sometimes not a few. The marrow likewise contained in addition to the usual marrow cells large numbers of the same huge amœba-like phagocytes which inclosed in their interior extraordinarily numerous small bodies of the same nature, as well as red blood corpuscles. It is to be noted, however, that the bodies were never found in the interior of the red blood corpuscles and that pigment formation was never associated with them Under high magnification the bodies exhibited surprisingly regular forms; the majority were of a signet-ring shape with a clear centre; in a large number of them there lay beside this ring shaped chromatin body a second and much more intensely stained (especially with carbol-fuchsin) dot of rounded or slightly elongated contour and which sat directly on the larger body or was separated therefrom by a small space. Generally this smaller body was situated with its long axis perpendicular to *the surface of the larger or sometimes also tangential to it.* Many of these bodies, and not only those lying in the cell vacuoles but also those which are to be found not infrequently lying free amongst the cells, were surrounded by a very fine faintly stained roundish or somewhat elongated halo of from 2µ to 3µ in diameter. (*Vide* diagram, copy of a drawing shown to the Leipsic Medical Society.)



Explanation of diagram —*a*, Several marrow cells (magnified 460 times). Some of the large cells contain the small ring-shaped bodies and one of them also contains vacuoles. *b* and *c*, Two large phagocytes from the marrow containing numerous bodies which show in part signs of rather severe degeneration (only a portion of the same is shown in the diagram). *d*, Several isolated bodies from the marrow with their inclosing halos. *e*, Similar ones from the spleen (from *b* to *e* magnified 1250 times). These bodies gave us the [illegible] familiar to us [illegible] like them bef[illegible] thing to do with malarial plasmodia proved quite unentertainable, when in support of it one had to consider the history of the *case as* well as the course of the fever, although certain doubts still remained as to whether some unknown form of malarial parasite, or, failing that, some quite strange protozoon, might possibly be present.

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[1] Translation of [illegible]

For lack of some fixed starting point Professor Marchand in the above-cited address on Banti's Disease believed it incumbent upon him to give it as his opinion that the bodies represented the product of degenerated cell nuclei. For this view the appearance of the cells of the spleen pulp seemed specially to speak as in certain situations their nuclei presented a disintegration to all possible forms of granules and shreds of chromatin substance which exhibited apparently all transition stages to the ring-shaped bodies lying amongst them. Still, the discovery was characterised by Professor Marchand as a yet unsolved riddle. The condition of the marrow and liver where no signs of nuclear degeneration were present served always to cast doubt upon the view that the bodies might represent nuclear products; the oft-repeated and thorough examination of the bodies served to make their parasitic and protozoic nature still more certain. At the conference of the Deutscher Naturforscher und Aerzte in Cassel Professor Marchand demonstrated the bodies to the German Pathological Society on Sept. 25th, 1903, but none of those present could decide as to the nature of the bodies. So also Professor Korschelt and Professor Brauer in Marburg and Professor Chun in Leipsic, who were good enough to make a personal examination of the preparations, were unable to give a decided opinion. These gentlemen also had no doubt as to the parasitic nature of the bodies.

Unfortunately the cited communications in the *British Medical Journal* did not come to our knowledge till the end of November. The identity of the bodies found by Leishman in film preparations of the much enlarged spleen of a soldier who succumbed to a peculiar form of tropical fever in the cantonment of Dum Dum near Calcutta, with those discovered by Donovan of Madras in April, 1903, in film preparations of the spleen (three times post mortem and once after splenic puncture during life, later repeated) can no longer permit of doubt after Leishman's exact description. Demonstration of the bodies in sections seems generally to have met with failure, while in our case their demonstration presented no difficulties. Leishman is of opinion that the bodies found by him in the spleen pulp are degeneration forms of that species of trypanosomata which were first discovered in man not long previously by Dutton[6] in the case of a woman who had been infected in the Gambia region. He believes himself, therefore, forced to admit that trypanosoma disease occurs also in India, while this conclusion is still doubted by Donovan from the fact that no trypanosomata were found in the peripheral blood of the case examined by him during life. Leishman explains the appearance of the bodies in the following way. The trypanosomata lose their undulating membrane and the flagellum and only the shrunken macronucleus with the micronucleus remains behind. As a matter of fact, he was able to convince himself of the successive changes in this process after death in rats infected with Trypanosoma Brucei. Ross, as a result of his examination of Donovan's preparations, finds certain difficulties in accepting Leishman's view because, according to him, in the case in which remains of trypanosomata were concerned, at least isolated flagella must still have been present. Leishman[7] replies to Ross's objections on good grounds apparently. The reddish-stained rings round the chromatin body which were found in the preparations which Donovan made during life, and which gave support to the conclusion that these chromatin bodies were situated inside red blood corpuscles, might very well represent cysts or capsules. Still, up to the present Leishman considers it impossible to decide whether the small bodies are new parasites or really altered trypanosomes. Laveran,[8] who also had occasion to examine Donovan's preparations, believes that we have here to do with a new hæmatozoon which has no relation either to malaria or to trypanosoma and is to be referred to the genus piroplasma. He proposes the name piroplasma Donovani, but all the same gives the priority of the discovery to Leishman. (N.B.—The bodies were first described by Professor Marchand. We do not, however, lay great stress on this fact as Leishman has the honour of having recognised their relationship to trypanosoma.) Laveran found the parasites lying partly free and partly inclosed in red blood corpuscles. They were pear-shaped or oval, from 2·5 μ to 3 μ long and 1·5 μ broad, with a larger karyosome and a smaller accessory one which at times was joined on to the first by means of a short pedicle. The infected blood corpuscles, however, no longer stain like normal ones but are, as it were, washed out. These pale rings are surely identical with those above described in our case but which we could not recognise as being remains of red blood corpuscles but as constituent parts of the parasites themselves. Now, while we lay great value on the judgment of so great an authority on protozoa as Laveran we should not like to omit to mention in this connexion that Laveran and Mesnil themselves in their work on Trypanosoma Lewisi,[9] Plate XI, Figs. 10 and 15, describe changes in these parasites as a result of phagocytic inclusion by leucocytes which at least are very like those described by us. The slight difference in size (in Fig. 10) may well be due to an earlier stage in the change or to a difference in species. If then, as we consider probable, our case had also to do with a trypanosoma infection, we have certainly to admit that the infection took place during the patient's sojourn in China. On the strength of the correctness of the patient's history such a long latent period is certainly very extraordinary. On the other hand, the possibility of a like infection also in our neighbourhood (Leipsic) would not altogether be excluded although in the present case which occurred in winter it would be more than improbable. The case will be described in greater detail later.

The following additional facts relating to this important case have been ascertained quite recently by Professor Marchand. He says: "The stepfather of the deceased made in response to my inquiry the following important statements (which were in no way influenced by me). His son had been a soldier at Peking and had lain for a considerable period before the great walls. During the course of a long march he had received a fly bite on the foot, as a result of which his leg swelled enormously so that he could not draw on his boots and lay for about eight days in the lazaret. Of the further course of the illness nothing is known by his parents. On his return to Germany the deceased made a short stay of about three months as night watchman in the barracks in the vicinity of Leipsic, and though his disposition is said to have shown a change to a peevish morose type he was not considered to be really ill."

A CASE OF LOBAR PNEUMONIA IN WHICH THE PHYSICAL SIGNS PERSISTED FOR EIGHT WEEKS ACCOMPANIED BY A VERY IRREGULAR TEMPERATURE.

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LATE HOUSE PHYSICIAN TO THE METROPOLITAN HOSPITAL.

A WOMAN, aged 32 years, was admitted into the Metropolitan Hospital on June 8th, 1903. She was taken ill on June 3rd with a "shivering fit," severe headache, and pain in the right side. On the 4th she was feverish and was suffering from sharp pain in the side and cough. From this date until admission the temperature was high, up to 104° F. off and on. No phlegm was brought up. Her previous history was to the effect that she had ovariotomy performed 12 years previously and that she had suffered from pleurisy on the left side three months previously. Her parents were dead; one sister suffered from phthisis.

On June 8th she complained of great pain in the right side. She looked ill but was not cyanosed. Her temperature was 102·8° and her pulse rate was 120. Her respirations were 60 per minute and rapid and shallow. She coughed a good deal but brought up no phlegm. Her chest was of good shape moving rapidly, but the expansion of the right side was deficient. Her heart was natural. Examination of the lungs yielded the following results. On the left side the note was good; the breath sounds were vesicular and clear. On the right side in front there was impaired movement; the note was good over the upper three intercostal spaces but below it was much impaired. A friction rub was felt and heard in the third, fourth, and fifth spaces. Many crepitations were heard also in these spaces. On the right side behind the note was good; the breath sounds were vesicular over the upper two-thirds of the chest, but below the note was impaired and the breath sounds were weak. On auscultating the larynx expiration was noted to be much louder and longer than inspiration. The abdomen showed a linear scar of laparotomy but was otherwise natural. The urine was of specific gravity 1025 and acid; it yielded a slight cloud of albumin; the chlorides were diminished. On the 10th the patient remained much about the same as above described. In the morning she coughed up a little viscid phlegm (not rusty). Her temperature was 104°; her pulse and respirations were respectively 126 and 48 per minute. In her right chest in front there was less friction; behind, the note was much impaired over the base up to the mid-scapular region; loud bronchial breathing, bronchophony, and many crepitations were heard. On the 12th her temperature was 102 6°; her pulse and respirations were respectively 144 and 48 per minute. Over the right upper lobe behind the note was impaired and some crepitations were heard. On the 15th the patient was a little better in the morning, although the signs of consolidation of the right lung persisted. At 6 P.M. she was perspiring freely. Her temperature was 98 4°; her pulse and respirations were respectively 120 and 48 per minute. On the 25th it was noted that the temperature had not risen above normal since the 15th. Both lungs were now apparently clear in front. Behind on the right side the signs of consolidation still persisted over the upper half of the chest but the lung was resolving below; the note was good; some moist sounds were heard. On the 27th the cough was very troublesome. It was noted that the temperature rose on the previous night to 101°. On the 29th the temperature was high. Some crepitations were heard over the third and fourth right intercostal spaces after coughing, otherwise the physical signs were as noted on the 25th. On the 30th, just before 6 P.M., the patient had a rigor lasting about half an hour. Her temperature rose rapidly to 104° and her pulse and respirations were respectively 144 and 60 per minute. Her cough became frequent and distressing. On July 1st her morning temperature was normal but the signs of consolidation of the right upper lobe remained. From the 2nd to the 12th inclusive three grains of quinine were given nightly, while for the next three nights five grains of antipyrin were given. On the 6th it was noted that since the 1st a very irregular temperature had been present. On the previous night she shivered a short time before the temperature rose to 104°. The Widal reaction was found to be negative. The leucocyte count was 9800 per cubic millimetre. The condition of the right lung remained the same. On the 13th it was noted that every night the temperature ran rapidly up to 104° and that the patient usually had a slight shivering fit. On the 27th it was noted that the temperature had not risen above normal since the 23rd. The patient was now up half the day and was much stronger. The following physical signs were still present over the right upper lobe behind—namely, impaired note, vocal vibrations increased, bronchial breathing and many crepitations. On August 7th she left the hospital for a convalescent home, the temperature having been normal from July 21st. Her health has remained good since.

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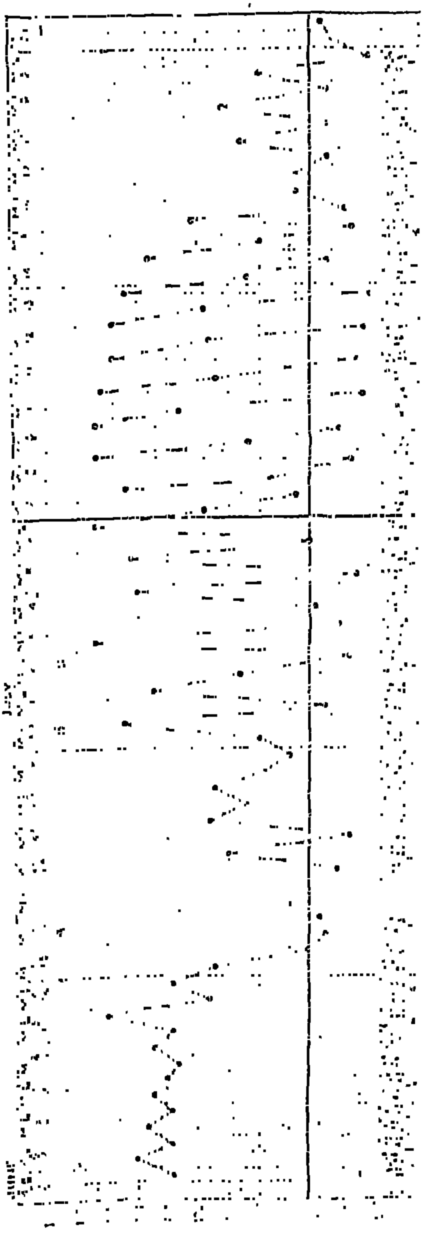
[6] Brit. Med. Jour., Sept. 20th, 1902.

[7] Ibid., Nov. 21st, 1903.

[8] Bulletin de l'Académie de Médecine, No. 35, 1903, p. 238.

[9] Annales de l'Institut Pasteur, 1901, vol. xv., p. 673.

The interest of this case, I think, lies in the rigors and the very irregular and high temperature which occurred ten days after the temperature had been normal, and also in the length of time taken by the right lung in resolving. The temperature chart and rigors suggested that the patient was suffering from septic absorption from a collection of pus somewhere. The chest was constantly examined for any signs of fluid. Empyema was of course, thought of, but as no physical signs of fluid were found a needle was not put into either pleural cavity. A leucocyte count on July 6th and 14th proved to be about 10 000 per cubic millimetre. This fact was not in favour of a collection of pus being the cause of [illegible] Empyema was therefore co[illegible] not the cause of the pa[illegible] amily history of phthisis and acute tuberculo-pneumonic phthisis was thought to be the most likely diagnosis, and in consequence a very unfavourable prognosis was formed. As there was no sputum the diagnosis could not be confirmed. The Widal reaction was negative and typhoid fever was therefore excluded. The diagnosis of acute tuberculo-pneumonic phthisis evidently was wrong. The rigors and very erratic temperature from June 30th to July 16th were therefore probably due to



A, The temperature remained normal until June 26th. B, Rigor.

the absorption of toxins from the delayed resolution of the right lung. I have to thank Dr. Arthur T. Davies (under whose care the patient was in the hospital) for permission to publish the case.

Petersfield.

ATMOSPHERIC TEMPERATURE AND SMALL-POX.

BY DAVID SIVEWRIGHT, M.A., M.B., CH.B., D.P.H. ABERD.

IT is generally recognised, I think, that there is some connexion between the atmospheric temperature and the incidence of small-pox cases. During the epidemic in London in the winter 1901–02 I collected from the *Standard* a series of statistics from which I have made calculations bearing on the point. I have taken weekly averages of the maximum shade temperature and the minimum shade temperature, also similar averages of the admissions of cases to the hospitals of the Metropolitan Asylums Board. Allowing 12 days for incubation and an average of two days for the cases to be recognised and sent off I have compared the averages of temperature of one week with those of the admissions on the third week following I find on putting these numbers on charts that a rise in the number of cases generally corresponds with a fall in temperature, and *vice versâ*. The correspondence of each rise in the number of cases with a fall in temperature is not absolute, at the same time I think it is sufficient to warrant the assumption that the relation is more than a casual one. I have also in the same way compared the maximum solar radiation in vacuo with the cases admitted and find that the correspondence is even more striking in this case. The accompanying charts illustrate the article.

Catford, S.E.

CHART 1.

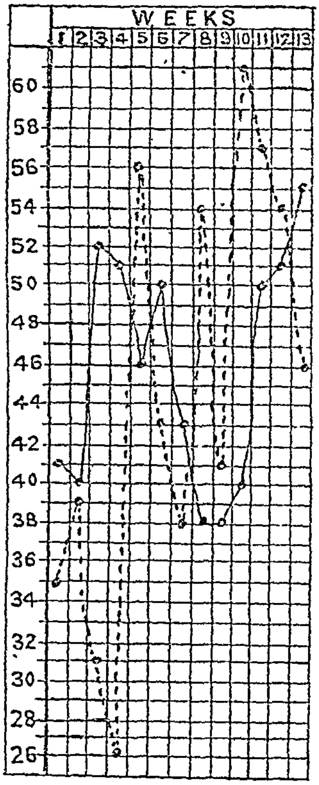


CHART 2.

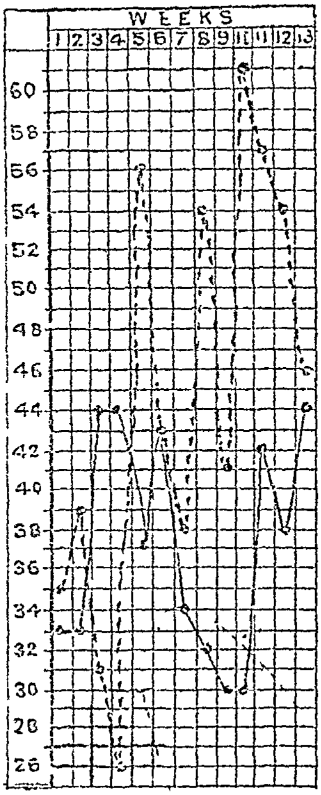
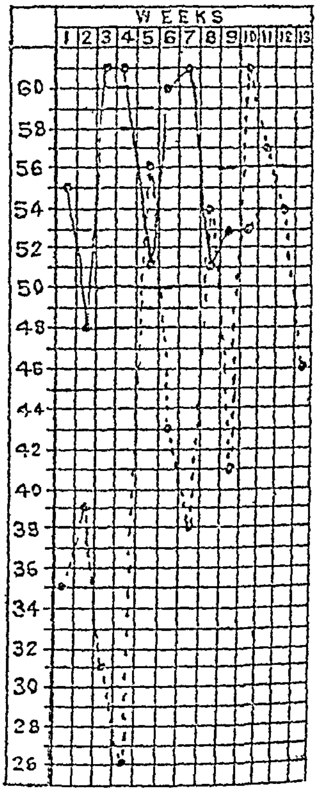


CHART 3.



The dotted line in all the charts denotes small-pox cases (first week commences Dec 28th, 1901) In Chart I. the continuous line denotes the maximum and in Chart II. the minimum shade temperature in degrees Fahrenheit (first week commences Dec 14th, 1901). In Chart III. the continuous line denotes the maximum solar radiation in vacuo in degrees Fahrenheit (first week commences Dec. 14th, 1901). The temperature curve for the last three weeks is not given because it rose to 77°, extending beyond the limits of the chart.

CASE OF RUPTURE OF THE LEFT AURICLE.

BY F. W. FOOTT, L.R.C.S., L.R.C.P. IREL.,

WITH A NOTE

BY F. DE HAVILLAND HALL, M.D., F.R.C.P. LOND.,

PHYSICIAN TO THE WESTMINSTER HOSPITAL.

I WAS called to a man, an Arab, aged about 40 years, a stoker on the P. and O. line of very fine muscular development. There was a history of his having been in a Bombay hospital two years previously for "something." On my arrival I found that he was dead, having fallen "all of a heap." Previously to the fall he had been playing a game of cards. The game over, he rose suddenly to see if his supper was being cooked, when he fell, as described, in the kitchen.

I suspected aneurysm and by the coroner's order made a post-mortem examination in the presence of two other qualified men and we found the following conditions present. The pericardium was full of blood (*none being outside the pericardium*), the left ventricle was hypertrophied, the auriculo-ventricular ring was stretched, the mitral valve was not nodular and was apparently healthy, the wall of the left auricle was exceedingly thin and stretched, and there was a small tear about half an inch in extent on the outer and posterior surface, the thinnest part. The muscular substance of the heart looked fatty—i.e., it was pale in colour and not firm. A microscopical examination was not made. The pulmonary and general venous systems were loaded with blood. The kidneys were very lobulated but otherwise normal.

The etiology appears to be as follows. The man was a ship's stoker, a notoriously laborious occupation and one throwing great strain on the heart; this caused the hypertrophy and dilatation of the left ventricle, with the usual sequence of incompetence of the mitral valve and secondary dilatation of the left auricle from overfilling during ventricular systole. Possibly the site of rupture was a particularly weak spot where the backward stream of blood impinged on the auricular wall.

Remarks by Dr. DE HAVILLAND HALL.—The occurrence of rupture of the heart, and especially of the left auricle, is such a rare event that I induced my friend Mr. Foott to place on record this extremely interesting case. The statistics that have been collected on the subject show that in 77 per cent. of the cases of rupture of the heart (excluding cases of traumatism) the rent takes place in the left ventricle, in 14 per cent. in the right ventricle, in 6 per cent. in the right auricle, and in the remaining 3 per cent. in the left auricle. So that the case under consideration belongs to the rarest form of rupture of the heart. As is usually the case, the rupture occurred in a man, but at a much earlier period of life than is common. According to Walshe, "rupture of the heart is favoured by advanced age; it becomes comparatively frequent after the fiftieth, still more so after the sixtieth year." Out of 100 cases collected by Quain in 12 the rupture took place under the age of 50 years and two of these occurred between the ages of ten and 20 years, so that while rupture is very uncommon in early life the possibility of its occurrence should be borne in mind.

Though the authorities whom I have consulted do not appear to lay stress on a laborious occupation as a factor in the production of rupture I think that there is much cogency in the explanation given by Mr. Foott of the cause in his case. Unfortunately, a microscopical examination of the heart muscle was not made, but the naked eye appearance was in favour of fatty degeneration. Gowers in his article on Fatty Diseases of the Heart in Reynolds's "System of Medicine" says emphatically: "Spontaneous rupture never occurs in a healthy heart," and it is "probable that in at least nine tenths of the cases of rupture fatty degeneration is the condition of the cardiac wall to which the accident is due."

The mode of onset varies very much; sometimes the rupture is induced by physical exertion or great mental excitement. Of 24 cases collected by Barth, in five death occurred during the act of defecation. It may occur during sleep, as in a case of spontaneous rupture of the left auricle reported by Dr. M. Mackintosh.[1] In the classical case of George II., who died from rupture of the right ventricle, it is stated that he rose at his usual hour of six, drank his chocolate, inquired how the wind was, being anxious for the arrival of the mails, and then suddenly fell, uttered a groan and expired.

In Mr Foott's case there was neither mental nor physical excitement to account for the rupture and there were no premonitory symptoms as sometimes happens. In Dr. Mackintosh's case, for instance, the man complained of pain in the epigastrium in the evening which he attributed to his having had a dinner of hard, badly-cooked beef. He died the same night in his sleep. As Dr. Mackintosh points out, the marked ecchymosis which was found in the neighbourhood of the rent in the left auricle suggests that some laceration took place during his work, causing the pain he complained of, and that the final rupture occurred during sleep, the result being instant death.

NOTES AND COMMENTS UPON FIVE CASES IN WHICH CHLOROFORM ANÆSTHESIA WAS CARRIED OUT BY DUBOIS'S APPARATUS.

BY P. M. CHAPMAN, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE HEREFORDSHIRE GENERAL HOSPITAL.

THE induction of anæsthesia by chloroform has fallen into much discredit, although its use is persisted in and ably advocated by some of us. Certain advantages connected with it lead perhaps most of us to regret that we are obliged to abandon its use. Although complete anæsthesia can be induced by ether in less than three minutes and the irritation and distress often caused by it can be avoided to a great extent by the previous administration of nitrous oxide gas, we seem still to be out of our path and away from perfection. All is vague and haphazard. With ether even young girls may become violent and inebriated and may require large quantities. The profuse frothy mucous secretion and salivation may often cause infinite trouble and some anxiety, and the occasional evil after-effects are known to all.

To the administrator, the anæsthetic employed has mainly to be considered in the two aspects of its chemical and physical properties. The one, however inseparable from the clinical aspect, should be first considered by the physiologist who should furnish us with some certain data for our guidance. The physical problem should never be lost sight of by the administrator himself and is to some extent his to consider. 1. The chemical problem involves a study of the effects of toxic vapours upon nerve. Of these effects we have gained in late years some definite knowledge through the labours of Dr. A. D. Waller. Briefly, nerve resumes its normal reactions after loss of function from exposure to 1 0 to 2·0 per cent. chloroform vapour. By a small excess beyond this nerve may be poisoned and with larger doses it will certainly be poisoned beyond recovery. 2. The physical properties of chloroform make it a grave source of danger It is customary to use it by the "open method," a small but unmeasured quantity being poured upon lint which is held in the hand at some variable distance from the face Owing to its high specific gravity the vapour falls in a downward stream, and the approximating of the hand to the face may rapidly raise the percentage inhaled to four or five times beyond the limit of safety. In labour, where chloroform is frequently used and with few accidents, the patient is usually lying on her side, and this permits the vapour to stream past the face, much of it being thus happily wasted. Moreover, the quantity used is but small. The senses are but dulled and complete anæsthesia is neither sought for nor desirable.

No apparatus giving a constant supply of a definite percentage of chloroform vapour is in ordinary use The Junker inhaler is a notable endeavour in this direction, though it cannot be granted that it supplies a definite and accurate percentage nor that it allows perfect freedom of expiration Dr Waller having lately deeply interested me in the method of anæsthesia practised in the physiological laboratory at the University of London (whereby an accurate percentage of chloroform vapour is supplied in a constant stream, the expiration being unimpeded) I obtained the consent of my surgical colleagues on the staff of the Herefordshire General Hospital to use his apparatus on one of their operating days upon a small series of unselected cases occurring in the ordinary course of their work. The anæsthetic was administered by Dr. Waller himself while I closely watched the cases and took notes of their condition.

CASE 1. *Sacro iliac disease; psoas abscess*—The patient was a young adult. At 1.23 P.M. the administration was begun, 1 2 per cent of chloroform. 1 24, increased to 2 per cent. 1 31½, diminished to 1·2 per cent. 1.33, abolition of the conjunctival reflex (ten minutes after commencement). 1 34, operation commenced. 1 37, slight vomiting and retching, administration discontinued for about half a minute. 1 37½, increased percentage to 2 per cent. 1 40, operation completed; administration discontinued. The patient first spoke nine minutes after leaving the theatre. She vomited at 4 25, at 6, and at 6 50 slightly. She had had ether on a former occasion and of the two rather preferred ether.

CASE 2 *Excision of hydrocele.*—The patient was a labourer. At 1 47 P M administration was begun; 2 per cent. chloroform was continued throughout. 1 52, stage of excitement and muscular resistance; the patient was talking loudly; pulse rate 150 1 55, excitement passing off; pulse-rate 80. 1.56½, complete anæsthesia (nine and a half minutes from commencement). 1 57, operation begun; slight movement at initial incision; still muttering incoherently. 1 59, silence; pulse-rate 108 2 0, slight stertor; faceplece removed for one or two respirations. 2 2, rather increased stertor. 2 4, quite quiet and breathing easily; pulse rate 108; respirations 44. 2.7, stitches being inserted, no sign of movement. 2 9, administration discontinued. 2 11, sleeping quietly; no conjunctival reflex; pulse-rate 92. 2 14, dressing completed, pulse-rate 128. 2 15, answered to name and responded not quite incoherently to questions.

CASE 3 *Operation for varicose veins.*—The patient was a labourer. At 2.20 P.M. administration was begun; 2 per cent. chloroform. The pulse rate was 96 2.23, stage of excitement. 2 26, conjunctival reflex abolished. 2.28, operation began; no movements. 2 38, operation over; administration discontinued. 2.40, conscious of questions; incoherent in reply.

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[1] THE LANCET, Feb. 1st, 1890, p. 239.

CASE 4 *Operation for removal of cervical glands.*—The patient was a female adult. At 2 48 P.M. administration was begun; 2 per cent. chloroform. 2 54, conjunctival reflex abolished; complete anæsthesia. 2.56, operation began; no reaction to incisions from beginning, no struggling, and no stertor. 3 6, retching, slightly vomiting. 3 16, reduced to 1·2 per cent. chloroform. 3.21, stitches being inserted; no movement. 3 27, operation over; administration discontinued. 3 32, slight retching. The patient first spoke at 3.55. She vomited at 4 20 and at 5 30. She said that she thought (having had chloroform once before some ten years ago) that this time "it was longer in taking and not so strong," she "felt nothing," she "was more sick last time," and "liked this much better."

CASE 5. *Circumcision.*—The patient was a baby, aged three months (?). At 3.35 P M. administration was begun; 2 per cent. chloroform. 3.38, reflexes abolished; slight movements on removing the prepuce. 3.40½, administration discontinued; all quiet.

Throughout the whole series I was greatly struck with what I must call the maintenance of the anæsthesia upon a smooth plane below the surface of consciousness. Though sunk to a depth beyond sense each case attained a certain level of rest not beyond our reach, neither occasionally rising therefrom nor sinking into any deep and perilous pool. The administration being discontinued each patient quickly rose again to the surface of consciousness. Throughout there was quite an extraordinary absence of anxiety, and I am clear that this feeling was produced through my observation of the patient's real condition under the anæsthetic and was not unduly owing to the fact that for the first time in my experience I knew with some approach to accuracy what was being done. Case 4 had some years previously taken chloroform for the same kind of operation. On this, the later, occasion she was completely under its influence to the full surgical degree for 33 minutes when the administration was discontinued. She could speak 27 minutes afterwards. The next day I asked her to compare her sensations on the two occasions. She said "it was longer in taking and was not so strong." On this last occasion she "felt nothing"; she was "more sick the other time," and "liked this much better." For myself I should without hesitation choose this means if I had again to undergo a surgical operation.

There are few practical difficulties. The use of the apparatus necessitates the turning of a handle attached to a small wheel at the rate of about four revolutions per minute. This can be done by the administrator almost mechanically. But it is better that he should have both hands free and the whole of his attention disengaged. The wheel can be turned by anybody, for it requires no skill and it can be done at a distance from the operating table. It could be worked by a motor or with a treadle by means of some suitable adjustment. By whatever means the stream of vapour is supplied to the facepiece the administration itself is of the utmost simplicity. There is free exit from the facepiece for all expired air and if the chloroform vapour, always of known strength, is supplied in greater abundance than is necessary, it merely passes harmlessly out of the orifices in the facepiece and is not pumped into the lungs. The patient has absolutely no sense of there being any obstruction to his breathing. He is simply inspiring air mixed with chloroform vapour to the extent of 2 per cent. or *under*, and this maximum quantity cannot be exceeded through any over-zeal on the part of the person, however untutored he may be, who is turning the handle. Excess of zeal means waste of vapour at 2 per cent, no greater percentage can possibly be inspired. The machine itself cannot supply a higher percentage without active interference on the part of the administrator.

I am not surprised to learn that animals can breathe such an atmosphere and remain completely unconscious for many hours at a time without ill-effects. I myself have exhibited it to a cat for several hours and have witnessed the animal lf an hour afterwards lapping milk, purring happily, and bing itself affectionately against my legs. I am led to of its possible use in the future in cases other than of surgical operation. Some may think that the time occupied in inducing anæsthesia is too long. It is not, for adults, apparently less than six, nor more than ten, minutes. But rapid anæsthesia has been pushed to a point which has roused some protest. These protests might be ignored if the rapid induction of anæsthesia were wholly safe and pleasurable. Since it is not so, and since inhalation as now practised is nearly always very disagreeable and is often terrifying to patients, being a considerable addition to their already pitiable anxieties, I feel that we ought not to deny them this easy and pleasant means of relief. For to say the least we cannot plead that this method is less safe; nor do I see that we have any excuse for not admitting it into our daily hospital practice unless we are prepared to plead against it some small considerations which merely affect our own convenience. But all undue advocacy is to be avoided. The important matter in this connexion is our *clinical* experience of the method, and at this early stage of our experience it is essential that *every case* in which the method has been applied should be reported without selection, or omission of favourable or unfavourable features, or of actual failures if such should occur.

Hereford.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

◆

A CASE OF ERYTHROMELALGIA.

By BRUCE C. KELLY, M.B., C.M. EDIN., M.R.C.S. E

VARIOUS theories have been advanced to explain the g
of symptoms known as erythromelalgia—e.g, the
that it is due to a neurosis, to a peripheral nerve
to a spinal lesion, to a cerebral lesion, and to a
lesion. The case about to be described, thou
because there was no necropsy, would seem
spinal lesion, as do many other recorded cas
of this disease being due to a spinal lesion
that it coexists with tabes dorsalis, disseminat
spinal tumours, general paralysis, and other co
like kind. The secretory and vaso-motor tro
example, syringomyelia have their seat in the
of the cord in its middle part adjoining the
posterior cornua. Cases have been described
peripheral nerves have been found unaffected.

The following is the history of a case occ
married woman, 77 years of age, who had
neurotic troubles, who had advanced arterial d
who had had three attacks of hemiparesis, and
symptoms or physical signs pointing to affection
pheral nerves. She began to suffer from eryt
in October, 1901 She had a left-sided hemipa
before. There was no exciting cause, remote
her history. The illness began with severe
shooting" pain in the outer part of the left f
panied by redness and swelling of this part of the
pain was paroxysmal, and the intervals of freedom
became shorter and the paroxysms more severe.
weeks there appeared swollen, purplish-red patc
inner part of the sole and on the heel. The supe
of the foot, on the dorsal and plantar aspects, an
were markedly swollen. The surface temperatu
but pulsation could not be felt. The pain soon ex
the knee and the whole foot sweated
was aggravated by hanging the foot, so that
bear to stand, and was temporarily relieved by
were slight pain and dilatation of the veins of
and leg up to the knee The heart was
apical systolic murmur, and there was ad
degeneration. The urine was natural The
left foot and leg was tender to the touch. Sen
heat and cold was normal. Beyond wasting from
there was no atrophy of muscles or loss of power
electrical irritability was normal, as were all the
There were no trophic changes in the skin or nails.
was no tenderness on pressure over the nerve

oles. The pain became almost constant and she died, n out, nine months from the commencement of her ess. Unfortunately, no post-mortem examination was mitted.

rythromelalgia is an affection of the vaso-motor system, ably of the vaso-motor centres in the spinal cord—either over-action of vaso-dilator or a paralysis of vaso-con-ctor centres. Are there any means of localising the lesion e definitely? It has recently been shown by Laignel-astine[1] that by destroying the sympathetic cord in the le length of the thorax of dogs and keeping the animals e for some months there were produced spinal lesions, ecially evident in the cells of the base of the anterior u and in the lateral cornu. This writer thinks it able *that the efferent fibres of the sympathetic have* the most part their origin in the cells of the lateral nua. In the *Revue de Médecine* for October, 1903, there hat appears to be clinical confirmation of this research the publication by Lannois and Porot of a case of hromelalgia, the spinal cord in which actually pre-ed lesions of these parts. A widow, aged 55 years, wed vaso-motor phenomena of the fingers of the left d immediately after the death of her husband. Five ks later she had a monoplegia of the left arm wn by necropsy to be due to cortical softening). The emities of the fingers were swollen like drumsticks the nails were thin and grooved. A few weeks later hand became cold and she had patches of gangrene the toes. Post mortem the left crossed pyramidal and right direct pyramidal tracts were degenerated. There atrophy of the left half of the grey matter of the cord, cting especially the anterior cornu in the cervical and sal regions. There was much diminution of the pro-ence that the lateral cornu gives ordinarily to the outer der of the grey matter. In the dorsal region there was ost complete disappearance of the lateral cornu and its s, there being only two or three atrophied cells present— atrophy of the *intermedio-lateral tract; there was* atrophy, indeed almost complete disappearance, of the umn of small fusiform cells that normally exists at the the posterior cornu. Clarke's columns were intact. cervical region there was atrophy of the cells repre- the upward continuation of the intermedio-lateral .e., the antero-lateral group of cells of the anterior This atrophy of the intermedio-lateral tract was pre-oughout the upper dorsal cord and was out of all pro- more marked than the atrophy of the rest of the grey The arteries of the cord were in a state of advanced ration. No lesions of peripheral nerves were found some sheaths empty of myelin but containing intact ylinders. If these researches, experimental and , are confirmed it will be possible to localise the otor lesions of erythromelalgia in the cells of the edio-lateral tract and in the small *fusiform cells at* se of the posterior cornu. It is not necessary to point e significance of the vascular degeneration in the n such cases.

Somerset.

ON A CASE OF CHANCRE OF THE LIP AND ITS MODE OF INFECTION.

LEOPOLD G. HILL, M.R.C.S. ENG., L.R.C.P. LOND.,
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RING the past year a couple of well-marked cases ancre of the lip have come under my notice in the n hospital here, one of which has such a clear history origin that it is worth recording.

male Chinese, aged 24 years, came to the mission tal, on March 17th with an ulcer almost in the e of his upper lip; it was very painful and partly ed with a blood scab. He had had it for about a night, but the day before it was more painful, so he ght relief. The ulcer was of the size of a split pea and the so-call- It was not ising much held stiffly. ere were tw isible, that the left being of the size of a small nut and that on right, the larger, that of a filbert. It was undoubtedly hancre. It is unnecessary to go into the after-history except to say that under mercury by the mouth and inunction the chancre and enlarged glands disappeared and that the patient regained his usual health as soon as the debilitating effects of the drug passed off and also that 11 weeks after the onset of the disease he had some suspicious symptoms of secondary syphilis—feverishness, pains in the bones, and slight sore throat—which soon cleared up and now he is in excellent health.

The point of interest is how he contracted the sore His only child, some eight or nine months old, was being treated a month or so before and was then under treatment for congenital syphilis, consisting chiefly in a running at the nose, "snuffles," and emaciation—at that time beginning to improve and now a strong enough looking child. His wife—*he married a widow—had had syphilis ten years ago*, contracted, presumably, from her first husband; by him she had become pregnant twice and had had two miscarriages, carrying the fœtus nearer to term each time, but not a living child by him. The first child by the second husband was born dead at full term; the second, a puny child at birth, is the one referred to as having the nasal discharge. The father is extremely proud and fond of this child and I had often seen him nursing it in its sickness, kissing it and fondling it with his mouth on the child's face in spite of the moisture coming from the nose. No doubt some of this infected a scratch or open sore on the delicate lip and produced the chancre.

Pakhoi.

SYMPTOMS OF SUFFOCATION IN AN INFANT CAUSED BY A PIECE OF COAL LODGED IN THE TRACHEA; OPERATION; RECOVERY.[1]

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ON Nov. 11th, 1903, an infant boy, aged 15 months, was left to play in the kitchen while his mother did some work in the washhouse. When his mother returned she found him sitting on the floor near to the fireplace. He was crying and gasping for breath, with the fingers of both hands in his mouth. The mother concluded that the child had put some of the cinders which were lying on the hearth in his mouth and that possibly he had swallowed some. During the rest of the day the child was very fretful, had considerable difficulty in breathing, would take no food, and frequently cried as if suffering pain. day there was a stead When the medical r suffering from what he considered to be laryngeal obstruction, and without delay had the child sent from the country to the Western Infirmary as an urgent case. The child was admitted late in the evening of Nov. 12th and was seen by me about 10 P.M. He was then pale and exhausted and while suffering from severe dyspnœa had no hoarseness—his cry was perfectly clear. The pulse was 148 per minute, the respirations were 64 per minute, and the temperature (which was taken with difficulty on account of his struggles for breath) was 100 4° F. The marked indrawing of the intercostals and the epigastrium was an index to the serious nature of the obstructive difficulty present. By auscultation it was found that the amount of air entering the lungs was greatly deficient, that both sides were equally affected, and that the respiratory murmur, particularly towards the bases, was accompanied by mucous râles. The cause of the obstruction to the entrance of air was evidently in the trachea and probably was well down in that tube. An examination by the x rays gave no sign of the lodgment of a foreign body.

For the removal of the foreign body, the presence of which was indicated by the history and the symptoms, inversion was first tried but without benefit. The child was then placed under chloroform. The larynx was inspected with the laryngoscope and found to be normal, after which tracheotomy was performed. When the tracheal cartilages were split and the edges of the incision held apart a black object, lying transversely and firmly fixed within the trachea, was seen at the level of the fourth ring. This was grasped with forceps and removed and it was found to be a piece of coal measuring half an inch long, by three-sixteenths of an inch broad, and one-eighth of an inch thick. A tube was inserted lest any fragments might have been broken off and retained. As soon as the piece of coal was removed the child breathed with freedom, the chest expanded fully, and the child was asleep shortly after. Later, he again became restless and his temperature at 4 A.M. was 101·8°, his respirations were 58, and his pulse was 144 per minute. At 8 A.M. on the 13th his temperature was 100·6°, his respirations were 46, his pulse was 136, and at 10 A.M. the tube was removed. From this time there was a gradual but steady improvement and on the 15th the evening temperature was 98·4°, the respirations were 28, and the pulse was 124. The child is now well and the wound healed.

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[1] Recherches sur le Plexus Solaire, Thèse de Paris, 1903.

[1] The case was shown and the notes were read at a meeting of the Glasgow Medico-Chirurgical Society on Nov. 20th, 1903.

Glasgow.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Procemium.

ST. THOMAS'S HOSPITAL.

SEVEN CASES OF INTESTINAL OBSTRUCTION.

(Under the care of Mr. G. H. MAKINS, C.B.)

THE following seven cases of intestinal obstruction seem worthy of brief record, since, besides possessing some surgical interest, no less than six of them, illustrating most of the more common causes of the condition, were met with during the course of a single major week at St. Thomas's Hospital. The first case which is added as affording an example of one other cause was admitted in the preceding major week.

CASE 1. *Cæcal volvulus.*—The patient was a woman, 67 years of age. During the last 18 months she had been the subject of four or five distinct attacks of abdominal pain accompanied by vomiting sufficiently severe to confine her to bed. Ten days prior to her admission to hospital she was seized with severe pain in the lower abdomen, most acute in the region of the umbilicus. Obstruction of the bowels had been complete for six days, vomiting had been frequent, and neither flatus nor fæces had been passed per rectum. On admission the woman looked anxious and ill; vomiting of dark feculent smelling fluid was frequent. Constipation was absolute. Her tongue was furred but not very dry. Her pulse-rate was 108 and her temperature was 97° F. Her abdomen was considerably distended; the prominence was median and on inspection gave the impression of a tumour rising from the pelvis. It was resonant throughout except in the right flank.

An operation having been decided upon, the abdomen was opened through the right rectus from just above the level of the umbilicus downwards. A hugely ballooned piece of bowel was at once disclosed occupying the whole field of operation. The incision was enlarged but the distended gut could not be delivered as it was tightly wedged into the pelvis. A trocar and cannula were therefore introduced and a large quantity of gas and liquid fæces was evacuated. The slackening of the tumour thus produced allowed of the hand being inserted into the pelvis beneath the sac and the piece of bowel was brought out. The intestine affected proved to be the cæcum and lower part of the ascending colon which was provided with an unusually long mesentery. The twist was through half a circle and involved the ascending colon about the centre of its length. The ileum remained viable. It was considered advisable completely to empty the loaded bowel which was then readily replaced, the two punctures having been securely sutured. The patient made an uneventful recovery, the bowels acted spontaneously the day after the operation, and the stitches were removed from the abdominal wound on the eighth day. On the fourteenth day a localised collection of pus was evacuated from the lower part of the wound in the abdominal wall and at the end of a month the patient left the hospital recovered.

CASE 2. *Carcinoma of the rectum.*—The patient was a man, aged 43 years, with a history of chronic constipation which had existed for years and for the last two months was much aggravated and accompanied by abdominal pain. There was no history of passage of blood or mucus. On examination the abdomen was found to be highly distended, visible peristalsis being marked. On introduction of the finger into the rectum a growth was discovered extending within three inches of the anus and firmly fixed. Inguinal colotomy was performed and three weeks later the patient was transferred as "relieved" to Lambeth Infirmary.

CASE 3. *Persistent Meckel's diverticulum.*—The patient was a man, aged 41 years, who had not had any intestinal trouble until seven years ago, but since then had suffered from attacks of abdominal pain once or twice each year. These attacks were sometimes accompanied by vomiting but never by any marked constipation or diarrhœa. They were of sufficient severity to oblige him to discontinue his work as a clerk for a few days. Three days before admission a similar attack of pain occurred; it was of a gnawing character, never very severe, but was continuous and seemed to spread across the abdomen just below the level of the umbilicus. Vomiting persisted throughout and at the time of admission the bowels had not acted for four days. The abdomen was moderately distended; the tongue was moist; the pulse was 75 per minute, regular, and of fair strength; and the temperature was 98° F.

A three-inch incision was made through the right rectus, starting just above the level of the umbilicus. Collapsed gut was at once discovered in the pelvis and when followed up led to a band stretching from the ileum to the umbilicus. This was at once recognised as a broad Meckel's diverticulum. The distal end was freed from the umbilical attachment and the strangulation was relieved. The constricted part of the bowel was in good condition. The diverticulum was removed and the abdomen was closed. The patient made an uneventful recovery and left the hospital on the seventeenth day well. The diverticulum was a broad one with a lumen at the distal end at least one inch in diameter. It may be mentioned as a matter of interest that the solitary follicles in this part were enlarged and inflamed but no ulceration had taken place. In a former case published by Mr. Makins the diverticulum was riddled with perforations which he thought might be the result of previous follicular inflammation.

CASE 4. *Intestinal adhesions.*—The patient was a man, aged 21 years, who 12 years before admission had been stabbed in the left half of the epigastric region. Three weeks before admission he felt himself unwell, the motions were very offensive, at times he vomited, and on one occasion the matter was said to be feculent. During this period the bowels were irregular, constipation for as much as four days alternating with days on which the bowels were opened by enemata. On admission the bowels had not acted for some days; the tongue was dry and brown; the pulse was feeble and 84 per minute; and the temperature was 97° F. The abdomen was not distended but marked peristalsis was observed around the umbilicus; the walls moved well. Nothing abnormal was discovered on palpation and there was resonance throughout. From the history and the general condition of the patient it was evident that the illness had commenced as a gastro-enteritis, followed by intestinal toxæmia. It seemed not the less clear that considerable obstruction existed in the course of the small intestine and an exploration was decided upon.

In spite of the cicatrix in the upper part of the left rectus over the cardiac end of the stomach it was thought better to make an incision through the right rectus, the centre of which corresponded with the level of the umbilicus, as it appeared unlikely that small intestine could be implicated at so high a level as the scar. This proved a considerable convenience, since the relation of the intestine to the scar which was after all found to exist was able to be investigated thoroughly and the danger of cutting directly down on adherent intestine was avoided. The jejunum was found attached to the scar and sharply kinked, dilated above the kink and considerably contracted below it. The adhesion was freed and the abdomen was closed. The after-progress of the patient was slow. For 12 days he lay with a sunken face, dark rings around his eyes, and mentally much depressed. The bowels acted freely, on several days the condition amounting to severe diarrhœa; the pulse remained of poor quality, usually about 80 per minute; and the temperature was normal or subnormal. Nourishment was taken badly but there was no sickness. Neither the administration of purgatives nor of salol as an intestinal antiseptic appeared materially to influence the condition. The stitches were removed from the wounds on the eighth day, when they appeared soundly healed. On the fourteenth day the temperature rose above 100° and on examination of the wounds the one through the old cicatrix was [illegible] was opened up at its superior end [illegible] from this wound for the next 1[illegible] the patient steadily improved, and on the thirty-first day he was discharged as well.

CASE 5. *Obstruction of the small intestine by an adherent vermiform appendix.*—The patient was a female, seven years of age, and was admitted with a history of six days' abdominal pain accompanied by vomiting and absolute constipation. She complained much of pain in the lower abdomen but tenderness was neither acute nor localised The abdomen was moderately distended, resistant to palpation but not rigid, and respiratory movement was fair. Her temperature was normal and her pulse rate was 114, rising to 120 at the time of the operation. Mr. P. W. G. Sargent opened the abdomen for Mr. Makins. An incision was made through the right rectus; on opening the abdomen a small quantity of clear fluid escaped, the upper part of the small intestine was much dilated, and below this a loop was found strangulated (not tightly) behind the vermiform appendix which was bulbous at its extremity and was adherent to the anterior abdominal wall. The bowel was readily released and the appendix was freed from the abdominal wall and removed. The child made an uninterrupted recovery and left the hospital on the twenty-first day.

CASE 6. *Ileo-cæcal intussusception.*—The patient was a female, aged eight months, a breast-fed child and with no history of anything solid having been swallowed. She awoke screaming one day at 5.30 A.M., a green motion was passed, and at 9 A.M. blood and mucus were passed. At 1.30 P.M. Mr. Wallace opened the abdomen for Mr. Makins and reduced the intussusception. The infant made an uninterrupted recovery and left the hospital well at the end of 14 days.

CASE 7. *Carcinoma of the ascending colon, with incomplete obstruction*—The patient was a woman, aged 41 years. For nine months previously to admission she had not been in her usual health. She had noticed tenderness and swelling of the abdomen and three months before admission she had had two severe attacks of abdominal pain. This pain was very severe, colicky in character, "doubling her up," and was situated just above the umbilicus. Other attacks of a similar nature followed at short intervals and the more recent ones were accompanied by vomiting starting about six hours after the initial attack. Slight transient constipation followed each attack and only a small quantity of urine was passed. On one occasion her medical attendants (Mr. Osborne and Mr. Sandford Arnott) noted a tumour in the right iliac region.

The patient was kept under observation for some time in the hospital. Slight attacks of pain were frequent, during which a tumour was felt in the right iliac region and a peristaltic storm around it. An exploration having been agreed to an incision was made through the right rectus. On introducing the finger a small tumour was felt in this region, moveable and so insignificant as to be readily lost when released. When brought to the surface it proved to be a small ring carcinoma, of the variety in which the [illegible] would result from tightly [illegible] The tumour and about [illegible] were removed and also some glands from the mesentery. The two cut ends of the bowel were then closed and a lateral ileo-colostomy was made. The after-course was quite uneventful and on the twenty-eighth day the patient left the hospital. The bowels were acting regularly and no attack of pain had occurred subsequently to the operation.

Remarks by Mr. MAKINS.—The notes of most of the above cases were made by the dresser, Mr. Dean. They do not call for much comment but it may be remarked that Case 1 was an instance of volvulus of the cæcum, a variety which in contradiction to the statements found in most of the text-books has been much more frequently met with at St. Thomas's Hospital than volvulus of the sigmoid flexure. In Case 3 the symptoms were remarkably typical of strangulation by a diverticulum. Thus there was a history of several less severe incomplete attacks and the characteristic moderate degree of strangulation due to the strangulating agent being furnished by a soft rounded cord. The presence of follicular inflammation in the diverticulum itself has already been remarked upon. Case 4 is of special clinical interest as illustrating the combination of signs of intestinal toxæmia and obstruction, two conditions often very difficult of differentiation. Case 5 again offers an excellent illustration of the comparatively subacute nature of the signs and changes when the strangulating band is furnished by an intestinal diverticulum. In Case 7 the main points of interest were the small size of the tumour and the fact that it was only readily palpable when peristalsis was abnormally vigorous; on the other hand, the remaining lumen of the bowel was as small as could be possibly compatible with the onward flow of the intestinal contents at all.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Hypertrophic Pulmonary Osteo-Arthropathy.

A MEETING of this society was held on Jan. 12th, Mr. ALFRED WILLETT, the President, being in the chair.

Dr. H. E. SYMES-THOMPSON read a paper on Hypertrophic Pulmonary Osteo-Arthropathy. He said that the condition of certain bones and joints to which this name was now generally applied was not looked upon as a separate entity among bone and joint affections till 1889, when Bamberger demonstrated two cases of bronchiectasis with clubbing of the fingers and painful enlargement of the ends of certain long bones. I[illegible] and also four cases of [illegible] milar disturbances. M[illegible] pertrophic pulmonary osteo arthropathy for the affection and clearly differentiated it from acromegaly, to which it bore some resemblance. The term "hypertrophic pulmonary osteo-arthropathy" had been retained in this paper but the disease was called osteopathy for purposes of brevity. Hypertrophic pulmonary osteo-arthropathy was a chronic symmetrical disease of the bones, the joints, and the soft parts, affecting chiefly the distal segments of the extremities. The changes in the bones consisted chiefly in the deposition of friable new bone under the periosteum, in a sclerosis of the cancellous parts of the bones, and in the appearance of hard new bone in the diaphyses, encroaching on the medullary canal. In the joints involved an intermittent passive effusion was the most characteristic manifestation, but in certain cases the effusion was accompanied by evidence of inflammation. The joint cartilages were often the seat of erosions and in some cases there was vacuolation also. A progressive thickening of the soft parts round the joints usually took place but the thickening was never very great and it did not involve the skin. Clubbing of the fingers and toes of a special kind was nearly always present. There was no softening or suppuration in the bones or joints in osteopathy. Of the above changes those in the joints were the most evident clinically, while those in the bones quite overshadowed the joint changes in skiagraphs and in the post mortem room. The disease was much commoner in males than in females. Between 30 and 40 years was the commonest decade for osteopathy and the next most common period was between 20 and 30 years. Osteopathy was probably always secondary to some other disease and in the great majority of the cases the primary disease was a chronic suppuration in the thorax. It was caused occasionally by suppuration elsewhere but in such cases some disease of the lungs was generally present. Congenital heart disease was sometimes responsible for osteopathy and in a few instances syphilis was the only disease present. The same conditions which caused osteopathy probably led to the clubbing also. The above causes of osteopathy probably acted by producing poisonous bodies which circulated in the blood. The theoretical considerations on which this view was based might be summarised thus: toxic products, whether the result of normal metabolism or of an infective process, might be divided into two varieties—volatile and non-volatile. The volatile toxins were eliminated under healthy conditions by the lungs in the expired air. The non-volatile toxins were eliminated for the most part by the cells of the liver. If for any reason the eliminating function of one of these organs was interfered with, the toxins over the fate of which the lungs or the liver respectively presided would not be sufficiently eliminated and would accumulate in the blood. This gave an explanation of the almost constant association of pulmonary disease and osteo-arthropathy. If the liver was for any reason unable to carry on its detoxicating work the other organs, such as the spleen were capable of taking its place. If, on the other hand, anything interfered with the amount of respiratory surface available in the lungs the volatile toxins had no other way of escape and they therefore accumulated in the blood. If these conclusions were correct the presence of a toxic focus in the lungs was not essential for the production of osteopathy. What was essential was the co-existence of a toxic focus somewhere in the body with a condition of the lungs which interfered with normal respiratory interchange—e.g., a fibrosis, or even a chronic congestion only.

Dr. C. THEODORE WILLIAMS, after congratulating Dr. Symes-Thompson on his paper, said that he had not seen any large number of cases of hypertrophic pulmonary osteo-arthropathy. On the other hand, he had seen a very large number of cases of bronchiectasis but had very seldom seen hypertrophic pulmonary osteo-arthropathy follow that disease. Dr. Symes-Thompson had shown that as the pulmonary discharge varied the condition of the bones also varied. It was, however, difficult to see how such variation could take place if there was an actual thickening of bones. Dr. Symes-Thompson had attributed the disease to a toxin and had also stated that the disease occurred in congenital heart disease; it was difficult to conceive what toxin could be produced in congenital heart disease which would give rise to osteo-arthropathy.

Dr. PERCY KIDD mentioned four cases which he had recently seen. In one there were tuberculosis of the sternum and but little affection of the lung. He thought that the important change in most cases was an arthritic change and not an osteo-arthritic. In one of his cases there had been marked pain and there was marked thickening around the joint. In one of the cases examined after death there was no change in the joint but marked thickening around the joint. He referred to a case in which there was hypertrophic pulmonary arthropathy but without any physical signs of disease of the lungs. Some time later signs of growth in the lung occurred and the patient died. The joint symptoms had then been in existence for two years. He was of opinion that the growth was not the cause of the osteopathy in this case. This patient had developed hair on the face and other male characteristics which suggested some altered metabolism. He quite agreed with Dr. Symes-Thompson that the disease was due to a toxin. In the earliest stage of the disease it rather closely resembled rheumatoid arthritis.

Dr. R. MAGUIRE said that the theory which regarded the lung as a "gland" was one which was too often neglected. Some of the acute attacks of dyspnœa which occurred without there being any signs of disease in the lung were attributable to some altered function in the "gland." He mentioned the case of a boy, aged 16 years, who suffered from bronchiectasis with a cavity at the base of the lung. The temperature was very irregular and this was probably due to absorption of toxic material. There was a considerable amount of fœtid sputum. Swelling of the tissues around the joints and effusion into the joints were present. Intravenous injections of formaldehyde were given, the temperature became more regular, and the joints less swollen, and at the same time the amount of sputum was also diminished. This result was the exact reverse of that obtained in the cases mentioned by Dr. Symes-Thompson for in them as the amount of expectoration increased the joint trouble began to improve. He was of opinion that the joint trouble was due to invasion by a micro-organism.

Mr. W. G. SPENCER said that he considered this affection rather one of the joints than of the bones, but that it was difficult to draw a sharp line between the early stages of this disease and chronic pyæmia. He did not think that the toxic theory could alone explain the condition but that venous congestion might play a very important part in its production. He referred to the joint affection which occurred in "mother-of-pearl" workers who were for the most part young girls. This disease appeared to be due to the irritation of the lung by dust. He was of opinion that the question of the cause of the disease was a more complicated one than could be explained by the presence of a toxin only but that venous congestion played an important part.

Dr. G. NEWTON PITT referred to the fact that in the advanced cases there might be thickening of the bones, clubbing of the fingers, and affection of joints, but that in the earlier cases only one of these might be present and this might render the diagnosis difficult. He suggested that it was important to examine the medulla of other than the long bones so as to show if any inflammatory conditions occurred in them also.

Dr. S. RUSSELL WELLS suggested that in the human body, as in the laboratory, organisms grew best on certain media and thus the disease tended to affect certain tissues. As the disease affected cartilage and fibrous tissue in the lung, so in the same way it affected those parts of the body in which fibrous tissue and cartilage occurred—viz., the joints.

Dr. SYMES-THOMPSON replied.

MEDICAL SOCIETY OF LONDON.

The Use of Serum and Other Inoculations in Pyogenic Infections.

A MEETING of this society was held on Jan. 11th, Dr. F. DE HAVILLAND HALL, the President, being in the chair.

Mr. W. G. SPENCER opened a discussion on the Use of Serum and Other Inoculations in Pyogenic Infections by reading a paper on the Use of Antistreptococcic Serum Streptococcus infection presented itself clinically under many forms—e.g., erysipelas, septic inoculation of the extremities, septic pharyngitis, scarlet fever, puerperal fever, endocarditis, pneumonia, or pleurisy. Any one of these forms might take such a virulent course that the indirect methods of treatment available to the physician proved inadequate. A generalised streptococcal infection was diagnosed by finding streptococci in the blood and no definite proof of the value of antistreptococcic serum could be deduced from any case in which the streptococcus has not been found in the blood beforehand The blood should certainly be examined repeatedly in all cases in which the antistreptococcic serum was being administered, but difficulties and delays in carrying out bacteriological examinations were often inevitable and time was an essential factor in the commencement of the treatment. However, apart from the examination of the blood, clinical observation went far to establish streptococcal infection in many of its varieties. The difficulties of producing a satisfactory antistreptococcic serum were then referred to. It was very probable that many reported cases of failure might have been due to the serum never having been standardised or to its having subsequently become inert. The essential requirements for the successful use of the serum were as follows: (1) evidences of a general infection by streptococci; (2) a standard antitoxin; (3) early administration after onset of the fever; (4) subcutaneous injection, and, perhaps, in very severe cases, intravenous injection; the administration by the mouth or rectum might be rejected and summarily dismissed; and (5) the administration of full doses every three or four hours until relief. Failure to comply with these requirements might explain many possible sources of failure Reference was then made to the clinical varieties of streptococcus infection. 1. In acute septic pharyngitis the best results had followed the administration of streptococcal antitoxin. 2. In cutaneous erysipelas, especially of the face and head, the indication for the serum treatment in this class of case was limited. 3. In cellulo-cutaneous erysipelas there was for the most part local suppuration due very often to a mixed infection with staphylococci; hence the issue was confused. 4. Scarlet fever Dr. Klein had for many years connected with a variety of streptococcus and this view of the pathology of the disease appeared to be generally accepted. Certain cases of malignant scarlet fever had been successfully treated by the serum 5. In puerperal fever they reached the most important section of the subject. The chief cause of fatal puerperal fever mainly consisted of streptococcal infection. It was, however, erroneous to infer that puerperal fever was invariably streptococcal in origin. Staphylococci and gonococci might cause the infection, even the diphtheria and colon bacillus had been found in the lochia. 6. Cases of endocarditis and pericarditis were either secondary to some local lesion or, when arising primarily, were diagnosed by finding streptococci in the blood. In primary cases it was essential to find streptococci in the blood beforehand and to note their disappearance after the administration. 7. In cases of septic pneumonia and empyema the serum had been administered but with very doubtful benefit. In conclusion, Mr. Spencer expressed the belief that there were abundant reasons for the proper use of antistreptococcic serum. There should be available for the practitioner an abundant supply of active standardised serum of the special kind required for use at the shortest notice.

Dr. A E. **WRIGHT** communicated a paper on Inoculation in cases of Staphylococcal Infection. He remarked that he would confine his attention to that kind of immunisation which was developed within the patient, such as could be accomplished in chronic or recurrent suppurative disorders, acne, boils, sycosis, and other suppurative conditions in the skin, and chronic generalised pyogenic conditions. Reference was made to a man who infected his finger, the infection from which spread up the arm and became generalised and chronic for ten years, the general staphylococcal infection taking the form of repeated crops of boils and suppurative lesions in various parts. Dr. Wright had administered staphylococcal vaccine prepared from dead cultures and the patient had rapidly recovered. Five other cases were treated with like success.[1] 15 more cases (making a total of 21) of chronic recurrent suppurative conditions had been successfully treated in this way. Cases did best if treated by the vaccine derived from their own staphylococcus. Cases required watching and the treatment adapted from day to day. The phagocytic reaction might vary considerably and in a negative phase go down to 0·5 of normal. Similarly the serum of immunised animals might vary and that was why the sera on the market were untrustworthy.

Sir **FELIX SEMON**, referring to the treatment of acute intoxications—Ludwig's angina, for instance—remarked that they were not necessarily of streptococcal origin, they might be due to any of the pyogenic group of organisms. The treatment to be of any use must be extremely prompt. The sera on the market were better than nothing.

Dr. E W. **GOODALL** thought they had not advanced very much in the last four years in their knowledge of the subject. In regard to scarlet fever Marmorek's serum had entirely failed. He did not agree that the streptococcus agglomeratus was the organism of scarlet fever, though no doubt the pyogenic complications might be due to streptococci, and reference was made to a case of severe angina in which recovery very rapidly took place under the serum treatment.

Dr. **CYRIL OGLE** had collected records of 110 cases treated by antistreptococcic serum. The results of his analysis showed some very hopeful results.

Dr. W. J. **GOW** referred to puerperal fever and expressed the belief that no real good had been accomplished in puerperal cases. The uncertainty of the serum on the market was a grave objection. Results would necessarily be fallacious, for many puerperal women incurred considerable temporary elevations of temperature which subsided spontaneously or under simple local measures.

Dr. F. J. **POYNTON** remarked that no one knew the nature of the several pyogenic cocci. The difficulty of preparing the sera was very great. The sera on the market were antibactericidal, which property was very easily and rapidly lost. Evil results arising from their use had been recorded, such as multiple arthritis and enlargement of the spleen.

The **PRESIDENT** thought that in desperate cases the use of these sera was justified. He had recently treated five cases; two were severe cases of erysipelas, one was a case of malignant endocarditis, one of Ludwig's angina, and one of septic pneumonia. Early administration was very important. Other precautions should not be neglected. Several extraordinary recoveries had been recorded when the sera had been administered by the mouth or the rectum.

Mr. **SPENCER** and Dr. **WRIGHT** replied.

CLINICAL SOCIETY OF LONDON.

Pneumococcal Peritonitis.

A MEETING of this society was held on Jan. 8th, Dr. **FREDERICK TAYLOR**, the President, being in the chair.

Sir **DYCE DUCKWORTH** and Professor **HOWARD MARSH** communicated a paper on a case of Pneumococcal Peritonitis. The patient, a woman, aged 27 years, was seized with headache, generalised pains, and a rigor on Feb. 26th, 1903. The temperature was found to be 104·2° F. on the following day and symptoms of general peritonitis followed. Widal's reaction was negative and a large polynuclear leucocytosis was present. On March 2nd Professor Marsh and Mr. A. A. Bowlby saw the case and a diagnosis of typhlitis with some general peritonitis was made. Professor Marsh operated and signs of inflammation were seen in the peritoneum and the large intestine. The appendix was found to be constricted at the base, dilated, and full of mucus above; it was ligatured and removed. There was some thin, turbid, and dark-coloured fluid in the peritoneal cavity but no adhesions were found nor was there any evidence of the perforation of a viscus. A culture of the fluid showed pure specimens of the pneumococcus, the presence of which was confirmed by an inoculation test. Three days later hiccough and abdominal pain supervened and ten cubic centimetres of No. 1 antipneumococcic serum were injected. On March 6th the injection was repeated. Signs of fluid in the left pleura appeared and on the 20th pus was found on exploration. Resection of part of the ninth rib was performed on the next day, when 12 ounces of sour-smelling pus were evacuated. The further progress of the case, though slow, was uneventful. The sudden onset and the rapid and grave development of the peritonitis closely corresponded with that which is observed in pneumococcal inflammations in the joints and elsewhere.

The **PRESIDENT** also communicated a case of Pneumococcal Peritonitis. The patient was a girl, aged eight years, who was admitted under his care into Guy's Hospital on Nov. 19th, 1903. On the 10th abdominal pain set in, followed by a rigor, and two days later signs of pneumonia developed. On admission the abdomen was distended and tender, moving very little on respiration, while physical signs of pulmonary consolidation at both bases were present. Some herpetic vesicles were seen at the base of the nose. Mr. R Clement Lucas performed laparotomy and a quantity of odourless pus together with masses of lymph was removed. The cavity was irrigated with hot saline solution and drained. The pneumonia on the right side cleared up but on the left side physical signs of empyema manifested themselves and on the 27th six ounces of pus were withdrawn resection of a portion of rib being performed four days later when more pus was evacuated. Cultivations made by Dr. J. W. H. Eyre from the peritoneal pus gave a pure growth of the pneumococcus; those taken from a second collection in the left iliac fossa which was incised on Dec. 11th gave a growth of pneumococcus associated with the staphylococcus aureus. Cultivations from the pus aspirated from the chest were sterile but under the microscope showed badly staining diplococci and empty capsules, characteristic of a pneumococcal empyema. The child was making good progress. The President discussed the question of the seat of primary infection which he thought was shown by the sequence of events to be the lung; the peritonitis and empyema he considered were secondary.

Mr. **STANLEY BOYD** referred to the case of a woman, aged 26 years, upon whom he had operated for symptoms of peritonitis, three pints of odourless pus being evacuated from which pure cultures of the pneumococcus were obtained. The abdomen was distended in a peculiar fashion and moved with surprising ease. No information was forthcoming at the time of operation as to the primary origin of the disease but the possibility of infection through the pelvic organs might be considered.

Dr. J. H. **BRYANT** alluded to three cases of pneumococcal peritonitis which he had published in 1901 in which the primary point of infection was the peritoneum. He considered that an alimentary origin was not at all improbable, especially as the pneumococcus might be found in the throats of healthy individuals. He called attention to the fact that abdominal pain was frequently complained of in pneumococcal pneumonia and he thought that the adhesions sometimes found post mortem between the lung and the diaphragm might account for this. Pneumococcal peritonitis was rare; of 162 cases of pneumococcal infection reported by Dr. Netter of Paris, in only two had the peritoneum become infected.

Dr. J **FAWCETT** stated that in 182 fatal cases of lobar pneumonia which had occurred in Guy's Hospital during the last five years and in which necropsies had been made five only showed any evidence of infection of the peritoneum and this was very slight. The conclusion to be derived was that in pneumococcal peritonitis the infection was generally a primary infection of the peritoneum or part of a general septicæmia.

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[1] THE LANCET, March 29th, 1902, p. 874.

Dr. W. LANGDON BROWN referred to a case of pneumococcal empyema in a girl, ten years of age, in whom signs of fluid appeared in the abdomen and right knee-joint. The abdomen was not opened as the condition cleared up He considered that this was probably a case of pneumococcal peritonitis in which recovery ensued without surgical interference.

Mr. C. H. GOLDING-BIRD said that although a tuberculous appendicitis was known, yet pneumococcal appendicitis was not as yet recognised. He thought that there were many points in Professor Marsh's case which might justify the latter description.

Dr. EYRE felt sure that if bacteriological examinations were made more frequently than they were the pneumococcus would be more often found. He called attention to one curious property possessed by the pus from these cases—namely, its tendency to auto-sedimentation, the upper layers soon becoming clear. He thought that such a simple test might be found of assistance at the time of operation. He also pleaded for the importance of performing animal inoculation experiments as a confirmatory test for the presence of the organism. Staining tests were fallacious.

Dr. HERBERT S FRENCH read notes of a case under the care of Dr. G. Newton Pitt in which he had performed the necropsy. Acute peritonitis with consolidation of the base of one lung was found. He thought that the cases might be divided into groups, one where the infection was directly into the peritoneal cavity and another in which the organisms entered the blood and so disseminated themselves.

Sir DYCE DUCKWORTH, in reply, said that he thought that pneumococcal peritonitis might exist in varying degrees of virulence. The improvement in his case after the use of serum was certainly *post*, if not *propter*, *hoc.*

Professor MARSH replied that he was unable to state whether the case was one of primary appendicitis. He thought that to the list of conditions which might imitate appendicitis pneumococcal peritonitis must be added.

The PRESIDENT, in reply, said that the presence of an extraperitoneal abscess containing pneumococci in association with another organism was an interesting feature in his case.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Treatment of Tuberculosis by Beraneck's Tuberculin.—Successful Operation for Typhoid Perforation.—Pylorectomy and Gastro-jejunostomy performed Five Years after Operation for Perforating Gastric Ulcer.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Jan. 8th, Mr. C. RICHARDSON, the President, being in the chair.

Dr. A. CHRISTY WILSON (Doncaster) read a paper on the Treatment of Tuberculosis by Beraneck's Tuberculin and said that he believed that the view was steadily increasing among those who had seen most of the results of the open-air treatment of consumption that the cures were not so numerous as was at first anticipated. He became acquainted with Beraneck's tuberculin as a result of several visits to this observer's laboratory in Neuchâtel. It was claimed that this tuberculin was innocuous and convenient in the treatment of tuberculosis. It was obtained by a mixture of basitoxins and acidophile toxins of the tubercle bacillus. It was less toxic than Koch's tuberculin. The patient was injected daily, the initial dose being about 0 002 gramme. The presence of hæmoptysis was no contra indication. The larynx had been painted with the pure tuberculin for several weeks with no inconvenience. Improvement had been noted in 60 out of 90 cases of phthisis. Dr. Wilson, in conclusion, gave details of some illustrative cases.—Dr. E. F. TREVELYAN drew attention to the fact that Beraneck's tuberculin appeared to be prepared on much the same lines as Koch's old tuberculin and tuberculin R and he doubted whether an active immunisation by toxins was likely to provide a really efficient treatment of tuberculosis. After some actual experience of sanatorium treatment he was quite prepared to admit that something more was wanted, no doubt in the shape of a bacteriological treatment, especially in cases with persistent pyrexia. If Beraneck's tuberculin was as harmless as Dr. Wilson maintained it was only right to try it.—Dr. T. CHURTON also took part in the discussion and Dr. WILSON replied.

Dr. A. G. BARRS and Mr. WALTER THOMPSON described a case of Successful Operation for Typhoid Perforation occurring in a young woman. Dr. Barrs gave a clinical outline of the case and emphasised the importance of early diagnosis. The operation was performed on Oct. 5th at 11 P.M., two hours after the occurrence of perforation. The patient was suffering severely from shock at the time. She was therefore infused with saline solution and five minims of strychnine were injected subcutaneously. Under ether an incision was made four inches long in the right linea semilunaris On opening the abdomen some four or five ounces of turbid fluid were found. There was no fæcal odour or escape of fæces, the intestines being small and empty. A small, cleanly punched out perforation was found about four inches from the ileo cæcal valve. It was of about the size of a filiform bougie and was so small that it was missed at the first examination. The whole ulcer and perforation were inverted with a single continuous suture. Two other ulcers which had roughened the peritoneum were treated in the same manner. The abdomen was cleaned and drained with gauze. The greater part of the wound was closed. For the next four days it was impossible to say whether the patient was suffering from general peritonitis or not. The wound suppurated and healed slowly. She was now well.—Dr. CHADWICK, Dr. CHURTON, Mr. H. LITTLEWOOD, Mr. B. G. A. MOYNIHAN, and the PRESIDENT took part in the discussion, and Dr BARRS and Mr. THOMPSON replied.

Dr. CHRISTY WILSON showed a case of Pylorectomy and Gastro jejunostomy performed five years after operation for perforating gastric ulcer. On May 3rd, 1901, he read before a meeting of the society notes of four cases of perforation of the stomach and duodenum. The patients, all men, were treated in the Doncaster Infirmary and, he believed, were cured not only of the perforation but of the ulcers and indigestion. Two out of the four had had recurrence in the site of the original ulcer. One recovered after three weeks of rectal feeding followed by dieting and one came back five years after his first operation (May 14, 1903). Pale, emaciated, and scarcely able to walk, he relapsed six months after his perforation. One and a half hours after every meal he had severe pain and usually vomited. Two weeks of rectal feeding and dieting doing no good the abdomen was opened by cutting through the cicatrix of the old incision. Dense adhesions surrounded the pyloric end of the stomach and the duodenum. They were very vascular and presented many large veins which were very friable so that it was somewhat difficult to clear the stomach and duodenum. The pylorus was thickened and indurated, so the duodenum was divided an inch and the stomach one and a half inches from the pylorus. As they would not approximate both were closed and a posterior gastro-jejunostomy was performed. The patient's recovery was rather slow but three months after admission he returned to his work and had continued perfectly well ever since. Examination of the specimen showed that the pylorus was occupied by a large ragged ulcer with an indurated base, but fortunately for the patient it was not malignant.

The following cases and specimens were exhibited:—

Dr. C. OLDFIELD: (1) A specimen of Hydatidiform Mole; and (2) a case of Pyosalpinx.

Dr. CRAWFORD WATSON (Halifax): A case of Splenic Enlargement.

Mr. LITTLEWOOD: (1) Suppurating Fibroid removed by Abdominal Hysterectomy; (2) a Portion of Catheter removed from the Male Bladder; and (3) two specimens of Ovarian Cysts associated with Pyosalpinx.

Dr. CHURTON: Three cases of Recovery from Tuberculous Meningitis.

Dr. J. B. HELLIER: Specimens of Tubal and Ovarian Disease.

Dr. J. GORDON SHARP: A case of Periodic Tonic Spasm of the Muscles of the Right Upper Extremity following Injury to the Left Motor Area.

Mr. MOYNIHAN: A series of specimens from cases Enterectomy, Colectomy, and Proctectomy.

Dr. CHADWICK. A case of Aneurysm.

Dr. A. L. WHITEHEAD: A case of Empyema of the

Frontal Sinus, right Sphenoidal Sinus, both Antra of Highmore, and of the Ethmoidal Cells on both sides.

Mr. G. CONSTABLE HAYES: Skiagram and specimen of a Piece of Steel removed from the Eye by Mr. H. Secker Walker with the Electro-magnet.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

On the Treatment of Various Forms of Cutaneous Disease by the X Rays and Light.

THE fourth meeting of this society was held on Jan. 8th, Professor JOHN CHIENE, the President, being in the chair.

Dr. W. ALLAN JAMIESON read a paper on the Treatment of Various Forms of Cutaneous Disease by the X Rays and Light. He said that the epidermis when structurally intact had hitherto offered such an impenetrable bulwark and so successfully protected the underlying structures that agents designed to exert action on tissue elements only very little beneath the surface had been found uncertain and inefficient. No doubt this statement, as Unna had shown, required modification when the epidermis had become unsound and therefore porous. A certain and sometimes an undesirable amount of absorption was then possible but this very unsoundness restricted their efforts as harm might easily be wrought. Hitherto their means had either been direct caustics or those which occasioned irritation in the first instance, as iodine. Quite recently, however, the introduction of the x rays, of the Finsen light under favourable conditions, of radium, and of high-frequency currents had assuredly given them sources of energy which could influence the various tissue elements in and beneath the epidermis. Dr. Jamieson limited himself to a consideration of the results obtained in the Edinburgh Royal Infirmary since the employment of the x ray and light treatment was introduced. He referred to the improvement in the old spring contact breaker by its replacement by a mercury motor interrupter and the beneficial results in treatment thus effected. Constant supervision of the cases under treatment was necessary so as to observe the earliest signs of reaction and thus to cease the exposures before the limit had been materially passed. There were instances where the reaction did not show itself until days, or occasionally even weeks, after the last exposure, but when such appeared so remotely it was seldom severe. Another point which had been closely considered was the protection by lead masks of parts other than those involved in the disease. When affected areas encroached on bearded portions the shedding of hair could not be wholly avoided, but this was a minor ailment, particularly as the hair usually after a time returned. The distance from the tube had also occasioned considerable thought, as while the nearer the more intense the effect there was also a greater risk of burning. Hence a mean of from four to six inches had been adopted. The duration had been on an average five minutes to each part exposed. Working with a comparatively high ampèrage and low voltage since accumulators were used exposures were made with a cold anti-cathode. While not in any way courting reaction it had been found that a moderate degree was not harmful. Indeed, it was a good test that the rays were acting on the tissues, but since no one could say how far in any given case such reaction might go further exposures were stopped on its appearance. Burns of any severity had occurred almost exclusively in cases of lupus or in favus or sycosis of an intractable kind where the rays were of little or no account. No scars from burns had been met with in cases of rodent ulcer or in the two cases of mycosis fungoides. Sometimes the plan suggested by Dr. Norman Walker of painting with pure carbolic acid where the disappearance of the lesion was slow had been followed by improvement. This had chiefly been employed in lupus vulgaris where great variations in the sensitiveness to the rays was found. A small number of cases, however, reacted to but one or very few exposures and the interval had in them to be prolonged. The tubes often became somewhat rapidly "hard" and in his experience less active. He had not found "soft" tubes, those having a sparking distance of over three inches, particularly apt to burn, while they were certainly more efficient in curing the disease. He had found that weather conditions materially affected the rays, that on cold raw days reactions more readily occurred and this was what might have been expected; but while cold was one it was not the sole climatic condition which favoured reaction. During the last 18 months 133 cases of lupus vulgaris had been treated and the greater proportion of these by exposures to the x rays. Some, however, had been treated exclusively, whilst a large number had been partially treated, by the Finsen light. Of favus 30 cases, of rodent ulcer 21, and of sycosis 12 had been treated and in addition two cases of mycosis fungoides. Unfortunately, the results could not be stated statistically as nearly all the patients treated were out-patients. Some discontinued attendance or the exposures were interrupted for various reasons. It might be said generally, however, that [illegible] who persevered had [illegible] benefited. 1. As re[illegible] largely, formerly in all forms of treatment, while the centre might be cured, the margins of the area were apt to remain the seats of active disease which ever tended to encroach on healthy skin. In very many examples the effect of x-ray treatment was to check the progress at the margins which scarred over but small nodules might persist in the centre; yet this also greatly improved, though, if extensively involved, the interior of the nostrils might need the employment of scraping or other topical medication; in not a few the crusting, so suspicious a feature, might completely dry up under the x rays alone. Undoubtedly, the soil in lupus had to be reckoned with. When the skin was soft, pale, and tender and the patient exhibited very markedly the signs of the strumous diathesis, such patients were somewhat prone to react readily and not always went on as satisfactorily as could be wished. This, however, was no valid reason for not employing the rays, as in many most [illegible] excellent results were obtained. [illegible] not be quite sure of ultimate [illegible] be immensely reduced and so brought within manageable limits. Other and older methods were quite compatible with the use of the rays and could be employed with advantage as auxiliaries. An important question had been raised as regards metastases. In the treatment of a case of lupus by the x rays tuberculous peritonitis and abscesses had developed in other parts of the body, but this was a solitary example and it was most unlikely that the action of the rays was to set the bacilli free in the circulation after the manner ascribed to tuberculin. Dr. Jamieson had found that the modification of the Finsen light provided by the Marshall and Woods lamp was most applicable to small patches of lupus where firm pressure could be exerted owing to their situation over bony structures or for residual nodules similarly placed after x-ray treatment. He related one case treated exclusively and most successfully by the Finsen light and others nearly as successful had resulted. This method had the advantage of not causing burns but was much more restricted in its applicability and the progress was slower. The application of adrenalin to the lesions shortly before exposure to the lamp was abandoned as the exaltation in effect was not at all commensurate with the expense. 2. Rodent ulcer. The curative effects of the x rays on this disease were now universally conceded. Perhaps the best results of their unaided use were obtained in cases of fungating rodent ulcer of the face. When progress was watched the margin was seen to recede and with the absorption of the new growth healthy epithelium advanced from without inwards. The more completely the rodent ulcer was limited to the skin and subcutaneous tissue the more brilliant was the success, but even when periosteum and bone were implicated a cure might follow. In other forms of cancer, however, the effects had not always been so good and in one advanced case fresh masses of cancerous growth sprouted up even when the rays were being actively employed. The rays found their special field of applicability in situations such as the nose, where excision was likely to occasion great disfigurement. In order to shorten the time required for the absorption of patches of rodent ulcer it was desirable to get rid of as much of the new growth as possible by scraping, together with [illegible] to small areas at a time. A[illegible] Jamieson could not speak [illegible] might recur even after prolonged exposures and apparent cure was shown in the case of a man, aged 58 years, who had been treated energetically two years previously for extensive superficial rodent ulcer of the cheek but who now exhibited a marginal extension in the shape of a deep groove all round the still healthy cicatrix. Some held that the x rays had less control over recurrence after previous use. 3. Sycosis. Only intractable cases had been treated. Some of these stood the application with merely the production of a sensation of heat, while in others swelling, redness, and pain rapidly followed. In all after a longer or shorter period the hairs fell out while the pustules became fewer and fewer. Yet unless the part could be rendered absolutely bald and a smooth, white, scar-like surface left the disease might recur. In such cases the fine returning hairs on being extracted were seen to have a minute amount of pus at the root. 4. Favus. With loosening and pulling out of the hair the disease died out, a polished, hairless surface remaining. In some cases exposures amounting to an hour caused separation of the hairs, in others a much longer period was required. Cases of favus did not usually react unduly. 5. Mycosis fungoides. In this rare disorder the rays had proved to be the sole means of arresting an otherwise hopeless disease. Dr. Jamieson had treated a patient more than a year ago and at present she remained well, in so far that all the parts of the body then exposed to the rays continued to be free from recurrence, yet one or two patches and two small tumours had developed in situations which were not submitted to the rays. Another case in the erythrodermic or premycotic stage had so greatly improved as to be almost well. (The patient was exhibited.) As regards the mode of action of the x rays, it was widely accepted that they exerted no directly lethal effect on microbes and this was supported by what occurred in sycosis. Though the rays had the power of causing the separation of the hair from its papilla and of inhibiting its growth and renewal at least for a time they only killed the staphylococci by removing the pabulum furnished by the hair and its sheaths *in situ* and by emptying the follicular tube much in the same way as an alveolar abscess ended when the offending tooth was extracted. In proof of this it had been shown that in sycosis the vitality of the staphylococci was not wholly destroyed since pustules reappeared in places coincidently with the re-growth of the young hair. In favus epilation had been for long the favourite method of cure and the rays merely did this more thoroughly and naturally but did not of themselves put an end to the achorion. The apparent bactericidal action in lupus could be best explained by their promoting phagocytosis. The bacilli were few in number and scattered throughout the nodules and were thus readily dealt with when the polynuclear leucocytes were increased in number and activity. In mycosis fungoides and rodent ulcer non-microbic diseases were met with, and the notable effect of the rays in these diseases seemed purely owing to a power which they possessed of recalling aberrant cells to obedience to trophic nerve control. Dr. Jamieson exhibited many patients to show the results of treatment in various skin diseases.

Dr. **WALKER** said that time was a great consideration and the period available for treatment had in each case to be determined carefully. The extent of the disease and the circumstances of the patient might allow of one or two prolonged exposures with a soft tube. Considerable destruction might be a result in such cases and though the healing was slow less time, on the whole, was lost. Telangiectases might occur but were easily cured by electro-puncture. He narrated cases to illustrate the good effects of exposures made at considerable intervals. In cases of rodent ulcer it did not seem to matter whether hard or soft tubes were employed but the difficulty was in knowing when to stop. Ulcerated cases did best and the resulting scar was excellent. He referred to the cosmetic effect of the x rays as contrasted with surgical procedure in cases where the cartilage had been attacked. In cases of hypertrichosis they would naturally have expected that the condition would be benefited but in Dr. Walker's experience the results had not been sufficiently certain to lead him to recommend the treatment. Where the hairs were diseased and where their removal was desired as part of the treatment this method was applicable. In favus the effects were most satisfactory but not so in ringworm for the simple reason that the hairs broke off. In sycosis experience had taught that removal of the hairs was not sufficient and the effects of treatment of this disease by the x rays confirmed the view that such rays were not germicidal. Dr. Walker referred to the inapplicability of the rays in the treatment of psoriasis and to their excellent effects in cases of widespread warty growths. Dr. Walker thought that as regards methods most depended on the lamp and that information gained from the operator's own apparatus was the most important of all. Too much stress could not be laid on the importance of protection. Dr. R. B. Wild of Manchester had very recently referred to the possibility of phthisis being set up by the treatment, death from phthisis having occurred in two out of his 80 cases. Dr. Walker agreed with him in thinking that there was no connexion between this result and the treatment. Dr. Wild gave the percentage of satisfactory results in the case of the Finsen lamp as 75, in x-ray treatment 74, and with the Lortet-Genoud lamp as 24. The results obtained in the Royal Infirmary, Edinburgh, were not dissimilar. Dr. Walker was satisfied that the x rays were at least twice as useful as the London Hospital lamp. Dr. Walker concluded by giving a warning against the indiscriminate use of such treatment and demonstrated many patients.

Dr. **DAWSON F. D. TURNER** remarked that metastasis was unusually common in scirrhus of the breast treated by the x rays. As only those rays which were absorbed could be of benefit he preferred soft tubes for superficial cases. For the proper treatment of disease by electrical methods some knowledge of physics was essential. The increase in the amount of unqualified electrical practice by so called institutes and by tradesmen was greatly to be deplored. Practitioners should recommend their patients to medical men who had had an electrical training. Dr. Turner exhibited the following:—1. A case of Scirrhus Erythema following removal of the breast; 46 exposures of four minutes each sufficed to remove it entirely. 2. A case of Fibro sarcoma of the Frontal Bone. It was so large that the right eye was almost entirely occluded. After only 11 exposures of four minutes each the swelling had greatly diminished and the patient could see easily with the right eye. 3. A case of Lupus under treatment by radium. 4. A Recurrent Scirrhus in which after 26 exposures the nodular and glandular swellings had disappeared. 5. A case of Recurrent Sarcoma[1] which had so improved after 48 exposures that the man had returned to his work.

Dr. **H. E. FRASER** said that the more abnormal the tissue the greater was the effect produced by the x rays. He thought that soft tubes were more liable to produce irritation. The erythema which resulted from treatment might not come on until the treatment had been stopped and the same occurred with sloughing. In one case of rodent ulcer an exposure of 25 minutes was accidentally given. A large slough formed but the result was most satisfactory and no recurrence had taken place a year later. The proliferating diseases as lupus and rodent ulcer seemed most easily and beneficially affected. The analgesic effects of this treatment were often great even though no benefit to the disease, as in a case of sarcoma of the ribs, resulted.

Mr. **D. M. GREIG** and Dr. **GARDINER** also took part in the discussion.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on Jan. 8th, Dr. J. Groves, the President, being in the chair.—Dr. J. Spottiswoode Cameron, medical officer of health of Leeds, read a paper on the Sophistication of Foods. By this term he understood not only the addition or substitution for the genuine article of another having a plausible resemblance thereto and the partial removal of some valuable constituent, but also the addition without the knowledge of the purchaser of some foreign matter producing or preventing chemical changes in the food, unless its presence were essential and implied in the description. Thus a ham would not be a ham without salt and tarry matters and the use of salt alone was understood in the case of salt pork, beef, and fish. But in all these the undeclared addition of borax was a sophistication and if the consumer's health suffered he was wronged and entitled to redress, whereas if the presence and percentage of the boric acid were declared no one was to blame. Most persons preferred their coffee with a little chicory but the addition or substitution of 90 per cent. was clearly a fraud though legalised by Section 8 of the Act of 1875. As regards the addition of margarine to butter, the Act of 1899 appeared to be strict enough, but there being no standard of butter and the soluble fatty acids calculated as butyric acid varying from 4 5 to 7 per cent. nearly a fourth of its weight of margarine might be added with impunity. Milk was very largely diluted, for the effect of fixing a standard had been its acceptance not only by the trade but by magistrates as a normal, not as a minimum, and the very general practice of watering rich milks down to it. He hoped that the standard percentage of fat would be raised to 3·25, which several companies found no difficulty in obtaining. Two of the most "burning questions" in connexion with adulteration were those of preservatives and of warranties The result of fixing standards or permissible maxima of preservatives had been similar to that in the converse case of the minimum of fat in milk additions not greatly exceeding the maximum allowed being looked on as venial With the recent improvements in sterilising and preserving foods by heat or cold, by sugar, and the like, Dr Cameron saw no need for the use of chemicals which, if not poisonous, were at least of doubtful wholesomeness Formic aldehyde ought to be prohibited and the use of boric acid should be limited and discouraged The addition of copper salts for "greening" peas and other vegetables should be made illegal The recommendations of the committee on preservatives appointed by the Local Government Board were reasonable and he regretted that they had not long since received legal sanction The law with respect to warranties was in an unsatisfactory state The Margarine Act of 1887 had introduced the mention of invoices and as one result in several instances an invoice handed in had been held to exonerate the retailer, though when proceedings were taken against the wholesale dealer who had given it, it was declared to have nothing of the nature of a warranty and the summons against him had been dismissed Section 20 of the Act of 1899 dealt with the "use of warranty or invoice as defence and proceedings against the warrantor" but in Subsection 6, stating the penalty for giving false warranties, there was no mention of invoices —Mr C Cassal, F I C, said that a sample of butter was pronounced by himself and the chemist of the Board of Agriculture to contain 17 per cent. of foreign fats whereas it was found to have been made from the milk of two cows—one normal the other diseased and yielding a butter containing as usually estimated, about 30 per cent of fats other than those of milk, together with pus cells, shreds of tissues, coagula and bacteria of all kinds Such butter was a fraud, for it mattered not to the consumer whence the foreign matter was derived —Mr D L Thomas, medical officer of health of Stepney, said that he had to prosecute more than one s than 2 per cent of fat and on ich gave but 1½ per cent he found lent by one retailer to the other for the purpose of defence —Dr E F Willoughby remarked that all discussion and evidence in the courts and elsewhere turned on the question of the possible injury to health through the ingestion of single large doses, or the habitual use of small doses, of the preservative but in his opinion the question of the possible presence of ptomaines in the partially preserved milk was a matter of greater importance —The President, Mr J Tubb Thomas, and many others also took part in the discussion

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[1] THE LANCET, Jan. 2nd, 1904, p 23.

LIVERPOOL MEDICAL INSTITUTION —A meeting of this institution was held on Jan 7th, Mr Rushton Parker the President, being in the chair —Dr A S I Grunbaum showed an experiment to demonstrate the hæmolytic action of Radium Rays on Red Blood Corpuscles —Dr R Stenhouse Williams exhibited and described a new ethyl chloride inhaler When the anæsthetic was administered by his method the patient was under its influence in 50 seconds, the anæsthesia was maintained with ether He had found it very useful in alcoholic subjects —Mr F W Bailey had noticed that patients frequently came out of the ethyl chloride anæsthesia before ether anæsthesia was induced —Sir William M Banks and the President also spoke —Mr R C Dun read notes of a case of Congenital Hydronephrosis due to stricture of the ureter at its junction with the renal pelvis The chief point of interest lay in the fact that the abdominal tumour was principally on the left side and was not palpable in the right loin The diagnosis of left hydronephrosis was made On performing nephrectomy through an incision on the left side a normal left kidney and ureter were exposed The tumour which proved to be a hydronephrosis of the right kidney, lay in front of the left kidney and was readily removed Recovery was uneventful A congenital displacement of the right kidney either to the middle line or into the loin of the opposite side probably explained the abnormal position of the hydronephrosis —Dr W Blair Bell and the President commented upon the case —Mr C Thurstan Holland read a note on the X Ray Diagnosis of Kidney Stones he laid special stress on the necessity, in making a negative diagnosis, of taking the x ray whilst the breath was held, also the importance of obtaining a plate showing the differentiation of the shadows of the soft structures lying between the iliac crest and the lower ribs The note was illustrated by a series of lantern slides showing stones *in situ* and also the type of negative to be aimed at —Dr W Carter, Dr Charles J Macalister, and Dr W Alexander spoke, and Mr Holland replied —Dr A Cassels Brown exhibited an old notebook containing notes on Dr John Rutherford's clinical medical lectures delivered in Edinburgh 1749 and read a paper on the subject After giving an account of Edinburgh the medical school, and Dr Rutherford, he referred to the total absence at that time of anything like scientific observation in medicine, but pointed out that the rate of mortality in Dr Rutherford's wards was in the existing circumstances not at all a discreditable one Dr Cassels Brown gave details of the treatment adopted in cases of anæmia rheumatism, ague, phthisis, syphilis, cardiac disease and hydrophobia, and in conclusion remarked that while the medical profession had advanced scientifically to an enormous extent, it had not advanced equally in other directions He suggested that more attention should be given to the teaching of practical therapeutics and advocated a modified return to the culture of the old time physician —The President, Sir William Banks, Dr Grunbaum, and Dr J R Logan spoke, and Dr Cassels Brown replied

ROCHDALE AND DISTRICT MEDICAL SOCIETY —At a meeting of this society held on Jan 7th Mr S T Lord read a paper on Functional Nerve Troubles Modern views of the nervous system recognised a conscious, a subconscious, and an unconscious mind An important function of the unconscious mind was inhibition In hysteria the inhibitory function was more or less in abeyance and hence a slight stimulus produced a fit In neurasthenia there were two factors, diminished resistance which was hereditary, and excessive strain Everyone was more or less susceptible to the influence of suggestion in fact, any so called voluntary action might be looked upon as the resultant of a complex series of suggestions How much more susceptible to this influence must those be whose nervous systems were weak or unstable Cases were related illustrating functional nerve trouble In all of them drugs had proved useless A girl with hysterical knee joint was cured when treatment had been given up A boy with a stiff and intensely tender elbow was perfectly well after being under chloroform and told that he was better Cases of hysterical vomiting were cured one by the threat of a thrashing, one by passes practised by a quack, and another by the suggestion of rectal feeding A boy subject to cataleptic fits had them averted by a box on the ear from a friend A neurotic mother had a son and twin daughters all subject to hysterical vomiting and the daughters also developed occasionally an ulceration of the lining of the mouth, most probably due to some obscure nervous cause A young man suffered from retention of urine after seeing his father catheterised for this condition A catheter was passed and drew off two drachms of urine (Dr A Lomas's case) —Dr A Wallace, Dr J A Menzies, and Mr H H I Hitchon joined in the discussion on the paper

THERAPEUTICAL SOCIETY —A meeting of this society was held on Dec 22nd, 1903, Dr Clarence Cooper, Master of the Apothecaries' Society, being in the chair —Dr W E Dixon read a paper in which he described the Action of Drugs on the Pulmonary Vessels He showed that these vessels had no nerve supply so that drugs which contracted ordinary systemic vessels did not affect those of the lungs He divided the drugs into three groups, the first of which included pilocarpine, adrenalin physostigmine, and digitalis which acted on peripheral nerve endings and produced marked contraction in systemic vessels but had no action on pulmonary vessels The second group consisted of substances such as barium and calcium salts and veratrine which acted directly on the muscles and produced contraction not only in the systemic but also in the pulmonary vessels The third group consisted of substances such as the nitrites and caffeine which caused vaso dilatation and acted not only on the systemic vessels but also on those of the lungs and must therefore affect directly the muscular tissues of the vessels In conclusion Dr Dixon explained how such substances as digitalis and adrenalin gave rise to marked pulmonary congestion —Dr H Sainsbury, Dr F de Havilland Hall and Mr E D Vinrace took part in the discussion —Mr Vinrace read a paper entitled "A I I a for the

More Thorough Study of Therapeutics." He said that little attention was now paid by medical students to therapeutics which in examinations had not the same importance as pathology or bacteriology. Young practitioners were therefore not so well qualified as they might be to treat minor ailments; the sufferer accordingly often sought advice from a druggist and finding relief continued to consult him in more serious diseases. Unfortunately, also, medical practitioners had in many cases given up dispensing their own medicines and even the art of writing prescriptions was on the wane, as many medical men now depended on the wholesale druggists for the supply of remedies ready prepared for use which the patient might afterwards obtain for himself in other ailments, whether similar or not, without consulting a medical man, thereby running great risks.

Reviews and Notices of Books.

Doctors and their Work; or, Medicine, Quackery, and Disease. By ROBERT BRUDENELL CARTER, F.R.C.S. Eng., Knight of Justice of the Order of the Hospital of St. John of Jerusalem in England and Consulting Ophthalmic Surgeon to St. George's Hospital and to the National Hospital for the Paralysed and Epileptic. London: Smith, Elder, and Co. Pp. 316 Price 6s.

Mr. Brudenell Carter's aim in taking up his pen has been, as he indicates in his preface, to bring about a better understanding of medical objects and methods than now commonly prevails and to show patients in which way they can coöperate with their physicians for the relief of suffering and the prolongation of life. His intentions have resulted in a thoroughly good and interesting book and we have great pleasure in commending it to all our readers. We hope also that it may have the wider circulation outside the medical profession for which its author destines it, for a perusal of its contents will enable thoughtful members of the public to appreciate the difficulties and the responsibilities of the *vita medica* in a manner that, alas, few of them now do. Mr. Carter is a man of wide experience and strong views, and his habit of clear and exact writing enables him to place his knowledge and opinions in an uncompromising manner before his public. No one can misunderstand a word of what he writes, while the personal note of the book is struck on the title page by the adoption of Montaigne's well-known motto "*J'ay faict ce que j'ay voulu: tout le monde me reconnoit en mon livre, et mon livre en moi.*" It is possible that some who have considered the various social and ethical problems presenting themselves as incidents in our professional life will not agree with Mr. Carter in every detail, but in general we think that all medical men will find themselves in accord with one whose sense of the dignity of medicine is so marked, and whose moderation and fairness are in evidence throughout, however vigorous he may be in adopting an individual line.

A brief introductory chapter traces the history of the medical profession in England and shows incidentally that the troubles connected with the title of "Dr." were existent half a century ago, as they are now. From these troubles, acting of course simultaneously with other and more obvious factors, arose the movement for the reformation of the medical profession which culminated in the Medical Act of 1858. Previously to the passing of that Act in England the style of M.D. was to a great extent reserved for doctors of medicine of the Universities of Oxford and Cambridge whose intention it was to practise as consultant physicians; but in Scotland and Ireland, where the medical graduates had no legal status for practice in England, the title of "Dr." was earned and used by general practitioners. It became, therefore, the habit of certain English practitioners to acquire the degrees of Irish and Scotch, especially of Scotch, universities, and in those days such degrees were sometimes to be obtained with regrettable facility. The Scotch M.D.'s would then reappear in England with the style which in England was regarded as a hall-mark of the consultant physician, although there was nothing in their professional career which marked them as different from the holders of the diplomas of the English corporations. Obviously only a general standard of medical education for all the medical men of the kingdom could remedy an abuse which tended towards down-grade competition among educational bodies, and to enforce such a standard was a powerful reason for the constitution of the General Medical Council which came into being on the passage of the first Medical Act. Of the other causes which led to the passing of the Act under which, with but minor modifications, we at the present day pursue our professional calling, Mr. Carter does not say much, while the actual condition of medical education as it to-day exists under that Act, and the supplementary Act of 1886, he regards without enthusiasm. For many years representative of the Society of Apothecaries of London upon the General Medical Council he has had first-hand chances for forming an opinion upon the subject, and it is clear that he would have the preliminary education of the medical student considerably modified. The early training of the medical student, especially of the London medical student, whose academic opportunities are as poor as his clinical opportunities are rich, is at the present moment giving serious concern to the General Medical Council, to the authorities of the University of London, and to the teaching staffs of all the big hospitals. Neither the public nor the medical profession ought to continue ignorant of the questions at issue and in Mr. Carter's book they will find, not only in the introduction but in every chapter, information germane to the subject.

Two excellent practical chapters are headed "Reasons for Success and Reasons for Failure in the Medical Profession" Mr. Carter inevitably quotes Sir James Paget's well-known inquiry into the after-careers of a thousand students at St. Bartholomew's Hospital, and by closely analysing the figures of the famous surgeon and teacher comes to the conclusion that the medical profession offers as fair a chance of what is generally considered professional success as any other calling. But he goes on to point out as a singular fact in sociology that the mental attitude of the public towards medicine is credulous and superstitious, very much in fact resembling the attitude of the professors of medicine themselves towards their art 300 years ago. In a humorous and caustic chapter he shows that the public at large have not grown intellectually with their medical men in their conception of the aims and powers of the healing art. The half-education of to-day leads many to quote with facility what are mere nursery axioms in respect of disease and, alas, leads them to expect from their medical advisers some kind of endorsement of the obsolete lore. Many patients are still pleased to hear that their cataracts are not "ripe" for treatment or that their headaches are "latent gout"; the man who knows that his "blood is heated" or that he is suffering from "liver depression" is still quite common in our consulting rooms. He is urgent in demanding that something should be given him for the condition, and the course thereupon to be adopted by the honest practitioner towards him is a difficult one. "The patient whose chief desire it is to recover from his malady," writes Mr. Carter, "and who as a means of attaining that primary object desires to do all that is within his power to contribute towards its attainment, will usually act wisely if he abstains to seek popular explanation of physiological doctrine, and is content to submit himself resignedly into the hands of the doctor whom he has selected, and in whom he has confidence, and to do and avoid what he is told to do or to avoid without disturbing his mind as regards either nomenclature or causes." Quite so, but this excellent class of patient is in daily practice counterbalanced by the other class that desires to be treated according to its folly. It is not possible to lay down any general rule for the guidance of the medical practitioner and Mr. Carter does not attempt to do so. He contents himself with giving a clear account of how and why the position arises.

We need give no further detailed account of "Doctors and their Work." Under the head of "Medical Grievances" we find a spirited appeal to medical men not to class themselves as tradesmen. Mr. Carter's contempt for the "eminent doctor" whose fame is established in the boudoir or by the society journal and his appreciation of the mental deficiencies of "anti's" make excellent reading, and he tells the story of "medical etiquette" in a dozen pages of common sense. We commend the book heartily to our readers and we hope that the public will also study it. In a leading article at the beginning of the new year we urged that the aims of the profession and the public were broadly the same, and that apparent antagonism would often cease if the laity were better instructed upon professional matters. From this point of view Mr. Carter's book is very opportune. His design in writing it has been to assist a *rapprochement* between the medical man and his patient upon grounds of mutual esteem, and his method of execution is well calculated to bring about his commendable object.

The Standard Medical Directory of North America 1903–1904. Chicago: G. P. Engelhard and Co. Pp. 1226 Quarto.

THIS medical directory of North America includes not only the names of practitioners in the United States of America, whether in civil practice or employed as officers in the United States army or navy, but also the names of all practitioners in Canada, Cuba, Mexico, and Central America. Full information is given in addition concerning the medical laws and the constitution of any governing bodies of the profession in the different countries; there are accounts of medical societies and medical educational bodies, classified lists of medical books and periodicals, and notes upon various hospitals and sanatoriums It will be gathered from this that the work is an enormous book of reference and it must have entailed much and serious labour upon its compilers.

The list of medical colleges of North America shows that those responsible for this directory are not scrupulous to apply the word "medical" only to studies that are scientifically medical. Eclectic and homœopathic educational centres are set down as places where medical education can be obtained. This uncritical attitude is more or less forced upon the producers of an American medical directory, as it is clear that any one having a legal status upon which to practise has a right to insist that his name should appear in what must be regarded as a semi-official list of members of the medical profession. In England we see the names of members of the medical profession upon the Medical Register who do not practise in accordance with the scientific teaching and system under which they obtained their qualifications. It is true that in America, apparently, examinations are recognised by certain States which are conducted upon eclectic or homœopathic methods, whereas in this country the standard of medical education exacted by the General Medical Council compels every medical student to be instructed up to a certain point in scientific medicine. Nothing, however, prevents a man, after his qualifications in scientific medicine have gained him a place on the Medical Register, from becoming a homœopath, so that our Medical Register is no more pure of heretics than is the North American Directory, although the presence of dissentient names has a different explanation.

The bulk of the book is, of course, taken up by the names and addresses of the medical men in North America. Upwards of 1000 quarto pages are filled with the names arranged in four columns of tiny print. The names are first entered under addresses in the United States; then come the Central American States and Cuba; and then the Dominion of Canada. In the next section all these names are entered alphabetically, having placed against them their addresses. A great deal of space is saved in giving the qualifications by using an elaborate system of abbreviations For instance, we find a gentleman in the alphabetical index entered as, say, Smith, J. H., Palo Alto, California We turn up the place and find Smith, J. H., Ont. 5, '92. We then look up Ont 5, which signifies the fifth in the list of the medical centres of Ontario and thus ascertain what are the qualifications of Mr. J. H. Smith to practise, '92 signifying that these were obtained in 1892. A weary repetition of similar titles appended after thousands of names is by this simple plan rendered needless. We have said enough to show that we consider the "Standard Medical Directory of North America" a thoroughly useful and carefully prepared book of reference. We hope that the great American public, so devoted to quackery and all forms of irregular medical practice, will get into the way of consulting the directory before consulting the individual. There is nothing over discriminating about the directory, as we have indicated, and if a physician's name is not found in its generous pages he should not be called in.

LIBRARY TABLE.

Cancer and Pre cancerous Changes: their Origin and Treatment By G H. FINK, M R C.S Eng, L S.A. Lond., Major, Indian Medical Service (retired). London: H. K. Lewis. 1903 Pp. 105—This book is intended to assist in the investigations at present in progress into the origin of malignant disease and its treatment, both preventive and remedial. The author discusses all the main theories hitherto advanced to account for the origin of cancer. He then enters on a thorough investigation of the life-history of many animal and vegetable parasites and, as he has read very widely, this portion of the work is of great interest. The conclusions at which he arrives are that there are many points of resemblance between cancer and malaria, though the former is more prevalent in temperate climates and the latter in tropical regions, therefore he is inclined to look upon cancer as parasitic in origin The author, however, lays great stress on the necessity for predisposing factors in the body of the host. The treatment advocated naturally follows the lines suggested by the theory of causation advanced. For the prevention of cancer a simple healthy life without excess of diet will tend to prevent any predisposition; the surroundings should be healthy and as the author considers it probable that the "germ" may be conveyed by an insect he advises that flies and other insects should be excluded from dwellings Great care should also be bestowed on the water supply and the water should be boiled or filtered before use. The treatment after the appearance of the disease consists in attention to the *primæ viæ* and care as to food and perhaps the employment of sera from cases of rodent ulcer and lymphadenomata. The book is evidently the outcome of much thought and deserves consideration.

Diseases of the Skin: an Outline of the Principles and Practice of Dermatology. By MALCOLM MORRIS Consulting Surgeon to the Skin Department, St. Mary's Hospital, London, &c. With two Coloured Plates and 58 Plain Figures. New edition. London, Paris, New York, and Melbourne

Cassell and Company. 1903 Pp. 642. Price 10*s.* 6*d.* net.—Ten years have elapsed since the appearance of the first edition of this well-known text-book and we extend a cordial welcome to this issue. Of the smaller manuals of dermatology this is probably the most suitable for general use, for it is sufficiently full for the purposes of the average student and practitioner and yet its bulk has not been needlessly increased by the inclusion of details which are of interest to the expert only. In such a subject as dermatology, pervaded as it is with questions still undecided, there is an abundance of material for differences of opinion and there are many points on which we might join issue with Mr. Malcolm Morris but we must acknowledge that the views put forward in this work are, on the whole, those generally accepted. There are numerous illustrations and most of them show clearly what they are intended to represent.

The Royal London Ophthalmic Hospital Reports. Edited by WILLIAM LANG, F.R.C.S. Eng. Vol. XV., Part 4. October, 1903. London: J. and A. Churchill.—The contents of this part of the Royal London Ophthalmic Hospital Reports are as follows: 1. Some remarks on the Use of Mallory's Phosphotungstic Acid Hæmatoxylin and a note on the Musculus Papillæ Optici of Nicolai, by F. H. Verhoeff, M.D., pathologist to the Massachusetts Charitable Eye and Ear Infirmary, Boston, U.S.A. Details are given of the action of Mallory's and Zenker's fluids and of formaldehyde and nitric acid with thorough washing with water. The author denies the existence of Nicolai's muscle, believing the supposed smooth muscle cells to be really neuroglia elements. He gives a plate in which are drawings illustrative of his own views. In an appendix to the above article he describes a hitherto overlooked membrane of the eye. This is a fenestrated membrane situated in the pigment layer of the retina, identical in structure and staining reactions with the membrana limitans externa The rods and cones are not, in his opinion, nervous elements but modified ependymal cells. 2 Observations on Renal Retinitis, by E. Nettleship, F.R.C S. Eng. This is a record of the results of the observation and post-mortem examination of many cases of retinitis. Mr. Nettleship states that the microscopic features and micro-chemical reactions of the brilliant white spots seen on the retina show that they are not, as has been generally accepted, fatty exudations, but that they are either amorphous or composed of a fine fibrinous network. 3. Epithelial Plaques of the Conjunctiva, by W. T. Lister, F.R C.S. Eng., and W. Ilbert Hancock, F.R C S Eng. These growths are rare. Examination under the microscope in four instances showed that the growth consisted of a mass of epithelial cells and was nearly avascular. 4. A Pathological Report on a case of Mooren's Ulcer of the Cornea, by W. T. Lister, F.R.C.S Eng. 5. Two cases of Pigmentation of the Retina, by E. Erskine Henderson, F.R C.S. Eng., with a plate. 6. A case of Orbital Wound in which the Optic Nerve and Central Retinal Vessels were divided, by J. Herbert Parsons, F R.C.S. Eng, curator of the Royal London Ophthalmic Hospital Museum, with a plate; also (7) by the same observer a case of Epithelial Hyperplasia of a Ciliary Process. 8 Acute Dacryo adenitis, by William S. Inman, M.B. Lond., senior house surgeon, Royal London Ophthalmic Hospital. Dr. Inman reports ten cases as having occurred amongst the patients of the hospital in two years and refers to the literature of the disease. He draws the conclusion that the cases may be arranged in two groups, those associated with mumps which are usually bilateral and in which suppuration does not occur, and those not associated with mumps, in which the disease is usually unilateral and suppuration may or may not occur. This part contains the index to the fifteenth volume of the Reports.

FOURTH REPORT OF THE ROYAL COMMISSION ON SEWAGE DISPOSAL.[1]

POLLUTION OF TIDAL WATERS WITH SPECIAL REFERENCE TO THE CONTAMINATION OF SHELL-FISH.

THIS report, which consists of 54 pages, is a document of very far reaching import and its influence will be felt much beyond the limits to which it nominally applies. As we are discussing the general aspects of the problem in a leading article we shall confine ourselves in this place to a general *résumé* of the contents of the report. After their introductory remarks the Commissioners refer somewhat critically to

The Laws in regard to the Pollution of Tidal Waters.

Under this heading they show that although Section 17 of the Public Health Act, 1875, confers certain powers with regard to the prevention of the pollution of non-tidal waters its provisions have not hitherto been interpreted as applying to tidal waters, and very much the same remark may be made in respect of the provisions of the Rivers Pollution Act, 1876, which exempts tidal waters from its operations unless after inquiry by the Local Government Board any given tidal estuary is declared to be a "stream" within the meaning of the Act. As a matter of fact such a declaration has been but rarely made and the instances thereof could probably be counted on the fingers of one hand. Similarly, in regard to the Salmon Fisheries Acts of 1861 and 1862, it would seem that in order to take successful action under their provisions it is necessary to prove that "the pollution complained of has poisoned or killed fish," and an occurrence of this nature is a very different thing from the specific pollution of water by sewage. Lastly, it would appear that the Sea Fisheries Committees are unable to obtain any relief under the powers of their by-laws, since nothing in the Sea Fisheries Regulation Act, 1888, "shall authorise ...... a by-law affecting any powers of a sanitary or other local authority to discharge sewage in pursuance of any power given by a general or local Act of Parliament" The Commissioners raise the question as to whether the Board of Trade in taking the view that this proviso renders the by-laws inapplicable to the discharge of sewage by local authorities has correctly interpreted the law, but the Commissioners are nevertheless forced unwillingly to the conclusion that the statute does not in practice prohibit the discharge of polluting matters into tidal waters.

The Extent of the Mischief Caused by Polluted Shell fish.

With the view of obtaining assistance in their researches the Commissioners, through their secretary, Mr. F. J. Willis, despatched a circular letter to the county council of every county in England and Wales having any sea-board, and it is of interest in obvious directions to be able to narrate that of the 31 county councils thus addressed 21 had no evidence to offer on the questions raised. The remaining county councils sent copies of reports made by local medical officers of health or furnished other information which had been brought to their notice. Numerous witnesses representing public health, bacteriology, and the shell-fish industry were examined and the Commissioners themselves visited oyster layings and mussel and cockle areas throughout the country. They also carried out most important scientific researches to which reference will be made subsequently. As regards the fact that enteric fever and other illnesses may be caused by the consumption of specifically polluted shell-fish the Commissioners express themselves as fully satisfied, and they refer particularly to the remarkable outburst of illness which followed the mayoral banquets at Winchester and Southampton as an illustration of the danger which the public run under the present uncontrolled conditions. In dealing with the proportion of enteric fever generally which may be attributed to the consumption of polluted shell-fish reference is made to the evidence of Dr. J. T. C Nash of Southend who thinks that in Southend at least 50 per cent. of the cases in 1902 were due to this cause, of Dr. A. Newsholme who puts the proportion in Brighton between 1894–1902 at 37 per cent, of Dr. J. Niven who thinks that in Manchester an estimate of 10·3 per cent. understates the case, and of Mr. Shirley F. Murphy who inclines to the view that in 1902 the 8 per cent. of the enteric fever occurring in London which was associated with the eating of shell-fish at a time consistent with the incubation period of the disease is probably an under-statement of such an association. As a result of all the evidence put before them under this head the Commissioners do not feel justified in making an estimate in regard to the country as a whole and herein they doubtless show their wisdom. They are, however, unanimous that the evil demands a remedy not only in relation to the interests of the public health but also in that of the shell-fish industry. Passing to the

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[1] Fourth Report of the *Commissioners appointed* in 1898 to inquire and report what methods of treating and disposing of sewage may properly be adopted Eyre and Spottiswoode, East Harding-street, Fleet street, E.C. Price 4½*d.*

Remedies Suggested,

the Commissioners in discussing the purification of sewage raise a question which is of the greatest importance to a proper understanding of the problem. They point out that in their interim report of July 12th, 1901, they drew attention to the fact that the effluents from sewage farms as well as effluents from artificial purification processes usually contain large numbers of micro-organisms, many of which appear to be of intestinal derivation. Their subsequent investigations have only tended to confirm this conclusion and they tell us that the microbe of green pus which was added to sewage in large numbers by Dr. A. C. Houston passed freely through sewage purification works consisting of (1) septic tank and contact bed; and (2) continuous filter about ten feet in depth. What, therefore, it comes to is that no known *practicable* means of [illegible] organisms [illegible] : the better [illegible] situation. But the Commissioners are, nevertheless, not without hope that some method of sewage treatment may be devised by which *within reasonable limits of cost* (herein is the crux of the situation) the dangerous qualities of sewage may be eliminated.

With respect to the seizure of unwholesome shell fish the Commissioners agree with the evidence given by Dr. Newsholme that the existing provisions are practically useless for preventing the sale of contaminated shell-fish, and the prosecutions which have recently taken place in the City do not, unfortunately, alter the situation; indeed, they somewhat complicate it. They do so since, in the opinion of the Commissioners and as the result of the researches which they have made, they have been forced to the conclusion that bacteriology at present cannot be relied upon to determine whether oysters or other shell-fish are or are not polluted. Certain of the witnesses urged upon the Commissioners the desirability of ascertaining the distribution of the bacillus coli in the animal kingdom, as it seemed to them possible that further knowledge might invalidate the conclusion that "the normal oyster does not harbour within its shell or within its body bacillus coli communis or other B. coli closely allied to it," a basis upon which apparently oysters have in the past been condemned by those bacteriologists who believed that bacteriology could, apart from all other considerations, be relied upon as an index of pollution. In order to clear up this important point Dr. Houston examined a very large number of oysters procured from all sorts of layings around the coast and his researches revealed the eminently disturbing fact that in oysters taken from the various layings the number of bacilli coli or bacillus "coli-like" microbes varied in an oyster from 10 to 10,000, and it also appears, contrary to what has been formerly taught, that far more bacilli coli were found in the contents of the stomach than were found in the liquor contained between the shells. It is, however, very necessary to point out that, *taking in each instance the whole oyster*, a very much smaller number of bacilli coli or bacillus "coli-like" microbes is found in oysters stored in pure water than in oysters stored in polluted waters. But the Commissioners do not see their way to lay down any standard in the matter and they add very significantly, "If it should be seriously contended that the mere presence of bacillus coli or coli-like microbes in an oyster should condemn it few oysters would probably escape condemnation. This is a point to which we shall return, but we may at once state that we see no justification for such wholesale condemnation." They also direct attention to the eminently misleading conclusion which may be drawn from a chance sample of oysters or water.

With regard to the bacterial flora of sea and estuary waters numerous samples have been examined and it is most instructive to learn from Dr. Houston's work that of 34 samples of deep-sea water collected on the north-west coast of Scotland within sight of land but remote from pollution none contained bacillus "coli-like" microbes of any sort when using 100 cubic centimetres of water. The inference is that these microbes form no essential part of the bacterial flora at the surface of deep-sea waters at a distance from land and similar results and conclusions were obtained with bacillus enteritidis sporogenes. It has been contended by some that the deposit of the London sewage sludge in the Barrow Deep was causing grave evils and hence the statement that in Barrow Deep one half of the samples of water tested were not found to contain one bacillus coli per cubic centimetre will come somewhat as a surprise. This is a state of affairs which, we believe, is not excelled by the upper Thames in the vicinity of the intakes of the London drinking water.

In summing up their conclusions as to the bacteriological portion of their labours, and what these have really been can only be duly appreciated when the appendices containing the evidence and the record of the research work are issued, the Commissioners quote from the evidence of Dr. Klein to this effect: "Dr. Klein has repudiated the notion that shell-fish could be condemned solely on account of detection in them of the presence of B. coli. He said, 'I myself would not countenance this without the knowledge of the topographical conditions'; and again, 'I would not myself reject oysters as polluted with human sewage on account of the purely bacteriological examination.'" The Commissioners add: "We are aware that this view of the present limits of bacteriology as applied to shell-fish has not been uniformly acted upon, but we see no reason to doubt that it is in the main correct and that it should be accepted for the purpose of present administrative action." With regard to what may be called the "proportion" test concerning which we have heard much of late, the Commissioners state: "Mere numbers of B coli or any other particular micro-organism of sewage cannot, therefore, be said to have anything approaching an exact value as an indicator of the danger of disease and we consider that before any working bacteriological standard can be applied to this problem further knowledge is necessary" We cannot spare more space for a consideration of this absorbing topic and we must conclude this notice with a brief reference to the recommendations of the Commission.

After discussing numerous alternative proposals the Commissioners state that after carefully considering the whole of the evidence together with the teachings of their own researches and inspections the only way in which, in their opinion, the evil can be effectively dealt with is to place tidal waters under the jurisdiction of some competent authority. They propose to confer upon such authority power to prevent the taking of all forms of shell-fish for human consumption from any position in which they are liable to risk of dangerous contamination and to enforce restrictions as regards

Boards should be fully equipped in a scientific sense to deal with the problems which will arise from time to time. The procedure to be adopted by this controlling authority is to consist of a survey of each district, of a registration of pits, ponds, beds, layings, and the like, and of a prohibition of certain prescribed areas as those from which no shell-fish of whatever nature may be collected for human consumption. The Rivers Boards are, too, to determine in what cases the treatment of sewage is likely to render the conditions safer; they are to control the construction of fresh sewer outfalls and oyster ponds and generally to supervise the sanitary condition of our estuaries. As regards foreign shell fish the Commissioners advise that for the present a guarantee should be required on the part of each Government concerned "that all oysters or other shell fish imported into this country for human consumption had been procured from localities where they were not liable to be contaminated by sewage or other objectionable filth" and they think that in addition the Government of each country exporting shell-fish to Great Britain should be requested to grant facilities to an accredited representative from the central authority presiding over the Rivers Boards in this country to inspect at intervals the layings, ponds, and other places from which shell-fish are exported into this country. Failing such guarantee and permission all foreign shell fish for human consumption are to be deposited in registered layings or non prohibited areas in this country for a period of not less than six weeks antecedent to their disposal on the market.

THE LANCET.

LONDON: SATURDAY, JANUARY 16, 1904.

The Control of Home and Foreign Shell-fish.

THE fourth report of the Royal Commission on Sewage Disposal, which we notice in some detail in another part of our present issue, has been drawn up by persons able to take both a scientific and a statesman-like view of the problem. From a purely scientific standpoint the report is remarkable in that for the first time in the history of bacteriology a check has been administered to that young and vigorous pursuit which will result in an improvement of its methods and in more guarded interpretation of its rapid unfolding of nature's story. It is fortunate for the real progress of bacteriology that Lord IDDESLEIGH'S Commission numbers amongst its members such men as Sir MICHAEL FOSTER, Mr. W. H. POWER, Sir WILLIAM RAMSAY, and Dr. J. B. RUSSELL of the Scotch Local Government Board, since they have by their investigations, in spite of the critical attitude to which we have alluded, been able to advance materially certain aspects of the bacteriology of shell-fish and of sea water.

The Commissioners have not unexpectedly come to the conclusion that a real *danger exists* from the consumption of oysters, mussels, or cockles procured from sources more or less obviously liable to pollution by sewage, and they have recognised that in addition to enteric fever a considerable amount of other illness, such as gastro enteritis, may be caused by such a diet. In setting themselves to devise a remedy for the existing state of affairs it was natural that they should have turned their attention in the first instance to that relatively modern science the application of which has been fraught with such blessings to humanity in the treatment and prevention of disease and in perfecting or improving our industrial processes. It was hoped that by bacteriology we might be able to recognise polluted or dangerous shell-fish and hence to fix standards which might guide and control administrative action. But, as the chemist in his domain has been unable to tell us with certainty of the dangers which beset our water-supplies, even so the bacteriologist has failed to prove a trustworthy guide in this particular department of biology. Hitherto the bacteriologist has in practice apparently acted on the assumption that "the *normal* oyster does not harbour within its shell or within its body bacillus coli communis or other B. coli allied to it" and hence he has inferred that the "presence" of the bacillus coli communis "in considerable numbers of oysters in a *series of* samples from a particular locality may be taken to indicate sewage pollution." But it was suggested to the Commissioners by Dr. H. T. BULSTRODE and Dr. J. C. THRESH that possibly the premiss upon which this inference was based might be usefully verified. Accordingly Dr. A. C. HOUSTON was instructed to make a thorough investigation into this subject and as the results of such researches it was found that "nearly all oysters so examined from whatever laying they were taken contained bacillus coli communis or other B. coli allied to it." It seems, indeed, that when a quantitative examination was made the number of bacillus coli or bacillus coli-like microbes varied in an oyster from 10–10,000, the number of the bacilli coli contained in the stomach being greater than that in the liquor contained in the shell. The Commissioners state that the investigation has been carried out by Dr. HOUSTON in the most careful manner and that more than 1000 oysters have been examined. It would seem, too, from the evidence of Dr. THRESH that cockles obtained from places far removed from any ascertainable source of pollution may contain the bacillus coli. There are, however, certain conclusions arrived at by Dr. HOUSTON which it would be obviously unfair to bacteriology to omit to mention and in fact the Commissioners draw special attention thereto When the whole oyster is examined, a much smaller number of bacilli coli is found in oysters stored in pure water than in oysters stored in polluted waters, and, moreover, it seems probable that deep-sea oysters are free from either the bacillus coli or similar organisms. So, too, in regard to sea water it has to be recorded that no bacillus coli-like microbes of any sort, even in 100 cubic centimetres of water, were found in samples collected within sight of land on the north west coast of Scotland. But the Commissioners have gone very thoroughly into the whole question and the conclusion to which they are forced by the researches of Dr. HOUSTON and Dr. E. J. MCWEENEY, and by other evidence is that they would "not be justified in recommending that the closing of a foreshore, laying, or pond should depend *as a matter of routine* on the results of bacteriological examination." And we must confess, unwilling as we are to accept the situation, that we fail to see how on the evidence they could possibly arrive at any other conclusion. They add, "if it should be seriously contended that the mere presence of B. coli or coli-like microbes in an oyster should condemn it few oysters would probably escape condemnation ..... we may at once state that we see no justification for such wholesale condemnation," and they quote Dr. E. E KLEIN to the effect that "I could not myself reject oysters as polluted with human sewage on account of the purely bacteriological examination." The Commissioners are, however, not without hope that further research may enable bacteriology to prove of very material assistance.

Passing from this to other measures the Commissioners point out that, in the great majority of cases in which outbreaks of disease have been at all clearly traced to *shell-fish*, the foreshores, layings, or ponds from which the shell fish have been procured have been found to be so situated that the opportunities of pollution by sewage have been obvious; and they think that, although it is not at *present* possible to define with certainty the limits of the danger, if those places were closed or freed from chances of pollution the greater number of cases of disease due to the consumption of contaminated shell-fish would be eliminated. In their view the first step should be to deal with those foreshores, pits, ponds, beds, or layings of which the pollution is obvious and indisputable, and in this connexion the able cross-examination of Mr. SHIRLEY

MURPHY by Mr. T. J. STAFFORD, a member of the Commission, is well worth perusal. In discussing the authority by which the registration and the control of shell fish layings should be administered, the Commissioners pass in review previous proposals and they finally arrive at the conclusion that the Rivers Boards, the creation of which they recommended in their third report, would prove by far the most suitable bodies not only in regard to administrative action but also with respect to the prosecution of the necessary scientific research. These boards would be under the supervision of a central board and they would have the right to prohibit the gathering or laying down of *any* shell-fish within such limits as they might from time to time prescribe. They would also have control over all estuaries within these large areas, each board probably comprising several counties, and would regulate all questions relative to the discharge and purification of sewage or other filth. These and other measures proposed by the Royal Commission are, in our view, framed with an earnest desire to put an end to the present unsatisfactory state of affairs without at the same time depriving thousands of persons in this and other countries of their habitual means of livelihood. The machinery suggested would obviously be capable of expansion with growing knowledge and experience, and the measures proposed would, if acted upon, put an end to public risk as well as to the depression in a valuable industry. If this chance is lost it may be years before any definite and comprehensive action is again possible. It is earnestly to be hoped that the shell-fish industry will unite with the public health service in a vigorous combined attempt to place the recommendations of this Commission upon the statute-book. If this is to be done in the ensuing session there is no time to be lost.

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The Edinburgh Royal Infirmary: the Question of Superannuation.

AT the recent annual general meeting of the court of contributors of the Royal Infirmary of Edinburgh some very important principles were discussed and some resolutions were carried which are likely to create a great deal of friction. Our readers are referred to an article upon the matter from a correspondent which appears on p. 180, and in which no attempt is made to disguise the writer's views. The proceedings at the meeting opened with the usual annual report of the managers dealing with the number of patients treated, and with details of income and expenditure, and kindred subjects. It was then stated that the managers had introduced a new rule to the effect that the ordinary physicians and surgeons should retire in future on attaining the age of 65 years but that this rule should not be applied in the case of those members of the staff who were at present serving their second or third term of five years in charge of wards or to the professors of the University of Edinburgh. It could scarcely be expected that such a curious and partial alteration in existing regulations would be allowed to pass unchallenged, since, if compulsory retirement is desirable, such change should only affect those who undertake office under the new regulation. All who are already in office should be upon an equal footing and there would thus seem to be no reason for making any distinction between those who have been appointed during the last five years and those who are serving their second or third term of five years. Under former regulations members of the ordinary staff are only appointed to charge of wards for 15 years, and this rule was enforced, although in exceptional circumstances it might lead to retirement at a comparatively early age.

It will be noted that the new regulation, as drafted by the managers expressly exempted the professors from its operation, and in relation to these distinguished gentlemen it should be borne in mind that the staff of the Edinburgh Royal Infirmary is composed of members who may or may not have other teaching duties in the School of Medicine of the Royal Colleges of Edinburgh, and of certain professors of the University of Edinburgh who are nominated by the University as physicians and surgeons of the institution, and who are thus afforded facilities for giving clinical instruction in medicine and surgery. The discussion at the meeting turned mainly upon the proposed establishment of an age limit for the professors as well as for other members of the staff, and it is instructive to consider the arguments adduced by those who favoured and those who opposed the new proposal. In the first place it was definitely stated that it was not proposed to enforce the age limit upon the present professors but merely to establish a rule for future guidance. On grounds of efficiency it was urged broadly that a time came, even to the most skilful, when keenness of vision, delicacy of touch, and firmness of nerve gradually deteriorated, while there would also be inability to answer the emergency calls that might come at any hour of the night. Assuming the truth of the foregoing arguments one speaker said he felt a serious doubt as to whether there was anything exceptional in the case of the University professor which should exempt him from the rule which had been found necessary in the case of the ordinary physician and surgeon. With grave irony he presumed that the University professor was subject to the common rules of life and that old age grew on him as much as on any other man. Since the infirmary patients could not choose for themselves the medical men to whom they were going to intrust their lives and health it was felt by the managers that they had a public duty to perform in providing for efficient service. In spite of compliments paid to the present brilliant and distinguished body of professors, past experience afforded instances of some who had held their position in the Royal Infirmary beyond the age when they were completely qualified for work there. Against the proposal it was argued that the work of the University might be much hampered by this new regulation, that on other grounds the University might desire to appoint professors who would not be eligible to have wards in the infirmary, and that the area of selection of candidates for professorial chairs would be narrowed since candidates might be unwilling to come forward. Some speakers doubted the propriety of intimating to the University that any professor appointed with clinical teaching in the infirmary could only be accepted on the footing that he was to retire from those duties at the age of

65 years. In spite of all these arguments, and in spite of an amendment proposing to remit this question to the managers for further consideration and for report at the annual meeting in 1905, it was ultimately decided to establish the age limit of 65 years for all members of the staff with the exception of the present professors and of those ordinary members who are serving their second or third term of five years in charge of wards.

It must be admitted that the effect of this resolution is likely to produce curious results, since the Edinburgh Royal Infirmary thus criticises the action of the University and assumes the right to question the wisdom of its appointments, while it indirectly suggests the advisability of an age limit of service in the University as well as in the infirmary. There can be no doubt as to the injustice of the arbitrary distinctions made amongst the existing members of the staff of the infirmary. The new regulation should only apply to those who are appointed to office subsequently to its enactment, since those who have already been engaged in the work of the Royal Infirmary presumably undertook their arduous duties after full consideration of their prospects of advancement under existing regulations. It appears to be a breach of good faith to alter the terms of office which may have tempted them to endure the weary waiting in the out-patient room in the hope of ultimately succeeding to a reasonable period of ward work. There is, on the other hand, much to be said in favour of the establishment of an age limit of hospital service since it often affords an opportunity of graceful retirement when the demands of private work are impeding the due performance of hospital duties. In the interests of the patients in the hospital it might even be desirable that the age limit should be fixed somewhat earlier for surgeons than for physicians, since, while the former have been enduring considerable physical strain, the latter have been accumulating experience which renders their opinions valuable so long as they are able to retain their faculties and to maintain their interest in scientific progress. From a practical side, however, it will probably always be difficult to establish any such distinction between the two chief branches of professional work, and endless confusion might result from any attempt to differentiate between obstetric physicians and surgeons or those in charge of other special departments. Whether university professorships should be subject to age limitations is perhaps too difficult a question to determine, since it so largely depends upon the duties demanded. Many such appointments are regarded as posts of honour and reward for previous work rather than as involving routine comparable to that required from a lecturer in a medical school. With this estimate of university professorships an age limit would defeat the main object of their creation.

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Slum Life in Birmingham.

THOSE who are only superficially acquainted with the problems of our great cities seem often to imagine that it is only in London that genuine slums occur. But the medical man and the sanitarian know well that Liverpool, Birmingham, and other great cities, as well as much smaller towns, can show areas worthy of entering into a disgraceful competition with the environment of "No. 5, John-street," areas of which the general public know nothing because they hear nothing, and of which they hear nothing because the *sacer vates* has been generally wanting. Concerning one of these slums some information has just been disseminated in the form of a little book by the gentleman who holds the cure of souls in what is known as the condemned area of Birmingham. Not for the first time in his present book[1] has Mr. BASS appealed to the public to turn their eyes upon the miseries in the midst of which he works, while the series of articles which appeared a few years ago in the *Birmingham Daily Gazette* revealed horrors which must have appeared inconceivable to those unversed in the annals of poverty and crime. A further pamphlet emanating from persons connected with the medical mission and alluded to in our Birmingham correspondence some months ago tells a very similar tale. Naturally, we may even say properly, both these productions were pitched in that somewhat high key which is necessary if the public attention is rapidly and certainly to be attracted but we doubt if, even so, they have had much effect. Broadly speaking, all that has been published about the slums of Birmingham was substantially accurate. This is proved by the sober words of an official report drawn up by Dr. ALFRED HILL who has just retired from the position of medical officer of health after 40 years of honourable service to the city of Birmingham. "The condemned area," he writes, "has a population of 2429 If the area allotted to dwellings only be taken into account the number of persons per acre is 272, as against 41 per acre for the whole city. As regards the mortality on the area, I find that in 1899 and 1900 the death-rate was 42·3 and 38·7 per 1000 respectively, giving a mean death-rate for the two years of 39·5. In the entire city the mean death-rate for the same period was 20·7 and in the entire wards of St. Mary's and Nechells—the two wards in which the area lies—it was 29·6 and 21·4 respectively." Further, he tells us that the houses in the condemned area smell offensively, are badly roofed, old, dark filthy, and in vile repair; that their privy accommodation is detestable and that they stand in unpaved courts. Of the 589 houses in the area 295 are back houses which open into inclosed courts, 250 of these 295 are approached by narrow tunnel entries so that there is practically no circulation of air around them, most of them are back to back with others, and 124 of the 294 front houses have no back-doors, so that these too have no proper ventilation. It is not surprising that Dr. HILL reports the area in question "an unhealthy area" and declares that "the evils connected with such houses and courts cannot be effectually remedied otherwise than by an improvement scheme for the rearrangement and reconstruction of some of the houses within the area."

Of the nature of the social disease thus made apparent there can be little doubt. It is a case where the diagnosis presents no difficulty but where the treatment to be resorted to is not to be decided upon easily or without forethought. The housing committee of the corporation of Birmingham has had the matter under consideration for a long time and has reported against the erection of municipal dwellings and in favour of opening up the courts so as to allow a little air to enter their noisome recesses. Mr. BASS thinks the proposals made are wholly inadequate; he points out that the back-to back houses are for the most part to be left untouched and that the pulling down of a house or two at the end of a court, though it may provide an air space and be of great service to the police in their work of supervision, does not do much to make the interior of the houses which are left more healthy than they were. Also, he points out that there are 6000 courts in Birmingham, that it is estimated that the expense of opening each of these up in the manner proposed will be about £100, and that consequently if only one in four is opened up the cost to the municipality will be £150,000 and at the end they will not possess a single rood of ground or shred of building to show for their expenditure. Moreover, it is pointed out that 100 courts have been dealt with in two years, at which rate of progress it will take 120 years to put all the courts in the city into the state suggested by the housing committee. All this is no doubt very true but this is a case where criticism is easy. Mr. BASS, from his point of view, is perfectly right to declaim against the present state of affairs and to denounce the corporation for what he considers to be its supine attitude in face of undoubted and terrible facts. But Mr. BASS's is not the only point of view from which the question—perhaps the most complicated question now before the municipalities of this country—has to be considered. In the first place there is the point of view of the landlord who claims, and with justice it must be said quite properly claims, that a great deal of the filth and insanitariness of the slum house is due to the conduct of its inhabitants. We are told of skirting-boards pulled down and banisters torn out for the purposes of making fires, of acts of carelessness and worse, all tending to make what was originally bad seven times worse than it was at first. Then there is this further point to be considered, that as soon as the landlord is compelled to improve his property and to spend money in so doing he endeavours to recoup himself by raising the rent. In this way he drives out the really necessitous person to make room for someone who is prepared to pay the higher charge, in which case the poorer man has to huddle into some other already overcrowded slum, or he compels the accumulation of two families in a house which formerly only held one. Mr. BASS would say that in such cases municipalities should acquire the land and build on it proper dwellings for the poor. It is not long since our Birmingham correspondent gave at length the reasons which actuated the housing committee of that city in refusing to take this step and the question of compensation for the landlords alone makes it a very difficult course. Moreover, the corporation would have to make a rigorous inquisition into the circumstances of each case that they might only admit to their dwellings the deserving poor, while criticism would not be wanting to point out that a certain number of wage-paying employers were having servants secured for them at a lower rate at the expense of the ratepayers.

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[1] Hope in Shadow Land. By T. J. Bass. Birmingham Leicester: Midland Educational Co. Pp. 158. Price 1s net.

If the houses are to be built by the municipality they cannot be built, as municipal houses must be built, to pay their expenses at the rents which the very poor can afford to pay for them, when the expense of the ground is taken into consideration. Again, when a municipality enters upon a task of this kind all private efforts in the same direction come to an end. Now the exposure of the facts in Birmingham has at least led to the starting of two separate plans, on commercial lines, both of which we have described in our columns, the Rowton House and "Homes, Limited." The corporation is quite entitled to wait in order to see what effect these will have before embarking on a huge and costly scheme of clearance and rebuilding. With much that Mr. BASS says in his book we are in the most complete sympathy. We fully agree with him that to say, "Oh, it is all drink," or "It is the innate filthiness of the classes who inhabit these houses," does not justify the shelving of an enormously urgent social question. Drink may often be an effect just as much as a cause and when we see the places in which many of the poor live we cease to wonder that they seek relief from their misery and discomfort in the warm and cheerful gin-palace. Medical men are bound to endorse Mr. BASS's action in calling attention to the horrors amongst which he lives. Only by such plain speaking as he has employed can the public be aroused from their apathy. Medical men know of the existence of similar plague spots in most of our large cities but it is the experience of all sanitarians that until the time of epidemic arrives little attention is paid to these foci of disease and crime. They are regarded as inevitable products of the social scheme: they are shuddered at and forgotten. We believe that the conscience of Birmingham is fully aroused. The problem is pressing But to rush suddenly into a huge scheme without careful consideration would be a counsel of despair rather than of wisdom.

The Report of the Medical Officer of Health of the County of London.

WE have received the annual report of the medical officer of health of the county of London for the year 1902, which has been presented to the London County Council by the Public Health Committee, this being the eleventh annual report made by Mr. SHIRLEY MURPHY. As usual, the report bristles with figures, and also as usual, when we have Mr. SHIRLEY MURPHY's work to deal with, the figures are thoroughly explained, while many of the more important statistical points are accentuated and made easy of comprehension by charts and diagrams. At the first glance the reader may wonder why the report just issued should be dealing with 1902 and not 1903, but in our opinion no serious charge of procrastination can be made. The enormous population under the care of the London County Council, the magnitude of the questions in public health that are presented, and the careful manner in which the course pursued by the central health authority of the county is explained, sufficiently account for the delay. Such a report as the one before us cannot be prepared until the year with which it deals is completed. So that the mass of material which Mr. SHIRLEY MURPHY had to sift and to codify could not be in his hands until late in 1903 and it might well take him the rest of that year to deal with it. The result is to place at the disposal of the London County Council a large book containing tables and diagrams involving an immense amount of work in their preparation. We point all this out because the accusation of dilatoriness is easily made, while the advantage of time, by which fulness, accuracy, and clearness are secured, is not so generally perceived.

We shall, as usual, deal with the report in a short series of articles drawing attention to the prominent lessons contained in it. For the public health of London may be looked upon as a type of the public health of any urban community in England, and, indeed, of most urban communities where attempts are made to regulate life in accordance with modern sanitary requirements. We have in London all sorts and conditions of persons to deal with, while types are to be found of every kind of town. The splendidly built houses of the rich standing round open squares, looking out on large parks, and flanking broad streets, are in many districts in contiguity with overcrowded slums, ancient mews, and open-air markets. There is a riverside population with all the squalid environment of a busy port. There is a commercial, an industrial, and an artisan population, and large districts of London are monopolised by one or the other. Stretching into the suburbs the same acute differences obtain. The amenities of life in Hampstead differ as much from those in Haggerston as the standard of luxury in Lambeth varies from that in Grosvenor-square. Every sort of administrative sanitary problem at some time or other during the year is consequently placed before the Public Health Committee of the London County Council to be submitted to its medical officer of health, and in his report Mr. SHIRLEY MURPHY has made piquant uses of such opportunities of contrast. The London death rate from all causes per 1000 living was only 17·2 during 1902, the lowest figure ever recorded except that for 1901, which was 17·1. The factors which contributed to this decrease in death-rate are well shown in the diagrams, and the influence of the decrease in infant mortality will be observed with pleasure. Too much stress, however, cannot be laid upon the better chances that infants apparently enjoyed during the year in question, as the figure for infant mortality is largely dependent upon the prevalence of infantile diarrhœa. When infantile diarrhœa has been rife infant mortality mounts, and it is no exaggeration to say that one of the greatest tasks at the present time before a medical officer of health of any large urban community is the control of infantile diarrhœa. Some interesting observations with regard to the death-rate will be found in Mr. SHIRLEY MURPHY'S comparisons of life expectation in Hampstead and in Southwark, those being the two districts that he has arbitrarily selected to represent the situation of the homes of the well-to-do and that of the homes of the poor. In Hampstead the expectation of life at birth is in the case of males 50·8 years and in the case of females 56·6 years, while in Southwark the corresponding figures are 36·5 and 40·7 years respectively. In the same section of his report—i.e., where comparison is being instituted between the incidence of mortality upon the well-to-do and upon the poor—Mr. SHIRLEY MURPHY interpolates an interesting little quotation from Dr. FARR'S life tables. He finds that taking Hampstead as 100, the comparative expectation of life at birth in Southwark is now 72, while in St. George's Hanover-square in 1841, according to Dr. FARR, the expectation of life was only 74. It would not be fair to deduce from this that the inhabitants of Southwark to-day in every circumstance of occupation and environment are as well off as the inhabitants of St. George's Hanover-square were 60 years ago, but short of this deduction it is obvious that the conditions of life in the poorer districts of the metropolis have enormously improved during the indicated period. The story, in spite of many hitches and in spite of vested abuses, is one of progress.

The year 1902 witnessed, of course, a serious epidemic of small-pox. We do not want to minimise the importance of that epidemic, the risks to the community, or the expenses to which the various boroughs were put, but we cannot refrain from pointing out that in 1902 1314 lives only were lost out of a population of 4,579,110. Mr. SHIRLEY MURPHY'S plan, showing the comparative death-rates for small-pox for the years 1841 to 1902, indicates that in 1902 the deaths from small-pox were relatively few as compared with those which occurred in times of epidemic prevalence of former years We have no doubt whatever that the fact that the death-rate was so low depended on the administrative measures adopted for the limitation of the spread, and was in particular due to the removal of the small-pox hospitals outside London the result of the work of Mr. W. H. POWER, the principal medical officer of the Local Government Board. It is true that in their new situations they acted as centres to some extent for the convection of the disease but the benefit to London has been immense In our subsequent articles we shall have more to say concerning this epidemic and the methods by which it was arrested at the instance of the health authorities.

Annotations.

"Ne quid nimis."

THE LANCET RELIEF FUND.

THE annual report of the almoners of this Fund appears on p. and 178 form a of application for relief under the Fund is included in our present issue, and will be found to be readily detachable for use in case of need. These two documents contain the conditions subject to which distribution of the Fund is made and it will prevent possible disappointment on the part of applicants if they are carefully studied and if the object for which the Fund has been instituted and has been carried on for 15 years is clearly understood: this is the affording of immediate pecuniary help to registered medical practitioners or to their recently bereaved dependents in cases of sudden distress and emergency but not in cases where the need is chronic The value of such aid, when it is both timely and prompt will readily be appreciated and the promptitude with which THE LANCET Relief Fund is made available by the almoners will be judged from the statement that cases are not infrequently considered and assistance is granted on the day on which the application is received. Upon occasions of bereavement where, in addition to the grief inseparable from such calamity there is the crushing sense of helpless poverty, the relief thus afforded may, it is hoped, be of no insignificant order. The report for the year 1903 contains no remarkable features, although in various matters of detail it differs from the one which preceded it. There were in 1903 only three more applications for relief than in 1902, but a much larger proportion of these complied with the conditions laid down, so that gifts of money were alloted in 33 instances as against 24 in the preceding year; one payment voted in 1902 was made, and whereas there were no loans in 1902 four, amounting to £76 14*s.* 6*d.*, were sanctioned in 1903. Beyond this the statement of accounts and report speak for themselves and it is again our privilege to thank those who have aided us in distributing the Fund so as to make it an effective aid to those intimately connected with the medical profession in times of sudden and urgent necessity. The names of those to whom we would thus acknowledge our indebtedness are the same as last year with the exception that Mr. John Tweedy having succeeded Sir Henry G. Howse as President of the Royal College of Surgeons of England has thereby become an almoner and we thank him for having kindly consented to undertake the duties. With him are associated Sir William Selby Church, Bart., K.C.B., President of the Royal College of Physicians of London, and Sir William Turner, K.C.B., President of the General Medical Council; whilst Sir Henry Pitman, for many years Registrar of the Royal College of Physicians of London, is so good as to continue to act as honorary auditor. Again directing the attention of those who may be either seeking or assisting to procure the help offered, we desire to point out that all applications should be made on the prescribed form and addressed to the Secretary of THE LANCET Relief Fund, 423, Strand, London, W.C.

THE PRESERVATION OF ANTIQUITIES FROM FIRE.

IT would appear that an unusual number of fires, to say nothing of the terrible catastrophe at Chicago, have taken place of late. Country mansions, factories, inns, and various other structures attest the ubiquity of the so-called destroying element. In Worcestershire we regret to notice that Sir Edmund Lechmere has suffered another serious loss, his residence at Hanley Castle being destroyed. This gentleman was the owner of "Severn End" in the same county, a historic mansion immortalised by Harrison Ainsworth, which was almost totally destroyed some years ago. This house, which was one of the oldest in the kingdom, not only contained an interesting museum, which was open to inspection by the public, but also what, we believe, was extremely rare, an ancient laboratory where no doubt bygone members of the distinguished family pondered on alchemical problems, the foundations of which modern research seems to be doing something to rehabilitate. It would seem possible that in the quiet of these old country mansions, as in the gloom of the cloister, important discoveries were made which were in advance of the age and consequently not appreciated. The question arises, Can anything be done to stop this destruction by fire? It seems doubtful if the custodians of country mansions are equal to the task allotted to them. We would urge on all who possess the priceless treasures of antiquity to see that the guardians of such have both the mental and bodily qualifications, as well as goodwill, for their important charge.

THE SANITARY INSTITUTE LECTURES.

THE thirty-seventh course of lectures and demonstrations for sanitary officers will begin on Feb. 2nd at the Parkes Museum, Margaret-street, London, W., and will terminate on April 25th. The course is divided into two parts, the first part dealing with elementary physics and chemistry, hygiene, the laws of public health, and other subjects connected with sanitation, while the second part deals with the inspection of meat and the laws relating to the sale of meat and other articles of food. The names of Dr. E. J. Steegman, Dr. J. Priestley, Dr. E. P. Manby, and Dr. Reginald Dudfield are included in the list of lecturers. In connexion with this course a series of demonstrations will take place on successive Saturdays and Wednesdays throughout February, March, and April. On Feb. 6th, for example, there will be an inspection and demonstration at the new buildings of Charing Cross Hospital which will be conducted by Mr. A. S. Snell, F.R.I.B.A., on Feb. 27th Dr. J. F. Butler-Hogan will show to a party of students the working of the Tottenham disinfecting station and the dust destructor, on March 9th Dr. J. King Warry will take a small company of students through the district of Hackney for the purpose of inspecting the sanitary arrangements of that borough, and on April 27th Mr. J. King, M.R.C.V.S., will conduct an inspection and demonstration at the Metropolitan Cattle Market. Demonstrations on the sanitary apparatus and appliances in the Parkes Museum will be given from time to time by Mr. A. W. Harris and Mr. E. W. Wallis, F.S.S. The fee for the complete course is three guineas. The fifth course of practical training for meat inspectors will begin on Feb. 26th. This course, which lasts for two months, includes practical training at a cattle market. The fee is £3 13*s.* 6*d.*

ON THE KATATONIC FORM OF ADOLESCENT INSANITY.

THE adolescent forms of dementia have received much attention during the past few years, especially as regards their bacteriology and treatment. Dr. Lewis C. Bruce, medical superintendent, and Dr. A. S. M. Peebles, assistant medical officer, of the Perth Asylum, Scotland, have published in the *Journal of Mental Science* for October, 1903, a series of observations on the katatonic form of adolescent insanity which include certain new clinical and pathological facts of interest. 12 cases of the disease—ten females and two males—were investigated as regards physical symptoms, conditions of the blood, and the presence of bacteria in the blood or tissues. The history of the cases conformed to the classical descriptions of Kahlbaum and Kraepelin as given in the text-books. Nine men and one woman were in the period of adolescence, one woman was over 30 and one man over 40 years of age, "yet the disease was absolutely typical in both." Among the physical symptoms it was noted that the alimentary canal was disordered in every case, there was no desire for food, and vomiting after a meal was very common. The cardiac action was rapid, irregular, and intermittent The above symptoms occurred in the acute stage of development of the disease and were succeeded by the characteristic phenomena of the next or katatonic stage. In no case under observation did the acute stage last longer than four weeks. The katatonic stage was ushered in by a distinct febrile attack in 50 per cent. of the cases, or in default of the febrile attack a high degree of leucocytosis was developed. The alimentary and circulatory systems continued to show the same physical disorders as before and the extremities now grew cold, cyanotic, and œdematous. The temperature was uniformly subnormal and patients in this stage were particularly "liable to tubercular infection." The mental state was one of stupor complicated with delusions of a persecutory nature. Occasional impulsive actions, stubborn mutism, rhythmical movements, and a condition of muscular hypertonicity with resistance to induced movements constituted the symptoms of this stage. Examination of the blood showed that immediately upon the onset of the stupor the leucocytes fell to below 8000 per cubic millimetre but soon rose again to between 12,000 and 16,000 and the percentage of polymorphonuclear cells fell to about 60. As recovery set in the percentage of the latter increased. Bacteriological examination of the blood was made in eight cases. Three of these gave positive results and from one of the three cases a pure culture of a streptococcus was obtained which agglutinated in the serum of patients suffering from katatonia. "We have tested," add Dr. Bruce and Dr. Peebles, "the agglutinative power of the blood of 50 other patients, not cases of katatonia, to this streptococcus and only five gave the agglutinative reaction." It is probable, therefore, that a specific agglutinin is present in the blood of patients suffering from katatonia. Experimental observations were then made on rabbits with cultures of this organism. By infecting rabbits through the alimentary tract or blood stream with the streptococcus a condition of malaise with irregular temperature, increased skin reflexes, and mental hebetude was induced. This disease tended to terminate naturally in rabbits in about six weeks when a condition of immunity was established to this organism. The treatment of katatonia Dr. Bruce and Dr. Peebles consider to be entirely unsatisfactory. All but one of the cases treated by rest in bed, fluid diet, and saline purgatives "ran through the various stages of the disease unchecked." Attempts to procure a serum for the treatment of the disease were made by immunising a goat to the streptococcus obtained from an acute case of katatonia. The serum of this goat was used to treat two patients in a condition of stupor, by subcutaneous injections of 12 cubic centimetres daily. Two other stuporous cases were treated with ten cubic centimetre doses daily and five other cases were treated with subcutaneous injections of sterilised broth cultures of the organism. The object in these serum or broth injections was rapidly to raise the active immunity of the patients. The serum obtained from the goat gave no beneficial results and the active immunisation of the patients in the stuporous stage produced no curative effect. Dr. Bruce and Dr. Peebles conclude that though katatonic dementia is characterised by an acute toxic condition of definite onset and course, accompanied by definite changes in the blood and attended by a condition of mental confusion with stupor and katatonic rigidity of the muscles, the disease tends to run its course unchecked by ordinary medicinal or special serum treatment and that further investigation is needed for the discovery of an effective "anti-serum" for its treatment.

THE REBUILDING OF ST. BARTHOLOMEW'S HOSPITAL.

ON Jan. 7th the deputation from St. Bartholomew's Hospital to the Postmaster-General was received by that Minister and on the same day a court of governors was sitting at the hospital. The deputation returned to the hospital before the court rose and were enabled to lay before its members the following results of the interview. Lord Stanley did not hold out any hope that the hospital would be enabled to buy any of the site of Christ's Hospital from the Post Office, for that department requires it all for itself. But the Post Office has met St. Bartholomew's Hospital in a most friendly manner. The Post Office authorities are going to make a private road 40 feet in width which will only be used by their own vans between their new buildings and those of the hospital. Further, they have instructed their architect to confer with the architect of the hospital as to the best arrangement of the new Post Office buildings so as to avoid taking away more light and air from the hospital than is unavoidable. These facts show a generous and sensible spirit on the part of the Post Office which is highly commendable. Furthermore, the governors of the hospital and the medical staff are in absolute accord as regards the necessity of more land being acquired and, the remainder of the Christ's Hospital site being now impossible to obtain, it has been decided to remove the nurses' home from its present position to some site outside the precincts of the hospital. This will free an area of nearly one and a half acres which, together with the site already purchased from Christ's Hospital, will give about an additional three acres of land to that on which the hospital already stands. There will thus be ample room for the construction of a thoroughly well-appointed building and it only remains now to raise the necessary funds; but if a properly thought-out and practical scheme is submitted to the citizens of London at the coming Mansion House meeting we are sure that the money will be forthcoming.

WALLS AND VENTILATION.

THE impression is quite common that in order to secure the efficient ventilation of the house the doors and windows or some aperture connecting the outside air with that inside must necessarily be open. In some cases this is no doubt to a large extent true. It is probably true, for example, in the case of a house situated in the middle of a terrace and in a measure for the semi-detached house. Recourse also to opening the window or ventilators is probably the only means of securing a change of air in the rooms of houses which are externally heavily painted or stuccoed or in which the walls of the rooms are solid or thick or covered with impervious paint or paper. The fact is that considerable ventilation is capable of taking place and quite a large exchange of fresh for bad air is effected through the walls of buildings. Many a room that is notoriously "stuffy" could doubtless be made pleasant to live in by removing the solid paper or impervious coat of paint from the wall and substituting porous paper or, better still, giving up paper altogether and using a distemper wash of pleasing tone. It is not appreciated as it ought to be that the common brick wall and plaster permit of considerable ventilation. The man who would live in fresh air when not out of doors and who objects to the open window would therefore accomplish the consummation of his wishes by choosing a detached house or as next best to that a semi-detached house or one at either end of a terrace and seeing that the walls, whether inside or out, had not their porosity interfered with by paint or air-tight paper. Naturally he would avoid the house in the middle of a terrace over the side walls of which he would have no control.

PATHOLOGICAL RESEARCHES FROM THE LABORATORY OF THE LUNACY DEPARTMENT, NEW SOUTH WALES.

THE pathological laboratory of the Lunacy Department of New South Wales was opened in 1900 and Dr. J. F. Flashman of the University of Sydney was appointed pathological director. Accommodation for the building was provided in the University, the laboratory being modelled on the lines of the pathological laboratory established at Claybury Asylum by the London County Council in 1895. Like the latter, says Dr. Flashman, the aim of the laboratory at Sydney is purely scientific, "being the investigation of the changes in the brain and nervous system caused by mental disease." The present volume of reports from the laboratory is the first of its kind issued and contains papers of pathological and neurological interest. The first contribution, by Dr. Flashman, describes the features of the brain of a microcephalic Australian idiot showing the rare absence of a corpus callosum. The brain was that of a patient, aged 17 years. Among the anatomical abnormalities were the presence of convolutions passing across the great longitudinal fissure, the apparent absence of a corpus callosum, and the marked extent to which the cerebellum and insula were uncovered. The hippocampal gyri were extremely broad, a condition characteristic of microcephalic idiocy, as Professor D. J. Cunningham had pointed out some years ago. The second paper, by Dr. Flashman, deals with the parieto-occipital fissure in the brain of four Australian aborigines and points out certain rudimentary features in the same which indicate a stage of evolution less advanced than that of the European brain. This paper is of special interest to neurologists and anatomists. Dr. Flashman in another paper gives a detailed account of all the fissures and sulci of these brains, illustrated with reproductions of photographs and sections. The concluding paper in the volume is by Dr. O Quaife and deals with certain technical methods for the permanent preservation of specimens of the nervous system prepared by the Golgi method. It contains some useful hints on technique. The whole book is well got up and the printing and illustrations are excellent. The volume reflects credit on those concerned in the management of the pathological laboratory of the Lunacy Department, New South Wales, and gives promise of useful work to follow.

HEAVY RAINFALLS, AGRICULTURAL FAILURE, AND THE NEED OF SCIENTIFIC AID.

ONE consequence of the heavy rainfall of last year should not be overlooked by those who have the welfare of the country at heart. We allude to the impoverishment of the soil owing to the soluble fertilising ingredients, especially those containing nitrogen, being washed away by the repeated downpour. Apparently there is an impression that the saturation of the earth during the last season will, if conditions are otherwise satisfactory, lead to a "bumper" year for the agriculturist. This is a mistake, for useful though a copious supply of moisture may be there must be replacement of the essential manurial ingredients to bring out its full value. The present year is therefore decidedly a year when the farmer should have effective advice as to the condition and treatment of his land. We have already called attention to the parlous state to which analytical chemistry had been brought in Ireland by the old bad system of "cumulative" appointments and we regret that the same cause is working evils in this country. Some ten years ago the Fertilisers Act was passed and was framed for agriculturists much on the lines of the Sale of Food and Drugs Act. Unfortunately this Act has been almost a dead letter, for the "district" agricultural chemist, instead of being actively employed in the country and an available servant to the farmers, shielding them from imposture and benefiting them with advice, is carrying on scientific agriculture shut up in a laboratory in the city. This is the age of "personal service" and the analytical chemist should be in evidence or his sphere of usefulness will be sadly limited The benefits that a resident analytical and agricultural chemist in each county could confer are boundless and the question should form one for discussion by such a body as the Institute of Chemistry.

PREMATURE DISCHARGE OF SCARLET FEVER PATIENTS.

AT a meeting of the Metropolitan Asylums Board held on Saturday, Jan. 9th, a letter was read from the medical officer of health of the Stepney borough council forwarding details of four cases in which a fresh outbreak of scarlet fever had followed the discharge of patients from the Board's hospital. The communication stated that the council had had under consideration a letter from a resident at Shadwell in which he stated that on Nov. 26th one of his children was removed to one of the Board's fever hospitals suffering from scarlet fever and was discharged therefrom on Dec. 18th. On her arrival home there were distinct signs of peeling. The result was that five days afterwards a second daughter was seized with the same disease. Moreover, three other cases of premature discharge with consequent infection of other patients had come before the attention of the public health committee. The council drew attention to the great danger to public health caused by the action of the Board in discharging patients before they had finished peeling, thereby causing unnecessary suffering to patients, great inconvenience to relatives, and a large amount of additional expense to the ratepayers generally. The letter concluded by asking that the cases might be thoroughly investigated and for the Board's observations thereon. It was decided to refer the letter to the hospitals committee for consideration and report.

TWO NEW ROMAN OCULIST SEALS.

AN account of an oculist seal found at Rugles was given in THE LANCET of Sept. 5th, 1903, p. 725. Two more will now be reported upon but the first of them is only known by a careful copy of the inscription made by an antiquary named Garrucci whose note of it has recently been discovered having remained hidden away among sundry papers since 1867. The seal was disinterred at Arles in the Rhone valley and its readings are preserved among the notebooks of the late Dr. Sichel who obtained them from Garrucci. Dr. Sichel devoted a considerable amount of time to the medical side of the evidence afforded by oculist seals and published his results which have been much utilised by scholars in studying new specimens from time to time. This particular signet belonged to an oculist, Lucius Tettius Sabinianus, and bore the following inscription, omitting the fourfold repetition of his name :—

"L(ucii) Tetti(i) Sabinia(ni) authem(erum) ad lipp(itudinem)
diac(h)yl(um) ad cal(iginem)
.... ad lippi(tudinem)
... diachol(es) ad dia(theses)."

The translation of the inscription is as follows :—

"(Collyrium) authemerum of Lucius Tettius Sabinianus against ophthalmia.
(Collyrium) of sugar of plants ...... against obscurities of vision.
Collyrium . ... against ophthalmia.
Collyrium of gall against diatheses."

The first remedy appears to have been identical with another collyrium mentioned by ancient medical authors but not yet found upon oculist seals, known as "monohemera." The special characteristic of "authemerum" and "monohemera" was rapidity of action, for they were reputed to effect a cure, or considerable amelioration of the symptoms, within a single day. Several formulæ for authemerum are given by ancient writers such as Paulus Ægineta.[1] The collyrium diachylum mentioned next in order conveys its own meaning: it was a vegetable sugar and has only once before been found upon a seal and then without any addition to show the purpose for which it was recommended. Ætius, however, twice speaks of it. Scribonius used it for "caligo," or defective vision. The seal of Gaius Valerius Amandus found at the "Ballast Hole," near Biggleswade, and now in the British Museum, mentions caligo, giving stactum as its remedy—that is, oil of myrrh. The third line of this seal does not require comment. Diacholes in the fourth had gall (διαχολῆς) for its base. It was used to cure leucoma and ulcerations of the cornea. All that can be said about it is told by M. Villefosse and M. Thedenat in their "Cachets d'Oculistes Romains." The second seal is of importance because its inscription is in Greek, it being the third, or perhaps the fourth, yet known. It reads :—

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[1] De Re Medicâ, iii., 22.

Δικεντη(τον) = dicentetum.
Κυκν(αριον) = cycnarium.
Χλωρον = chloron.

It was discovered in a lady's tomb by Dr. Sauvage when excavating a Merovingian cemetery at Boulogne. Dicentetum was treated of in the notes upon the Rugles seal published in The Lancet of Sept. 5th. It means "of special power," or strength. Ætius gives its ingredients as misy, sugar of poppies, verdigris, and gum. Cycnarium occurs in Galen and in Paulus Ægineta ;[2] it meant "swan-coloured" (κύκνειὸς)—i.e , white. Chloron (χλωρὸς) was green ; it occurs on the seal of Ariovistus found at Colchester.[3]

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[2] Ibid., viii., 16.

[3] See Simpson, Monthly Journal of Medical Science, 1851, p. 250, also Ætius Tetrabiblos, iii., 3, 29.

THE ASSOCIATION OF CERTIFYING FACTORY SURGEONS AND THE VENTILATION OF FACTORIES AND WORKSHOPS.

At the annual meeting of the Association of Certifying Factory Surgeons held in May last year it was decided to ask a special committee of the association to report on the recommendations made in the first report of the departmental committee appointed to inquire into the ventilation of factories and workshops which was issued on August 15th, 1902. This report was dealt with in The Lancet of Feb. 14th, 1903, p. 463. In regard to the recommendations, which are given *in extenso*, we stated that the first, which referred to limitations as to the permissible amount of carbonic acid gas in the air, "is open to very grave objection," while we remarked that "the last two are devoted to recommending the general use of Dr. Haldane's apparatus." These points have now been dealt with by the special committee appointed by the Association of Certifying Factory Surgeons. In regard to the sufficiency of a carbonic acid standard in all cases, the committee points out that it does not follow necessarily that if the proportion of carbon dioxide is found to be below the limit the place is properly ventilated. To quote one example, it is no uncommon practice to have the entrance to a workplace protected by a closed door and it is only on the business of the factory inspector being known or made known to the janitor behind the wicket that the desired entrance can be obtained. Thus an opportunity is provided for "emergency" ventilation before any samples can be taken. The special committee suggests that the difficulty might be overcome by insisting on proper regard being given to the relationship between ventilation and temperature. Obviously the introduction of fresh air to sweep out impurities just before the inspector's visit would disturb the temperature of the room. It is proposed that two thermometers should be fixed in each room in such places that the degree of variation between them would be a guide to the recent opening of windows. The special committee very seriously questions the utility of any order based upon the standard of 13 volumes of carbonic acid in every 10,000 volumes of air and it quotes a few important arguments against the adoption of too low a standard of purity which we, think, are very much to the point. It agrees that the standard should be lowered when gas or oil is burning, though not to the extent—namely, 21 parts per 10,000—recommended by the departmental committee. It is suggested that a reasonable proportion of carbon dioxide over and above that of the outside air which might be allowed during gaslight would be double the amount allowed in excess of outside air during daylight. In any case the committee thinks, and we agree that it is quite sound in principle, that the standard should be stated in terms of carbonic acid in excess of that found in a sample of outside air taken at the same time. It is clearly not reasonable that an employer in the outskirts of the city with better natural facilities for ventilation should be allowed an extra volume of respiratory impurity over and above that conceded to the employer in the town. In the case of Manchester, for example, a difference of one volume of carbonic acid per 10,000 between the atmosphere of Manchester proper and the immediate outskirts exists owing, not to respiratory impurities, but to smoke troubles and stagnant air. The practical utility of the suggestion is doubted of asking inspectors to conduct estimations of the amount of carbonic acid by means of Dr. J. S. Haldane's apparatus which is certainly not simple and would require the attention of an expert There are much simpler methods which are sufficiently accurate for the purpose. The committee concludes that an equivalent of impurity to the extent of an additional five volumes of carbon dioxide per 10,000 in excess of that found outside would be a fair proportion to allow during daylight and that double this amount cou'd reasonably be allowed during gaslight. It is also of opinion that the basis for legal proceedings should be one volume in excess of that named for a daylight sample and two volumes in excess in the case of samples taken during gaslight. It is added that the limit suggested should also be made to apply to cotton-cloth factories. The report is signed by T. F. Young, Thomas Fort, and W. F. Dearden, the honorary secretary of the association.

FACIAL ERYSIPELAS FROM EROSIONS OF THE NASAL SEPTUM.

In the *Boston Medical and Surgical Journal* of Dec. 17th, 1903, Dr. J. W. Farlow calls attention to a source of facial erysipelas which is not generally recognised—erosions of the nasal septum. These may exist without attracting the notice of the patient or the practitioner. He relates the following cases. A woman, aged 75 years, came under observation for occasional spasm of the throat. Nothing was found except an erosion and crust on the right side of the septum nasi. Two months later she was ill, with a temperature of 101° F. and headache. The septum was red and swollen and there was marked erosion on the right side of the septum, on which was pus. The bridge of the nose on the right side was very red, tense, and painful, and the redness was spreading towards the cheek and the eye. The secretion was removed from the nose and antiseptic dressings and powders were used. On the following morning the temperature was 103° and the erysipelas had spread to the other side of the face. The septum was again thoroughly cleansed and the nose was kept free from secretion. On the next morning she was much better. Recovery rapidly followed. The treatment of the nose seemed to have prevented a fatal result. In another case a woman, aged 40 years, had had several severe attacks of facial erysipelas at frequent intervals. There was a marked erosion of the septum which Dr. Farlow treated. On one occasion subsequently the septum became reddened and there was incipient redness of the bridge of the nose as in the former attacks. The nose was thoroughly cleansed and the symptoms disappeared in a short time. During the remaining nine years of life she had no more attacks. In a third case a man, aged 52 years, had a severe attack of facial erysipelas. When Dr. Farlow examined his nose at a later period he found a marked septal erosion with bloody crusts. Subsequently the nose became reddened and the patient feared an attack of erysipelas ; but treatment of the septum seemed to prevent the attack. None of these patients complained of the nose sufficiently to have it examined, yet when they came under Dr. Farlow's care each had a large open sore. At the Massachusetts General Hospital all cases of facial erysipelas going to the department for diseases of the skin are referred to the department for diseases of the nose and throat for examination of the nose. The importance of Dr. Farlow's observations, particularly in recurrent attacks of facial erysipelas, is obvious.

WILLIAM BLAKE.

AT the present moment there is to be seen at the Carfax Gallery in Ryder-street a collection of the works of that very remarkable poet and craftsman William Blake. He was a man who was certainly born out of due time, for his life 1758-1827, coincided with the time when art, except for Turner, Constable, and one or two other landscape painters, was at its very lowest ebb in England at all events and his strange mystical drawings must have been absolutely incomprehensible to the majority of his contemporaries Take, for instance, "The Nativity," where the Divine Child is floating in the air between the Virgin and St. Elizabeth, or "The River of Life" with its swiftly moving figures. Blake's drawing was often defective and he had a habit of making his figures appear to be about ten feet in height, as exemplified in the picture of Christ raising the son of the widow of Nain; his nude figures also are, as a rule, too anatomical, but his feeling for line is wonderful. He could, however, at times produce nude figures of wonderful beauty —witness the picture of the triple Hecate. He had the same faculty for making his figures move as had Botticelli, a point well seen in the picture of the Ascension, where our Lord is rising and two angels are descending. In all his pictures of fire, also, he gives the flicker and ascent of the flames with wonderful fidelity and his angels really are winged creatures and not men or women with bird's wings attached to them. Even when his angels are sitting still they are angelic and show their spiritual qualities, a good instance of which is the drawing of Raphael talking to Adam, where his wings mount up in a beautiful flamboyant ogee, and there is no need here to refer to the angels in the Job illustration of "The morning stars sing together." The borderline between sanity and insanity is so narrow that it is, perhaps, impossible to say whether Blake was sane or not. Imagination when uncontrolled may be said to be insanity and Blake's imagination certainly played him strange tricks. But, mad or not, the man who could write poetry like the song beginning "My silks and fine array," or paint pictures like the "Ascension," has left treasures to posterity.

THE METROPOLITAN ASYLUMS BOARD AND ITS ASSISTANT MEDICAL OFFICERS.

ON Dec. 21st, 1903, the following communication was received from the assistant clerk to the Metropolitan Asylums Board by seven assistant medical officers in the fever service of the Board :—

[illegible]

of this communication.

The seven assistant medical officers who are referred to above have sent a reply to the Asylums Board in which they express their surprise at the communication. They add that all of them have seen at least one year's service and some of them two years' service, that the terms of the advertisement which they answered, and also the form of application which they filled in, left no room to suppose that the engagement could be terminated in such an abrupt manner. Moreover, when they appeared before the selecting subcommittee several of them were asked whether they would be willing to serve for several years and they were only appointed on giving such an assurance. The protestors add that they were elected in an emergency and worked at high pressure and that they did not expect that a lull in the work would be made the opportunity for dismissal. They therefore beg the Board to reconsider its decision. We cannot but think that the Asylums Board has acted harshly in this matter. No one can expect the same staff to be kept up during a time of freedom from infectious disease as during an epidemic, but the Board should not, as it appears to have done, have implied that the term of service of the assistant medical officer would be for several years. A month's notice is far too short a time to give to men who have most of them resigned good permanent appointments to assist the Board in a difficulty (three months at least should have been given), and for a body which has wasted thousands of pounds of the ratepayers' money over the Brook Hospital, to treat its employés with what we must call calculated meanness is not right, to say nothing of the fact that when the next epidemic comes the Board will find it very difficult to obtain the services of extra medical officers. This is a bad policy, for not only does it mean increased mortality but increased expense.

THE medical officer of health of the Cape Colony states that for the week ending Dec. 19th last only 1 case of plague was discovered in the Colony—namely, a native male at East London. Plague-infected rats continue to be found at various places in the Colony, but in the Cape Town and Harbour Board area 422 rats were examined during the week and none was affected with plague. As regards the Mauritius a telegram from the Acting Governor received at the Colonial Office on Jan. 8th states that for the week ending Jan 7th there were 55 cases of plague and 37 deaths from the disease.

THE interests of Dr. J. F. D. Macara, to whose case we referred last week in a leading article on the Scottish Poor-law Medical Service, have been intrusted to the Medical Defence Union We understand that an "interim interdict," to use the Scotch expression, was obtained last week by the Medical Defence Union against the Durness board to prevent the appointment of a successor to Dr. Macara.

DISQUIETING reports having appeared in the press as to an outbreak of yellow fever in Jamaica the governor of that colony has telegraphed to the Colonial Office that since the death of an officer from this disease which he reported on Nov. 18th last no case has occurred and that the state of health in the island is most satisfactory.

AT the next meeting of the Royal Microscopical Society on Wednesday, Jan. 20th, at 8 P.M., Dr. Woodward will deliver his presidential address on the Evolution of Vertebrate Animals in Time. The meeting will be held, as usual, at 20, Hanover-square, London, W.

THE SALE OF FOOD AND DRUGS ACT.—An interesting point of law was raised at Axminster on Jan. 6th with regard to the Sale of Food and Drugs Act. The inspector under the Act visited a shop and wished to purchase some cheese for the purpose of analysis but the proprietor refused to sell it. The solicitor for the shopkeeper contended that as the inspector did not tender payment for the article he asked for there could be no conviction as the Act distinctly provided that the price of the article must be tendered. The inspector stated that when he received the goods he would have been quite willing to tender payment for them but he could not offer payment until the goods were ready to be received. The bench of magistrates eventually dismissed the case, although at first the chairman stated that the majority of the magistrates thought it was not absolutely necessary to tender any payment until the cheese had been received. Notice of appeal was given.

THE LANCET RELIEF FUND.

Almoners.

THIS Fund, which came into operation on the 1st of February, 1889, has for its Almoners the President of the Royal College of Physicians of London (Sir WILLIAM SELBY CHURCH, Bart., K.C.B., M.D. Oxon.), the President of the Royal College of Surgeons of England (Mr. JOHN TWEEDY), the President of the General Medical Council (Sir WILLIAM TURNER, K.C.B., M.B. Lond., F.R.C.S. Eng. and Edin., F.R.S.), Mr. THOMAS WAKLEY, F.R.C.S. Eng., and Mr. THOMAS WAKLEY, jun., L.R.C.P. Lond., with Sir HENRY PITMAN, M.D. Cantab., F.R.C.P. Lond., as Honorary Auditor.

Scope of the Fund.

FOR the guidance of those seeking assistance and of those desirous of recommending deserving cases, it may be useful to record that THE LANCET Relief Fund is sustained solely by the Proprietors of THE LANCET, who provide every January the sum of at least £300, which is administered free of cost, with the object of affording immediate pecuniary assistance to registered medical practitioners, or to their widows and orphans, in cases of distress and emergency, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require. In the case of widows and orphans, in order to come within the scope of the Fund, the death of the Husband or Father must have been of recent occurrence.

Chronic Cases ineligible.

WHEN the Fund was inaugurated considerable misapprehension existed as to the precise objects for which it had been established, and, as a result, the majority of the earlier applications, being cases of *chronic* distress, and not coming, therefore, under the designation of *emergency*, could not be entertained. As the Almoners still receive applications for assistance for cases which are obviously of a *chronic* character, it is thought advisable to append a statement concerning cases of this nature which appeared in THE LANCET of Feb. 16th, 1889:—

> "We are requested by the Almoners to state that, from the character of a number of the applications received, both personally and by letter, for relief, it is evident that in many cases the object for which this Fund has been established is not quite clearly understood; and if relief had been afforded in the cases of those who suffer from chronic distress the Fund would have been completely exhausted within the first few days of its existence. They would therefore be greatly obliged if those readers of THE LANCET who may be asked to endorse applications would carefully peruse the Application Form and exp[illegible] the Fund to those applicants whose cases do not seem to come within the scope of the purpose *for which the Fund has* [illegible] is to afford prompt aid to registered medical practitioners, or to the widows or orphans of members of the profession, who, in consequence of the supervention of some unexpected emergency, which is not likely to recur, have pressing need of immediate and temporary pecuniary relief"—

And who, it may be again pointed out, are likely to be permanently benefited thereby.

FIFTEENTH ANNUAL REPORT of the ALMONERS.

For the year ending December 31, 1903.

IN presenting their Fifteenth Annual Report the Almoners have to record that the balance in hand on Dec. 31st, 1902, was £303 2*s.* 11*d.*, to which, on Jan. 1st, 1903, the Proprietors of THE LANCET added the sum of £300, making a total sum of £603 2*s.* 11*d.* available for grants during the year 1903.

The number of applications for assistance received by the Almoners during the year was 76—a slight increase as compared with those received in the previous year—of which 21 *were so obviously* outside the scope of the Fund that they were rejected by the Secretary by virtue of the discretionary power conferred upon him by the Almoners at their meeting on Jan. 1st, 1890; six were rejected by the Almoners after due consideration; three were withdrawn by the applicants; two were uncompleted at the close of the year; in eight cases Forms were sent but were not returned—probably the applicants recognised that their cases were outside the scope of the Fund; and 36 applicants were relieved by gifts or loans of money ranging from £2 to £35. The relief of the 36 cases, a detailed list of which is given in the accompanying Statement of Accounts, involved the expenditure of the sum of £442 16*s.* 6*d.*—a sum considerably above the normal income of the year, omitting balances brought forward and possible receipts from repayment of loans, and the largest sum voted in any one year since the inauguration of the Fund in 1889.

Letters continue to be received by the Almoners from some of those whom they have helped, expressing their gratitude for the relief which has enabled them to mitigate, and in not a few cases to overcome, their difficulties, and thus testifying to a pleasing feature in the administration of the Fund.

The promptness of the relief afforded to applicants is also a feature to which the Almoners continue to give their particular attention; in this connexion it may not be uninteresting to record again the fact that on several occasions the Almoners have been able to consider cases and to grant relief on the actual day on which the application was received.

There continue to be far too many applications received for assistance for what are *obviously* "chronic" cases, a large proportion of the 21 cases *rejected* by the Secretary coming under this heading. It cannot be too emphatically reiterated that THE LANCET Relief Fund exists to meet cases of *sudden emergency*, where timely help will *tide the* practitioner over unforeseen difficulties, or afford his *widow* and orphans a few weeks' respite from the more pressing financial cares of their unhappy position.

Mr. John Tweedy having succeeded Sir Henry Howse as President of the Royal College of Surgeons of England in July last, thereupon became an Almoner of the Fund and consented to act as such. The present Almoners desire to record their appreciation of Sir Henry Howse's excellent services to the Fund.

In conclusion, the Almoners desire to state that they will at all times be glad to have their attention called to any cases of genuine distress coming within the scope of the Fund, but they trust that those recommending cases or giving testimonials will first take steps to satisfy themselves of the *bona fides* of such cases before endorsing them. In the administration of such a Fund as this the Almoners are of necessity largely guided in their decisions by the testimonials accompanying the applications.

(Signed) W. S. CHURCH. JOHN TWEEDY.
WM. TURNER. THOMAS WAKLEY.
THOMAS WAKLEY, Jun.

January, 1904.

THE LANCET RELIEF FUND.

STATEMENT OF ACCOUNTS FOR THE YEAR ENDING DEC. 31st, 1903.

DR.	£	s.	d.
To Balance at the London and Westminster Bank, Limited (Westminster Branch), Jan. 1st, 1903	303	2	11
,, Proprietors of THE LANCET, Jan. 1st, 1903 ...	300	0	0
	£603	2	11

CR.	£	s.	d.	£	s.	d.
By Loans :—						
Case No. 566	35	0	0			
,, 591	10	0	0			
,, 596	6	14	6			
,, 599	25	0	0			
				76	14	6
By Gifts :—						
Case No. 565 (voted 1902) ...	10	0	0			
,, 567	5	0	0			
,, 568	10	0	0			
,, 569	10	0	0			
,, 570	20	0	0			
,, 571	6	0	0			
,, 572	5	0	0			
,, 573	5	0	0			
,, 574	15	0	0			
,, 575	25	0	0			
,, 576	5	5	0			
,, 578	15	0	0			
,, 579	5	0	0			
,, 580	20	0	0			
,, 581	20	0	0			
,, 582	5	0	0			
,, 583	10	0	0			
,, 584	15	0	0			
,, 585	10	0	0			
,, 586	15	0	0			
,, 587	10	0	0			
,, 588	15	0	0			
,, 589	10	0	0			
,, 590	4	17	0			
,, 592	25	0	0			
,, 593	5	0	0			
,, 594	10	0	0			
,, 595	10	0	0			
,, 597	20	0	0			
,, 598	5	0	0			
,, 600	10	0	0			
,, 601	5	0	0			
,, 602	3	0	0			
,, 603	2	0	0			
				366	2	0
Cheque Book					4	2
Balance at Bank, Dec. 31, 1903 ...				160	2	3
				£603	2	11

I find by the Bankers' Book that the actual Balance on Jan 1st, 1903, to the credit of the Fund was £303 2*s.* 11*d.*, to which the sum of £300 was added by the Proprietors of THE LANCET on Jan. 1st, 1903.

The balance at the Bank on Dec. 31st, 1903, was the sum of £160 2*s.* 3*d.* I have also checked the receipts for disbursements and find the above account strictly accurate.

January 4th, 1904.

HENRY A. PITMAN, Hon. Auditor.

THE INTRODUCTION OF AN AGE LIMIT AT THE ROYAL INFIRMARY, EDINBURGH, FOR THE MEDICAL AND SURGICAL HONORARY STAFF.

(FROM A CORRESPONDENT.)

AT the annual general meeting of the court of contributors of the Royal Infirmary of Edinburgh held on Jan. 4th publicity was given to a matter which up to then might have been regarded as of the nature of confidential relations between the managers on the one hand and the honorary staff on the other. In the report submitted by the managers it was intimated that "the managers had, after most careful consideration, introduced a new rule to the effect that the ordinary physicians and surgeons should retire in future on attaining the age of 65 years. The limit was originally fixed by the board at 60 years, but in deference to the strongly expressed wish of the medical and surgical staff it was afterwards extended to 65 years. It was resolved, however, that the rule should not be applied in the cases of those members of the staff who were at present serving their second or third term of five years in charge of wards nor to the professors. It was at the same time resolved that the charge of wards set apart for the instruction of women students (hitherto held by the senior assistant physician and the senior assistant surgeon) should now be regarded as a full charge and count towards the full term of office as ordinary physician and surgeon." It will be seen that no reason for this change is given—it appears to be quite an arbitrary decision. It is not suggested that physicians or surgeons at the age of 65 years were unfit for hospital work, for were that the contention it would have left the board open to the reply that present seniors, whether professors or not, were continued in office in spite of their incompetence. The history of this sudden new departure is somewhat as follows. So far as can be ascertained it appears that there had been expressions of dissatisfaction on the part of assistant surgeons as to slowness of promotion. Acting apparently on this somewhat vague spirit of discontent the managers without any consultation with the staff intimated that they had determined upon an age limit of 60 years but exempted from it the two sets of persons indicated in the quotation from the report given above. It will be noted that this new regulation was not confined in its application to future appointments but was applicable to present holders of office. The regulation in fact affected nearly the whole of the assistant physicians and surgeons and some of the full staff. It therefore gave rise to much excitement and to much hostile comment. It may here be mentioned that the full physicians and surgeons have charge of wards for three periods of five years each and then retire, and that the assistant physicians and surgeons are promoted to charge of wards in order of seniority on the staff. These assistants are also appointed for periods of five years but they have always been looked upon as having absolute security of tenure and certainty of promotion. Were it not so men would not give up so much of their general practice as they do in order to devote themselves to the duties of the infirmary and of the school of medicine. The new regulation cut into the time during which the junior staff expected to have charge of wards and it was keenly resented. Instead, however, of opposing it as a breach of custom, if not of contract, they decided to fight for an extension of the limit to 65 years and this the managers acceded to. The 65 years limit only fell upon a few assistant physicians, so that the hastening of promotion, which was the avowed motive of the managers for the new regulation, was confined to those appointments and in not one of them does it become operative for something like ten years from now.

This explains the paragraph quoted above from the annual report of the managers to the court of contributors, which seemingly constitutes the final authority in infirmary matters. At this meeting it was proposed "that in the public interest the age limit enacted by the managers of the Royal Infirmary for the ordinary physicians and surgeons be made to apply as well to the physicians and surgeons of the institution nominated by the University." The proposal was submitted by a member of the junior bar who had been evidently coached by someone with a restricted sense of humour, for his whole argument consisted in the assertion that it was the duty of the court to protect the interests of the patients by seeing that they were not attended by physicians and surgeons of the worn-out age of 65 years, and yet he excluded any present physician or surgeon who had reached that age and also excluded the present holders of University nominations. So while the age limit is at once made applicable to certain of the assistant staff, professors may go on to 80 or 100 years, no matter what the loss to patients may be meanwhile. Curiously enough this proposal was opposed by a prominent member of the board of management and by a University representative on the board in the interests of "justice and equity" and "the public interest," and yet so far as is known those gentlemen did not hesitate from any sense of justice and equity to apply their rule to other members of the staff. The motion was carried by a majority of two to one and it is probable that a good many persons wish that the matter of age limit had been left alone and that the managers had instead used the power they possessed of not reappointing men when it became notorious that they were unfit or unsuitable for hospital work and the teaching of students. It is not known what the University may determine to do in the circumstances; the professors hitherto took little or no interest in the question of age limit, seeing that they were specially excluded; now that it has been determined to apply it to their successors it has led to a measure of perturbation. The question has, it seems, to come up before another meeting of contributors to be held shortly.

MEDICINE AND THE LAW.

An Important Decision under the Dentists Act.

MR. FENWICK at Bow-street police-court has delivered a decision of considerable importance in the case of John Panhaus summoned for using a description wrongly implying that he was a person qualified to practise dentistry. The defendant carried on business under the title "Dental Institute (Limited)" and had no registrable qualification. The point was taken on his behalf that as a limited company could not be "a person specially qualified to practise dentistry" there could be no infringement of the Act. The learned magistrate said that it was clear that the defendant was not a qualified and registered person within the meaning of the Dentists Act of 1878. It was also clear that he practised dentistry and apparently he carried on the Dental Institute (Limited) for his sole profit. He agreed that a limited company could not be a person qualified to practise dentistry and he had no doubt that the defendant registered the company for the purpose of evading the Act. The words "Dental Institute" clearly implied that the persons using them were specially qualified to practise dentistry and the defendant must pay fines and costs amounting to £14 1s. This case would constitute an excellent one wherewith to test and to establish the law with regard to the inference to be drawn from such words as "Dental Institute (Limited)" and the liability of unqualified persons practising as medical men or as dentists under such shelter as the title of company may afford. In these circumstances it is better not to discuss previous decisions bearing upon the subject but to wait and to see whether Mr. Panhaus cares to take his case up to the Divisional Court. The findings of fact against him are clearly the only ones which the evidence justified.

Unqualified Practice by a Ticket-of-Leave Man.

James Charles Ady, a coloured man, was convicted and fined £20 with £10 10s. costs at the West London police-court for the use of titles implying qualification to practise medicine in the following circumstances. Ady's name was struck off the Medical Register for infamous conduct in 1896 and in 1898 he was sentenced to seven years' penal servitude for performing an illegal operation. Having been released on ticket-of-leave in April, 1903, he had lost no time in fitting up a surgery in Wardo avenue, Fulham, placing in the window a card bearing the inscription "Institute of Eclectic Medicine—Medical Superintendent, Dr. Ady, L.R.C.P., L.R.C.S. Edin., ex-Med. Reg.," the last three syllables being in smaller type than the rest. It was contended for the defence that these constituted a sufficient notice to the public that the defendant was not a qualified practitioner. In addition two brass plates contained the letters indicating the qualifications under which he had been registered and it was proved that he appended them to his signature. When a clerk in the employment of the solicitors to the Medical Defence Union complained to him of a cough and suggested that he would like "to have a rest and declare on the club," Ady gave the following certificate: "I certify that Mr. Tyrell is suffering from a bad attack of influenza and a few days' rest would greatly aid in his recovery.—(Signed) James O. Ady, L R C.P., L.R C S. Edin., 1878."

Professional Secrecy in America.

Medical practitioners in this country have often appealed against the principle of English law which imposes upon them in certain infrequent circumstances the duty of divulging in the witness box the professional confidences of their patients. The courts of this country do not recognise the right on the part of a medical man to refuse to give a patient's name or to state the nature of the disease from which that patient is suffering. But when practitioners are very much averse from making the disclosures required of them they always find judge, jury, and all counsel concerned anxious to spare them. In one case which was heard in Scotland in 1896 a medical man who brought an action against an insurance company on an accident policy allowed judgment to go against him rather than disclose the name of the patient from whom he had caught the infection.

In America, however, the legislatures of some of the States have adopted the principle of excusing the practitioner from having to make disclosures. Thus by the New York Civil Code :—

> A licensed physician or surgeon cannot without the consent of his patient be examined in a civil action as to any information acquired in attending the patient which was necessary to enable him to prescribe for the patient.

A similar enactment is in force in many other States, subject, however, in some cases to the further provision that ie consent may be given by the legal representative of a eceased patient. It might be thought, and so far as embers of the medical profession are concerned it is ndoubtedly the fact, that this enactment works well in ractice. A reference, however, to some of the cases which ave recently been decided in the American courts shows that ircumstances arise which make its practical application omewhat difficult for the patient.

In the first place, the American courts in applying the ule seem to draw a distinction between civil and criminal ases. When the defendant, who was charged with rape, as examined while in gaol by physicians who were not ummoned by him, and against his consent, their testimony nat they [illegible] ase which was al [illegible] from the risoner, [illegible] not come ithin the meaning of the phras [illegible] ion by a patient to his physician [illegible] 35). The rule seems to be differ [illegible] n Pennsylvania an action was brought by a person to ecover damages for personal injuries sustained in a railway ccident Under a statute there in force a physician could ot, without the consent of his patient, be examined n a civil action as to any information acquired in attending a patient which was necessary to enable him to prescribe or the patient. The railway company sent a physician o examine the injured man on their behalf. It was held that he was not entitled to testify, it being apparently presumed by the court *in such* a case that the relation of physician and patient existed during such examination and that the information obtained was for the purpose of enabling the physician to prescribe and to act for the patient. This [illegible] y to lead to grave [illegible] No doubt if the [illegible] rpose to allow the [illegible] estigations in the consulting room he will consent to waive the privilege, but if in the reverse case he is able to withhold his consent grave [illegible] Vaiver may arise by implication of law. [illegible] waiver of privilege if a witness states what her physician has said as to her [illegible] Missouri Pacific Ry. Co , 93 Mo. App. 219). But it is the patient or his personal representative only who can grant the waiver. Thus the Code of Civil Procedure of the State of New York, Section 83, provides that a physician shall not be allowed to disclose any information acquired in attending a patient in his professional capacity which was necessary to enable him to act in that capacity, and Section 836 provides that a physician may disclose the mental or physical condition of a deceased patient when the provisions of the previous section have been expressly waived by the personal representative of the deceased. It was decided in an action by a widow against a mutual benefit insurance company that the testimony of her husband's physician, introduced in her behalf, that the husband was in a state of delirium prior to his death by suicide, was improperly admitted, the widow not being the executrix or administratrix of the husband and therefore not competent to waive the provisions of the section. This case merely requires to be stated to show that the law of which it purports to be an interpretation is both harsh and unjust. Suppose in America an action was brought by a widow to recover damages for the death of her husband alleged to be caused by the negligence of the defendant. Suppose, further, that the whole question in the case was whether the death of the deceased had been caused by that negligence. Unless the widow was the personal representative of the deceased and as such able to permit her husband's medical attendant to give evidence she would be unable to recover. Hard cases of this kind seem to show that the law as applied in the United States is misconceived. The whole object of making secret the confidences of the consulting room is to protect the patient, not to injure him or those dependent on him. We have already seen that in a civil action the defendant may find it hard to adduce medical testimony. The following case is a further illustration of this Under a statute providing that a physician should be incompetent to testify except with the consent of his patient as to any knowledge acquired by him in treating such patient, the defendant in an action for malpractice was held not entitled to compel the plaintiff to testify that another physician had taken an x-ray photograph or skiagraph of her injured knee, which he had done for the purpose of treatment (Aspy *v.* Botkins, 66 N.E. 462).

THE MIDWIVES ACT, 1902, AND IRISH TRAINING INSTITUTIONS.

CERTAIN conditions imposed by the regulations of the Central Midwives Board upon candidates for examination with a view to enrolment upon the Midwives Register are likely to act with considerable hardship in the case of Irish institutions justly held in high esteem as training schools in midwifery unless the Central Midwives Board can see its way to modify or to supplement its rules with a view to meet the difficulty which has been pointed out. The Central Midwives Board has laid down that the candidate for registration as a midwife before presenting herself for examination must have attended and personally delivered 20 cases of labour and that she must have nursed 20 such cases for ten days after confinement. At a recent meeting of the Section of Obstetrics of the Royal Academy of Medicine in Ireland the President, Dr. A. J Smith, stated that it would be impossible for such institutions as the Rotunda Lying-in Hospital, the Coombe Lying-in Hospital, and the National Lying-in Hospital in Holles street, Dublin, t[illegible] conduction, as to do [illegible] of the hospitals, and [illegible] nurses in the Dublin hospitals to nurse their patients for ten days after delivery because the practice is for patients to leave at the end of the eighth day and that if this time were to be extended by the hospitals there was no likelihood that the majority of their patients would remain longer. In these circumstances those present at the meeting unanimously passed the following motion :—

[illegible]

A further motion was also submitted to the meeting and passed unanimously to the effect that the Midwives Act should be extended to Ireland. At present it extends neither to Ireland nor to Scotland and it is with regard to midwives likely to be trained in Ireland for practice as midwives in England that the difficulty indicated has arisen. It must not be forgotten in considering it that Section 2 of the Midwives Act provides that "any woman who within two years from the date of this Act coming into operation claims to be certified under this Act shall be so certified provided she holds a certificate in midwifery from the Royal College of Physicians of Ireland or from the Obstetrical Society of London or the Coombe Lying-in Hospital and Guinness's Dispensary or the Rotunda Hospital for the Relief of the Poor Lying-in Women of Dublin, or such other certificate as may be approved by the Central Midwives Board, or produces evidence satisfactory to the Board that at the passing of the Act she had been for at least one year in *bonâ fide* practice as a midwife and that she bears a good character."

The result of this is that although under the Act itself women trained in the institutions named are, during the time specified, entitled to be enrolled without further question as to the sufficiency of their training, in the following year and afterwards, under the rules framed by the Board, they will not even be deemed to be qualified to present themselves for examination. The training afforded to women by the midwifery institutions in Ireland which are named in the section quoted is highly and justly esteemed by all who are acquainted with the subject. The case on their behalf, and in support of the views of those who would regard the training afforded by them as a sufficient preliminary practical education for the purposes of the Midwives Act, was thus forcibly put by Dr. Henry Jellett in a letter to Dr. W. Japp Sinclair, a member of the Central Midwives Board, which Dr. Jellett read at the meeting referred to and to which he had received a reply recognising that the Irish hospitals had a substantial grievance. Dr. Jellett inquired of Dr. Sinclair what would be the position of the Irish nurse who applied to be admitted to the examination of the Board and said, "I have been a pupil midwife for six months at one of the Dublin incorporated hospitals. During that time I have attended a regular course of instruction, I have watched some 300 or 400 deliveries, I have personally assisted at some 20 to 30, I have personally conducted some three or four, I have watched some 600 to 800 women during their puerperium, and I have personally nursed some 20 to 30. I have passed the examination of the hospital." There is a great deal of force in the argument that is thus suggested. The Central Midwives Board had to frame rules in order to secure the practical efficiency of women presenting themselves for examination and to provide a test. It had a perfect right to make its standard of efficiency a high one and to lay down a test which would maintain that standard in all cases. The question at issue relates to the test imposed. If that test admits only women whose practical training is superior to that afforded by the Dublin hospitals and excludes women trained in those institutions with others who in point of efficiency do not come up to the Board's requirements it carries out conditions which the Board has a right in its discretion to impose. If, on the contrary, all women trained in the Dublin incorporated hospitals are excluded by a hard-and-fast rule which at the same time admits to examination women whose practical training is inferior to theirs it cannot be said that the test is fair and reasonable or that it is one calculated to promote the object for which it was devised. The value of personal experience on the part of the candidate for examination is not to be underrated, nor, on the other hand, is the training in midwifery obtainable in the Dublin institutions the position of which was fully recognised by those who framed the Midwives Act. No one questions the high qualifications possessed by the Central Midwives Board to carry out its difficult duties or its desire to do so in the best possible manner without fear or favour. It was not, however, to be expected that a first set of regulations framed under a new Act of such a nature would meet all the requirements of all conceivable cases and there is no obvious reason why supplementary regulations to settle questions arising from time to time should not be framed when needed and approved by the Privy Council. Until April 1st, 1905, qualified women desiring to be midwives can be enrolled as such under the section quoted above and there is time for the Central Midwives Board and the Dublin hospitals to meet one another's views before any hardship can arise affecting the latter and those seeking their training in them.

Looking Back.

FROM

THE LANCET, *SATURDAY,* JAN. 14, 1828.

By far the most popular classification of diseases at present is that adopted by Dr. Cullen, in his work entitled, "Nosologia Methodica;" a work evincing great genius as well as deep research, and which, although objectionable in its principle, as I shall endeavour to show you, is, nevertheless, highly deserving of your attention, from the great mass of historical information it contains. Dr. Cullen's arrangement is founded principally upon the external characters, or obvious appearances, of diseases, a method borrowed chiefly from the writers on natural history, and which was adopted by Linnæus, Sauvages, and others, but which Dr. Cullen greatly extended and improved. An objection to this plan is, that the symptoms of diseases are often so numerous, as well as various, as to make it difficult to bring them within the compass of a definition, or to distinguish easily between such as are essential and those which are accidental merely; and what are only signs or symptoms are often considered as actual diseases, which, in this way, are multiplied to an extreme and unnecessary degree. Thus he makes above a hundred and fifty different *genera* of diseases, many of which are again divided into *species*, terms that imply differences that are radical and essential, to say nothing of *varieties* out of number. The distinctions proper in *natural history* have, however, very little application to the science of medicine; for diseases are, in fact, seldom more than varieties, deviations merely from the natural state; they are not distinct essences, as in the case with *species* in *natural history*. In this respect diseases may be compared with those changes that are induced on plants or animals by culture, climate, &c, and which are so various as almost to defy methodical arrangement. Diseases, fortunately for you, gentlemen, are far less numerous than this system supposes; indeed, were it otherwise—were all the diseases that have different names here assigned to them, essentially different in their nature, the study of physic would be absolutely interminable. The truth is, that the essential differences between diseases are few, whether we regard them theoretically or practically; they are many in name but few in nature; they differ more in their seat than in their nature, according to the observation of Hippocrates, who says, "Omnium morborum, unus et idem modus est; locus vero ipse, differentiam facit."[1]

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 9390 births and 5968 deaths were registered during the week ending Jan. 9th. The annual rate of mortality in these towns, which had been 17·8, 15·4, and 20·6 per 1000 in the three preceding weeks, declined again last week to 20·4 per 1000. In London the death-rate was 19·4 per 1000, while it averaged 20·8 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 7·9 in Barrow-in-Furness, 10·5 in Bournemouth, 11·8 in Hastings, 12·0 in Smethwick, 12·8 in Handsworth, and 13·1 in Walthamstow and in Burton-on-Trent; the highest rates were 24·1 in Salford, 24·6 in Manchester, 24·7 in Stockport, 25·6 in Brighton, 26·1 in Gateshead, 26·7 in Liverpool, 28·5 in Bury, 34·6 in Wallasey, 40·1 in Merthyr Tydfil, and 41·7 in Preston. The 5968 deaths from all causes in the large towns last week included 462 which were referred to the principal infectious diseases, against 423, 369, and 495 in the three preceding weeks; of these 462 deaths 132 resulted from measles, 121 from whooping-cough, 66 from diarrhœa, 60 from diphtheria, 42 from "fever" (principally enteric), 36 from scarlet fever, and five from small-pox. No death from any of these diseases was recorded last week in Walthamstow, Hastings, Southampton, Hanley, Burton-on-Trent, Walsall, Burnley, Kings Norton, Smethwick, Grimsby, Wallasey, Huddersfield, and Stockton-on-Tees; among the other towns hey caused the highest death-rates in Willesden, Bury, Preston, Rotherham, West Hartlepool, *Gateshead*, Newport Mon.), Rhondda, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Willesden, Bury, Blackburn, Preston, Rotherham, and West Hartlepool; from scarlet fever in Bootle; from diphtheria in East Ham, Northampton, Plymouth, and Bury; from whooping-cough n Leyton, Devonport, Aston Manor, Liverpool, Warrington, Rochdale, West Hartlepool, Gateshead, and Rhondda; and from diarrhœa in Merthyr Tydfil. The mortality from "fever" showed no marked excess in any of the large towns. One fatal case of small-pox was registered in each of the following towns: Warrington, Halifax, York, Sunderland, and Gateshead; no death from this disease occurred in any other of the large towns. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 26, 27, and 26 on the three preceding Saturdays, was again 26 on Saturday, Jan. 9th; six new cases were admitted during the week, against six, seven, and four in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 1659, against 1655, 1617, and 1632 at the end of the three preceding weeks; 201 new cases were admitted during the week, against 188, 142, and 194 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 344, 271, and 404 *in the three preceding weeks, further rose* last week to 433, and were 77 in excess of the number in the corresponding period of last year. The causes of 93, or 1·6 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Salford, Leeds, Newcastle-on-Tyne, and in 40 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Kings Norton, Aston Manor, Liverpool, Manchester, Sunderland, South Shields, Gateshead, and Tynemouth.

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[1] Extract from Lecture No. IX. on the Theory and Practice of Physic by Dr. Clutterbuck at the Theatre, General Dispensary, Aldersgate Street.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 20·9, 20·8, and 21·7 per 1000 in the three preceding weeks, further rose to 23·2 per 1000 during the week ending Jan. 9th, and was 2 8 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 17 5 in Leith and 19·9 in Paisley, to 24 8 in Glasgow and 46·2 in Perth. The 768 deaths registered in these towns included 15 which were referred to whooping-cough, 15 to diarrhœa, 13 to measles, three to small pox, three to diphtheria, three to "fever," and one to scarlet fever. In all, 53 deaths resulted from these principal infectious diseases last week, against 61, 73, and 71 in the three preceding weeks. These 53 deaths were equal to an annual rate of 1·6 per 1000, which corresponded with the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been nine, 16, and 14 in the three preceding weeks, rose again last week to 15, of which four occurred in Aberdeen, three in Glasgow, three in Dundee, two in Paisley, and two in Leith. The deaths from diarrhœa, which had been 10, 16, and 21 in the three preceding weeks, declined again to 15 last week, and included ten in Glasgow, and two in Aberdeen. The fatal cases of measles, which had been 33, 25, and 26 in the three preceding weeks, declined again last week to 13, of which 12 were registered in Glasgow. *The deaths* from small pox, which had been two, four, and five in the three preceding weeks, declined again to three last week, and all occurred in Glasgow. The fatal cases of diphtheria, which had been three, four, and one in the three preceding weeks, rose again last week to three, of which two were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 184, 180, and 177 in the three preceding weeks, rose again last week to 213, and were 1 in excess of the number in the corresponding period of last year. The causes of 30, or nearly 4 per cent, of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25 6, 19 9, and 1·8 per 1000 in the three preceding weeks, declined again to 27·8 per 1000 during the week ending Jan. 9th. During the past four weeks the death-rate has averaged *26 3* per 1000, the rates during the same period being 17 7 in London and 18·9 in Edinburgh. The 202 deaths of persons belonging to Dublin, registered during the week under notice, showed a decline of 29 from the number in the preceding week, and included 23 which were referred to the principal infectious diseases, against 10, seven, and 16 in the three preceding weeks; of these, nine resulted from whooping-cough, five from "fever," three from scarlet fever, three from diarrhœa, two from measles, and one from diphtheria. These 23 deaths were equal to an annual rate of 3·2 per 1000, the death-rates last week from the same diseases being 1·5 in London and 0·3 in Edinburgh. The fatal cases of whooping cough, which had been four, three, and 12 in the three preceding weeks, declined again last week to nine. The deaths from "fever," which had been two in each of the two preceding weeks, increased last week to five. The fatal cases of scarlet fever, which had been one in each of the two preceding weeks, increased to three last week. The 202 deaths in Dublin last week included 32 of children under one year of age and 58 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons were slightly below the respective numbers in the preceding week. Six inquest cases and three deaths from violence were registered, and 59, or more than one-fourth, of the deaths *occurred in public institutions. The causes of nine, or* nearly 4 per cent., of the deaths registered in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING DECEMBER, 1903.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 5·4 per 1000 of the population, estimated at 4,613,812 persons in the middle of 1903 The rates in the three preceding months had been 6 5, 6·8, and 6 0 per 1000 respectively. The rates were considerably below the average in Kensington, Fulham, Chelsea, the City of Westminster, Hampstead, and the City of London, while they showed the largest excess in Hackney, Holborn, Bethnal Green, Stepney, Poplar, and Deptford. Small-pox was rather less prevalent during December than in either of the two preceding months; of the 22 cases notified during the month under notice six belonged to the City of Westminster, four to Lambeth, three to Stepney, three to Southwark, and two to Wandsworth. The Metropolitan Asylums hospitals contained 26 small-pox patients at the end of last month, against 21, 42 and 40 at the end of the three preceding months; the weekly admissions averaged four, against five, ten, and eight in the three preceding months. The prevalence of scarlet fever showed a slight decline during last month; among the various metropolitan boroughs the greatest proportional prevalence of this disease occurred in Bethnal Green, Stepney, Deptford, Lewisham, and Woolwich. The number of scarlet fever patients under treatment in the Metropolitan Asylums hospitals, which had been 1849, 1794, and 1738 at the end of the three preceding months, had further declined to 1606 at the end of last month; the weekly admissions averaged 168, against 241, 210, and 184 in the three preceding months. Diphtheria showed a slightly diminished prevalence during *December as compared* with that recorded in the preceding month; this disease was proportionally most prevalent in Hackney, Bethnal Green, Stepney, Poplar, Wandsworth, and Deptford. The Metropolitan Asylums hospitals contained 731 diphtheria patients at the end of last month, against 671, 753, and 763 at the end of the three preceding months. The weekly admissions averaged 104, against 114, 121, and 109 in the three preceding months. The prevalence of enteric fever further decreased last month; among the various metropolitan boroughs the greatest proportional prevalence of this disease occurred in St. Marylebone, Hampstead, Holborn, Battersea, and Camberwell. The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 247, 285, and 286 at the end of the three preceding *months*, had declined to 246 at the end of last month; the weekly admissions averaged 30, against 40, 44, and 45 in the three

Correspondence.

"Audi alteram partem."

LONDON HOSPITALS AND CENTRAL CONTROL.

To the Editors of THE LANCET.

SIRS,—The correspondent signing himself "Hospital Surgeon" takes a somewhat gloomy view of the prospect of the establishment of any central control over the present London hospital system which he aptly describes as "an extraordinary example of misdirected and overlapping energy and of obsolete arrangements." If we seek at one step to obtain a central board "free to reorganise at its pleasure, to suppress, to establish, to remove, and to amalgamate," it is certain that this step will long be postponed. Such an all-powerful board could be nothing else but the State and hospitals that could be treated in such a high-handed manner by a central body would be entirely unrecognisable as our great voluntary medical charities of which, with all their faults, we are most of us justly proud. Is there no intermediate position between chaos and municipalisation? Many who have given close attention to the hospital question in recent years would certainly be inclined to say that some progress has already been made towards securing voluntary control, though probably at the same time they would admit that not much effect has been produced thereby in coördinating medical charity. It is, of course, through the three great collecting funds for the London hospitals that some slight, though definite and increasing, control is gradually being obtained over the bodies to whom their grants are distributed. The object of the present communication to THE LANCET is to urge those of your readers who are members of the committees of King Edward's and the Hospital Sunday and Saturday Funds to consider whether these committees might not by united action gain still further control over the medical charities. The proposed line of such united action would be as follows.

Each of the three funds should appoint delegates in order to form a Metropolitan Voluntary Hospitals Board. The proportionate number of delegates from each committee should be determined by the average annual income of its fund. The board might have powers of coöption and possibly some other public bodies might be granted rights of nomination upon it, but the majority of the board should be composed of actual members of the committees of the three collecting funds. To this board should be intrusted the distribution of a certain proportion, say one-fourth, of the annual income of each fund. The conjoint fund produced by thus "pooling" one-fourth of each of the three funds should be distributed on a special plan which is an essential part of the present proposal. To every hospital previously chosen by the board as worthy of receiving its support there should be given a share of the conjoint fund proportionate to the sum which the hospital's supporters had raised in voluntary contributions to their charity during the preceding year. No hospital should be allowed to participate in the conjoint fund which would not admit to its governing body one or more persons nominated by the board. There is no doubt, I think, that this method of a central body proportionately increasing voluntary local contributions, sometimes called the Australian system, with the principle and efficacy of which we have all been made familiar by Mr. Herring's generosity to the Sunday Fund, would be very popular with the hospitals themselves. Its popularity would, I think, enable the hospitals to put up with the nominated governor who under other conditions would be obnoxious to some committees. It should certainly insure greater enthusiasm in the local collection of funds—an enthusiasm which is likely to wane if the present methods of making grants by these three funds are alone adhered to.

I put this proposal forward at the present time when other proposals for the establishment of central boards are in the air because it seems to me advisable whenever possible to utilise existing agencies instead of introducing new competitors. The three funds each appeal to a separate *clientèle;* each has regard to special and different features of economy and efficiency in making its grants. All are well established, steadily growing, and doing most excellent work. Their power for good would be immensely increased by the formation of a central board to coördinate their work, especially if the formation of such a board enabled them to get into closer touch with the hospitals by means of the nominees of the board upon the governing bodies. The establishment of the board might be expected to increase the incomes of the central funds and to lessen the deficits at the hospitals which it is their chief aim to meet. Am I too optimistic in suggesting to "Hospital Surgeon" that by such concerted action as I have here outlined an effective step would be taken towards removing some of the defects of our want of system without at the same time destroying the great voluntary hospitals which are amongst the most honourable features of this city?

I am, Sirs, yours faithfully,

London, W., Jan. 11th, 1904. LAURISTON E. SHAW.

CARDIAC DROPSY IN MITRAL STENOSIS.

To the Editors of THE LANCET.

SIRS,—I have been struck by the fact that in patients who suffer from mitral stenosis general œdema supervenes at a much later stage in the course of the disease than is the case in mitral regurgitation. Dr. A. E. Sansom[1] writes: "Generally speaking, in cases of mitral stenosis œdema is not nearly so marked a symptom as in the cases of mitral insufficiency. A fugitive and slight œdema occurs in many of them, but general dropsy rarely until the final stages, when the right chambers of the heart have become dilated, and the tricuspid valve incompetent; many patients die before this stage is reached." In the final stages, however, œdema is very commonly present, as has been shown by an analysis of 143 cases of cardiac dropsy in which post-mortem examinations were made, since mitral stenosis was found to be present in 68.[2] Œdema in the last stages of mitral stenosis is a condition which would naturally be expected to be present and it would be surprising if it were not found to occur. My object is to endeavour to account for the absence of general œdema in the earlier stages of the disease. The explanation of the phenomenon is naturally difficult and any opinion of its causation which may be expressed must of necessity be conjectural.

A patient suffering from mitral stenosis has not usually the appearances which are so suggestive of the other forms of cardiac disease. There is not the pale and anxious expression so frequently present in diseases of the aortic valves or the congested appearance of the face and the bluish tint of the lips and ears which are so often seen in mitral regurgitation, but, to quote the words of Sir William H. Broadbent,[3] the face has "a good colour and cheerful expression, the lips perhaps being of too crimson a shade of red." At post-mortem examinations the heart in mitral stenosis is not usually found to be so large or its chambers to be so dilated as in mitral regurgitation. On account of the breaking down of the compensation of the heart the consequent dilatation of the cardiac chambers tends to obscure any previous hypertrophy of their walls. For reasons which will be explained later it seems probable that in mitral stenosis there are a considerable amount of compensatory hypertrophy of the walls of the left auricle and very little dilatation of its chamber. If hypertrophy of the left auricle be the usual result of narrowing of the left auriculo-ventricular orifice then failure of cardiac compensation is not so likely to occur or dropsy to supervene until late in the disease, because, as long as the walls of the left auricle continue to undergo hypertrophy they may have sufficient power to overcome the obstruction to the passage of blood into the left ventricle and may be able to prevent any undue and increased strain being thrown upon the right side of the heart. In support of the view that there are hypertrophy and only slight dilatation of the left auricle in mitral stenosis, Dr. D. W. Samways,[4] on making an analysis of 70 cases from the records of Guy's Hospital for the years 1888–91 inclusive, in which this valvular lesion was found to be present at the post-mortem examinations, ascertained that hypertrophy of the walls of the left auricle was present in 36 of the cases. He divided the cases into two classes: those in which the stenosis was severe (in which the orifice would *only just* admit one finger) and those in which the stenosis was less severe than this. There were 36 cases of the former class and 34 of the latter. In 15 cases of the severe form of stenosis there was hypertrophy of the walls of the left auricle with no dilatation of its cavity, in 11 there was hypertrophy with dilatation, in three dilatation alone was recorded, and in seven there was no note made as to the condition of the left auricle. Hypertrophy, therefore, was found in 26 and dilatation in 14 of the cases. Of these 70 cases, 18 came from the surgical wards and in only one of these was dilatation recorded and in this case was associated with hypertrophy of the walls of the auricle. There is therefore considerable post-mortem evidence that hypertrophy of the walls of the left auricle occurs in this valvular lesion.

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[1] Sansom: Allbutt's System of Medicine, vol. v., p. 1023.

[2] *Idem*, p. 683.

[3] Broadbent: International Journal of the Medical Sciences, [illegible], p 57.

[4] Samways: Brit. Med. Jour., November, 1896, p. 1567.

Again, Dr. T. D. Acland[5] says: "In cases of mitral obstruction, in which the auricle might be supposed to have extra active work thrown upon it, hypertrophy is more marked than in simp [illegible] cings of patients suffe [illegible] that the left auricle is [illegible] records show an abnormal magnitude of the elevation caused by the auricular systole. The auricular systole is sometimes so exaggerated as to be sufficiently powerful to thrust the heart forwards against the chest wall, and so to make the cardiac impulse commence before the ventricular systole. When compensation begins to fail the elevation caused by the auricular systole becomes greatly diminished and may even disappear. The evidence therefore is in favour of the view that the walls of the left auricle are usually hypertrophied and that its cavity is not dilated or only to a slight extent. The question which naturally presents itself is, Why does hypertrophy of the walls of the left auricle, with very little dilatation of its chamber, occur in mitral stenosis when in mitral regurgitation there are generally a considerable amount of dilatation and only slight hypertrophy?

In mitral stenosis as the left auriculo-ventricular orifice becomes diminished in size the increased strain is chiefly felt by the left auricle during its own systole, since during its diastole the blood is being drawn through the mitral opening by the suction action of the dilating left ventricle. The time occupied by the auricular systole corresponds to about one-tenth of the whole of the cardiac cycle, although when there is mitral obstruction this period is undoubtedly lengthened. It is only during this short period in each cardiac cycle that there is thrown upon the walls of the left auricle an increased strain, which is caused by the greater force required to drive the blood through the narrowed mitral orifice. In consequence the muscular tissue has time to adapt itself by undergoing hypertrophy, since the extra amount of work it is called upon to perform is only gradually increased and only exists for a short period during each cardiac cycle. In mitral incompetency, on the other hand, some blood is regurgitated during nearly the whole time occupied by the ventricular systole, so that the strain on the left auricle is more suddenly increased and continues over a longer period of the cardiac cycle than is the case in the former condition. This might cause some hypertrophy of the left auricular walls, but it is obvious that the conditions are not nearly so favourable for this protective change to take place as they are in mitral stenosis. The chamber of the left auricle will tend to become dilated as it has to contain the regurgitated blood from the left ventricle as well as that entering from the pulmonary veins. It is necessary in mitral regurgitation for the left auricular chamber to be larger than in health, in order that it may hold the increased amount of blood which is poured into it from these two sources during the ventricular systole. In mitral stenosis he increased strain is thrown on the left auricle during ts systole, whereas in mitral regurgitation it is placed upon t during its diastole, and "it is a generally recognised fact hat a very effective cause in producing dilatation of the avities of the heart is undue distension during diastole, nd that if nutrition is well maintained obstruction during ystole tends rather to cause hypertrophy."[6] The result is hat the walls of the left auricle tend to become hyperrophied in mitral stenosis, whereas in mitral regurgitation he tendency is for the cavity of the auricle to become ilated.

The changes which occur in the right side of the heart ust not be forgotten, since very early in mitral stenosis here is hypertrophy of the right ventricular walls, so that t the end of the ventricular systole the left auricle would probably contain more blood than in health. As a result of this hypertrophy there is some tendency for the left auricle to become distended; but the distension would not be nearly so great as in mitral regurgitation, and the increased strain would quickly be reduced by the diastole of the ventricles. With a hypertrophied condition of the walls of the left auricle there will not be so much strain thrown on the right side of the heart as there would be if the cavity of the left auricle was distended and the power of its contractions was diminished. The smaller the chamber of the left auricle the greater power has its contracting walls to drive the blood onwards. This has been pointed out by Mr. Robert H. Woods[7] who has shown that "the blood pressure inside a contracting cardiac chamber varies inversely as the radius of the chamber," and that "if the increasing thickness of the contracting walls be also taken into consideration the blood pressure must finally increase inversely as the cube of the radius."

From these considerations it would appear that the left auricle is placed in much better circumstances to deal with the impeded flow of blood through the heart in mitral stenosis than it is in mitral regurgitation. The result of this compensatory hypertrophy of the left auricle in mitral stenosis is that the other chambers of the heart do not become so early dilated as in mitral regurgitation, and the cardiac dropsy, which so easily appears in the latter valvular lesion, does not present itself until late in the disease. We may conclude, therefore, that hypertrophy of the walls of the left auricle is the chief factor in maintaining cardiac compensation in mitral stenosis, and that it is only after the auricle has begun to fail, which does not occur until late in the course of the disease, that the right ventricle and auricle dilate and dropsy supervenes.

I am, Sirs, yours faithfully,
JAMES E. H. SAWYER, M.A., M.D. Oxon.,
late house physician at St. Thomas's Hospital and at the
Bethlem Royal Hospital, London.

MALIGNANT GROWTHS AND NORMAL REPRODUCTIVE TISSUES.

To the Editors of THE LANCET.

SIRS,—We were greatly interested to learn from the letter appearing in THE LANCET of Jan. 2nd under the above title that Dr. G. T. Beatson had as long ago as 1896 put forward the view "that the active processes seen in a cancerous tumour are best explained by regarding the epithelium of the part as having taken on the properties and powers of germinal epithelium." Though with our present knowledge the term "germinal epithelium" can hardly be applied to cells which are destined immediately to undergo, or have undergone, a reduction division, to which we have applied the terms "gametogenic" and "gametoid," the former to those occurring normally, the latter to those whose presence is abnormal, it would have been difficult at the time he wrote for Dr. Beatson to have come nearer to the facts since demonstrated by us. There are, however, a few points with regard to our paper to the Royal Society which this letter leads us to believe would be elucidated by a brief explanation.

While there is a vague similarity in many respects between the general idea suggested by Dr. Beatson and those conclusions which we have drawn from our definite cytological investigations of malignant growths, we must state that we differ from him in many important details which space will not at present allow us to discuss. We would, however, draw attention to the following points. The chief conclusion drawn by Dr. Beatson from his clinical observations was, as far as we are able to make out from a careful perusal of his original paper, that the ovaries and testicles exercise "a control in the human body over local proliferations of epithelium" and that "the removal of the tubes and ovaries has an effect upon the local proliferation of epithelium which occurs in carcinoma of the mamma." To these conclusions he was led by his clinical observations of several cases, particularly of one of carcinoma of the breast where he removed the ovaries and tubes of the patient. In this case the carcinoma was apparently cured, Dr. Beatson attributing the cure to the removal of the ovaries. Our observations upon malignant growths have, on the other hand, been entirely microscopical and we have simply described what we have seen and are able to demonstrate. We express no opinion, one way or the other, as to the possible influence of the ovary or testicle upon the production or growth of malignant tumours.

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[5] Acland: THE LANCET, July 20th, 1889, p. 103.
[6] Acland: loc. cit.
[7] Woods: Journal of Anatomy and Physiology, vol. xxvi. Quoted from Dr. D. W. Samways, Brit. Med. Jour., January, 1897, p. 808.

We would lay particular stress upon the fact that we have shown that cells which have been for a long time carrying out specialised somatic functions may, under certain conditions, become gametogenic and go through a reduction division. In certain plants this occurs normally. In mammalia certain cells in the genital organs are set apart at some period during the life of the organism to produce sexual germ cells, and in these at the proper time reduction takes place normally. When, however, reduction division takes place in other somatic cells abnormally the growth possesses not only a parasitic character but is also malignant. This reduction division may apparently take place anywhere and in any kind of tissue and the presence of such cells enables us to differentiate between benign and malignant growths. With regard to Dr. Beatson not being sure about our statement as to the exact mode of development of normal gametogenic cells, we would merely point out that the features of this particular metamorphosis are matters of common knowledge among cytologists.—We are, Sirs, yours faithfully,

J. B. FARMER.
J. E S. MOORE.
CHARLES WALKER.

Royal College of Science, London, Jan. 11th, 1904.

SPIRAL FORMATIONS IN RELATION TO WALKING, SWIMMING, AND FLYING.

To the Editors of THE LANCET.

SIRS,—Never have I had the privilege of reading so interesting a study of spiral formations as that contributed by Professor J Bell Pettigrew to THE LANCET of Jan. 2nd. I speak with natural diffidence in the matter, but with the exception of some papers by Dr. George Wherry on similar subjects I can recall no other publications that deal with spirals in the same way, and the honour done me by the mention of my name in your columns leads me to congratulate myself not only on having directed Professor Pettigrew's attention to the publication of a combined form of research which others have lamentably neglected but also on the value to the second edition of "Spirals in Nature and Art" of many new materials thus placed within my reach. How much more I should have appreciated so illuminating an article a little earlier I need scarcely say, and if Professor Pettigrew had only had an opportunity of reading my preliminary notes on this subject in their original form I should have been only too glad to embody in my first edition those corrections which would have so much improved it, especially in the case of the two diagrams, the correct authorship of which I acknowledged last July both in *Nature* and the *Athenæum*.

It is unexpected news both to my readers and myself that "the great interest taken in artificial flight of late years ...... has been heightened by the publication (1903) of a small work" which has special reference to the architecture of an open staircase in Touraine. In that little book, I must repeat, the subject of flight was only a side issue and the name of Professor Pettigrew is mentioned with all the respect it deserves in connexion with the beautiful spiral fibres of the ventricle of the heart. But his article in THE LANCET of Jan. 2nd compels me to inform you that I knew nothing more about him or his researches into flight until last June. This may seem stranger to him than it does to those who have been willing to accept me merely as a modest inquirer into various subjects of general interest which scientific specialists seem far too much inclined to keep to themselves, or to conceal in literature apparently written for a select audience and certainly published on a scale by no means commensurate with its importance.

Professor Pettigrew says, that "in none of Leonardo's manuscripts and in none of his figures is the slightest hint given of his having any knowledge of the spiral movements made by the wings in flight." That anyone of the scientific accuracy of Professor Pettigrew should thus be in a position involving complete knowledge of all Leonardo wrote or drew is a revelation which every lover of art and science will warmly welcome. I have only about 500 photographs, in my own possession, of Leonardo's original MSS. on many various subjects; and I have only seen in many cities of Europe those MSS. hitherto known to be in existence. I recognise with pleasure that Professor Pettigrew must have larger sources on which to base his general statement. Of course, he does not solely depend on the one MS. he quotes. Yet even as to this MS. alone I venture to adhere to my original opinion, basing it on general considerations of the translation of the Italian dialect and of the value of evidence with which I am not wholly unacquainted. Leonardo's ideas of flight may not be those of Professor Pettigrew, yet I must respectfully, but finally, refuse to accept the Professor's conclusions as to Leonardo's omissions.

Professor Pettigrew need be under no apprehension that either his own scientific reputation or that of England in the nineteenth century will be lessened by my remarks on Leonardo's manuscripts. He does me too much honour. It seems scarcely likely, to take a parallel instance, that anyone will think less of Lyell if I point out that Leonardo calculated a period of 200,000 years for the accumulations at the mouth of the Po and explained the meaning of the strata in the Apennines revealed by the cutting of the river Lamona. English scholars have naturally made a great advance on the investigations of Leonardo in botany, hydraulics, anatomy, morphology, astronomy, optics, and flight. But though the discovery of Leonardo's manuscripts has proved that several of their results were anticipated by the Italian I cannot believe that the reputation of our countrymen has been thereby diminished, even if patriotism were a serious consideration in scientific or artistic questions. It is the recognition implied, not only of the bond between various special forms of science, but also of the general interest involved in each department of it, which leads me to welcome so warmly the publication in your columns of Professor Pettigrew's valuable collection of examples of spiral formations, the forerunner, I hope, of many others from the same able pen. I should not be alone, for instance, in welcoming some description of the advance in our knowledge of the conchoid curve since Albrecht Dürer, or of the new conceptions of phyllotaxis introduced by Mr. A. H. Church to supersede the theory of Bonnet and the mathematics of Calandrini. I venture on these suggestions because it seems to me that by such publications as that of Jan. 2nd you advance once more the ideal which has so often animated your pages and which I could wish were more widely appreciated elsewhere—I mean the ideal of bringing the results of modern scientific research before the notice of the public in a form which should prove not only advantageous to the general wellbeing but also conducive to the larger amenities of life.

I am, Sirs, yours faithfully,

Jan. 7th, 1904. THEODORE A. COOK.

THE BORDERLANDS OF INFECTIOUS DISEASES AND THEIR MANAGEMENT.

To the Editors of THE LANCET.

SIRS,—This controversy has tended to bifurcate and there are now two distinct points at issue—the soundness of my original contention and the value of isolation hospitals. As to the former, I find myself engaged with Dr. Clement Dukes and Dr. E. W. Goodall, both of whom I must thank for the help in elucidating what may have been obscure in my former communications. May I reply to Dr. Dukes under the categorical heads that I suggested and that he has kindly followed?

1. Here we have an assertion and a metaphor. I will not do Dr. Dukes the injustice of taking his parable of the wheat and the soil as an argument from analogy; that he surely cannot have intended. But I freely adopt metaphor. An agriculturist goes forth to sow. He wheat (bacteria) and sprinkles it on soil (potential pati The wheat germinates and produces, not wheat after kind (bacteria), but something else (diseases)! Is breeding true? I have accepted the metaphor. I that the wheat shall produce wheat, bacteria bacteria. Where does the disease come in? I follow metaphor. The wheat in its growth produces certain in the soil; the bacteria in their growth produce

changes in the patient. These changes we call disease. Still following the metaphor we can see that the changes produced in the soil by the growth of wheat (scarlet fever) may be remarkably like (very little different from) those produced by barley (diphtheria). In a field in which there are much wheat and a little barley the changes in the soil may be still more puzzling. In a field in which both are growing in about the same proportion it may be difficult to say which is the predominating factor in producing the changes noted. A blast of wind carries some ears of wheat, or barley, or both into the next field (infection). The wheat alone may germinate, or the barley, or both, or neither, or much of one and little of the other, or little of the one and much of the other. Thus many sorts of soil changes may be produced in the next field more or less resembling those in the original field. I need not dwell on the comparative fertility of various soils (patients); the importance of this element as a further complicating factor in the problem is obvious. It seems to me that Dr. Dukes has fallen into the error of confusing phenomena with noumena—the manifestations of disease with the essences underlying those manifestations.

2. These I think are described, inadequately doubtless but at a little length, in my paper. Dr. Goodall has very handsomely given the *cachet* of his authority to the accuracy of my descriptions of them; perhaps in view of what has come to light since he may be inclined to reconsider his previous comment on the sad and remarkable nature of the impulse that moved me to set forth such banalities at such length.

3. Now that Dr. Dukes has intimated that bacteria are "poisons" and that "generate" signifies "are the cause of," I do not hesitate to commit myself to the opinion that in the popular sense of the word "cause" particular bacteria are the cause of cholera, plague, tuberculosis, and diphtheria; that is to say, that the presence of a particular bacterium is a necessary antecedent condition. In the philosophical sense—the sense in which Mill used the word, "the sum total of conditions"—of course bacteria are not the cause.

4. Under this head the second question—the value of isolation (aggregation) hospitals—is raised It is my turn to feel a little resentment here, resentment that Dr. Goodall should stigmatise my statement (quoted by Dr. Dukes) as "somewhat loose." In the Metropolitan Asylums Board's hospitals for the last five years for which figures are available—1898–1902—2552 scarlet fever patients suffered from diphtheria during convalescence. The number of diphtheria patients that suffered from scarlet fever during convalescence is not stated, but speaking from my own experience I should say that the proportional incidence was about the same. One would, therefore, probably be not far from the truth in saying that 4000 scarlet fever and diphtheria patients suffered from diphtheria and scarlet fever respectively during convalescence in the quinquennium under notice. I leave out of account attacks of measles, whooping-cough, chicken-pox, and rubella, and ask Was I not justified in referring to the "constant outbreaks"? I should like it to be noted that far from imputing blame I was merely referring to some of the disabilities under which medical officers laboured. Dr. C. Killick Millard has already pointed out the inconsistency displayed by Dr. Dukes in condemning isolation hospitals and resisting an inquiry into them in the same breath. The purpose of such an inquiry would be to investigate the functions of isolation hospitals; how far they succeed in fulfilling those functions; in what do they fail (if they do fail); how far the causes of failure are capable of removal; and, finally, if the net good done by the system does not justify their existence, how far their resources can be diverted into more useful channels. Surely, a most commendable object.

Now, Sirs, on this question of inquiry may I point out that within the last three months the demand for such an inquiry, or a cognate proposal has received support from the following independent quarters:—The Southern Branch of the Society of Medical Officers of Health, *resolution*, Oct. 23rd, 1903. and (I have just been informed unofficially) the North-Western Branch of the same society; the *Medical Press and Circular*, leading article, Dec. 30th, 1903; public expressions of opinion by Dr. A. Mearns Fraser (medical officer of health of Portsmouth), I
officer of health of Leicester), Dr
officer of health of Stockport), I
of health of Windsor), Mr. E D.

W. Moore (Stourport), and Mr. H. Beale Collins (Kingston-on-Thames). Moreover, besides these definite statements of opinions, dissatisfaction with some features of isolation hospital administration as at present conducted has been exhibited by the *British Medical Journal*, leading article, Oct. 3rd, 1903; the *Sanitary Record*, sub-leader, Jan. 7th, 1904; *Public Health*, leading article, January, 1904; public expressions of opinion by Dr. Dukes (Rugby), Dr. F. Graham Crookshank (medical officer of health, Barnes), and others.

The spirit of unrest that manifests itself in these utterances in the short space of three months must surely spread, not only within the profession but also to the public whom we serve and whom we seek to guard. By an independent critical inquiry within the profession we may forestall and even disarm the indignation that seems certain to follow the carrying of these polemics into the public arena. Shall we have such an inquiry or shall we await the greater damnation? I am, Sirs, yours faithfully,

Eastbourne, Jan. 10th, 1904. HUBERT E. J. BISS.

OTOSCLEROSIS.

To the Editors of THE LANCET.

SIRS,—Dr. D. Chalmers Watson's paper in THE LANCET of Jan. 9th, p. 84, proves that aurists have some difficulty in accounting for some of the diseases of the middle ear. He concludes with these words: "While I have just stated that in my opinion we have to deal in all cases of non-suppurative middle-ear disease with a local reaction to bacterial invasion *viâ* the Eustachian tube *we must remember the possibility of the coexistence of an infection by the blood stream. This is probably a factor in many cases, more particularly in those in which there are clinical manifestations of disease usually designated as rheumatism or gout.*" The words which I have put in italics are most suggestive and it is highly probable that the state of the blood has more to do with ear diseases than aurists have yet recognised or are inclined to admit. Even Ménière's disease, which is supposed to depend upon disease of the internal ear, may be found to depend upon rheumatism or gout. Dr. W. Russell contends that arteriosclerosis and the protean troubles that follow in its train depend upon auto-intoxication, which is now receiving much attention at the hands of physiologists. I met with a case of Ménière's disease which in this connexion is worthy of notice. The patient was a man 45 years of age, whose case had been diagnosed by one of the leading aurists in London as Ménière's disease. He was advised by the aurist to cycle to reduce his weight. He continued, however, to have an attack of vertigo and sickness, &c., every week until he gave up eating butcher's meat, when he went eight weeks without an attack and was from home at the time it occurred. The next attack did not occur for eight months, was comparatively mild, and the last he had until he began to eat butcher's meat again. Taught by such experience he determined to avoid butcher's meat entirely and now he has no such attacks, but the noise in the ear remains as before. It is worthy of note that his mother had periodic attacks of vertigo and sickness (which she called "delirium tremens") without any ear symptom whatever.

If then, the worst symptoms of Ménière's disease can be relieved or banished by simply omitting butcher's meat from one's dietary, are we not entitled to conclude that diet must have to do with the causation of the disease, that it, in fact, may be a manifestation of auto-intoxication and be one of "the clinical manifestations of disease usually designated as rheumatism or gout" I commend the study of the question to physiologists and aurists as well as to the general practitioner. I am, Sirs, yours faithfully,

JOHN HADDON, M.D. Edin.

Denholm, Hawick, Jan. 12th, 1904.

THE LUNG REFLEX OF ABRAMS.

To the Editors of THE LANCET.

SIRS—You have been so liberal in affording me space in your columns lately that I feel I ought to make the present letter as short as possible I am glad to find Dr. Auld acknowledging that the inspiratory muscles are the chief
taining pulmonary suction and also that their
into account, in addition to passive
and diaphragm, in explaining reflex
Dr. Auld opposes my "oft-repeated

and novel plea that the inspiratory muscles are 'ever busy' and 'moment by moment' keeping up pulmonary tension," on the ground that they do not act during expiration. Surely this is a mere word quibbling. Should I be wrong in saying that the heart is "ever busy" and "moment by moment" keeping up the circulation because each contraction of that doughty organ is followed by a period of relaxation? But as a matter of fact I much doubt the correctness of Dr. Auld's assumption that the inspiratory muscles do not contract during expiration. So far as I can judge from my own organism inspiration is followed not by a sudden but by a gradual relaxation of the inspiratory muscles; during inspiration there appears to be a *crescendo* contraction of these muscles and during expiration a *diminuendo* contraction of them. But whether this is the case or not does not affect the general truth of my contention, for even granting (which I do not) that the inspiratory muscles are relaxed during the whole expiratory phase, their effect in augmenting pulmonary tension above its level at the end of expiration is practically continuous, the mean inspiratory increase in tension being practically equalled by the mean expiratory decrease.

Dr. Auld is of opinion that my "comments on the reflex of contraction are peculiarly unfortunate" but the evidence he adduces in support of this opinion is quite valueless. My contention is that in lungs inclosed within the thorax a momentary contraction of the bronchioles, even to the extent of their entire obliteration, will tend not in the direction of collapse but rather of distension of the vesicles belonging to them. Dr. Auld thinks this view is "peculiarly unfortunate" because it can be shown in the physiological laboratory that lungs whose tubes are made to contract by vagal stimulation diminish in volume. Of course they do when their surfaces are subjected to a positive pressure and not, as when inclosed in the thorax, to a negative one; but even so this diminution in volume does not imply a diminution in the volume of the vesicles: a diminution in the capacity of the tubes would alone suffice to produce it. As Dr. Auld appeals to physiological experiment I would ask him if he has ever seen sufficient pulmonary condensation produced by vagal stimulation to cause a darkening in the fluoroscopic field or a recognisable dulling of the percussion note? Dr. Auld has produced no experimental evidence, nor advanced any sort of *a priori* argument, against the contention he denounces in such *ex cathedrâ* terms. I maintain that a momentary contraction of a bronchiole cannot possibly lead to a diminution in the amount of air contained in the vesicles pertaining to it (by *momentary* I mean lasting a few seconds); and, further, that inasmuch as in the closed thorax the lungs cannot break away from the parietal pleura the vesicles belonging to a momentarily contracting bronchiole will tend to increase in volume by the extent to which that bronchiole diminishes.

I am, Sirs, yours faithfully,

Wimpole-street, W., Jan. 10th, 1904. HARRY CAMPBELL.

*** We must now apply the closure to this correspondence, to which we have allowed a liberal amount of space.—Ed. L.

A CASE OF ASCITES RAPIDLY CURED ON THE ADMINISTRATION OF IODIDE OF POTASSIUM.

To the Editors of THE LANCET.

SIRS,—A case under the above title which is reported in THE LANCET of Jan. 2nd, p. 24, by Dr. J. A. W. Pereira reminds me of an interesting paper read by the late Dr. J. S. Bristowe before the Medical Society of London on Feb. 15th, 1892,[1] entitled "Observations on the Cure or Subsidence of Ascites due to Hepatic Disease." One of the cases on which his paper was based was that of a woman, aged 24 years, belonging to a respectable and wealthy family. The patient had a profuse attack of hæmatemesis followed by ascites and she was tapped no less than 27 times. At one time the edge of the liver was detected below the ribs and in it a small nodule. This led to the diagnosis of malignant disease of the liver. It was, however, ascertained accidentally that a brother of this patient had been under treatment for some congenital syphilitic affection of the eyes. This discovery led to the suspicion that the lump in the liver might be a gumma. Iodide of potassium and solution of the perchloride of mercury were ordered with the result that the patient attained to better health than she had had for years. This case, together with that reported by Dr. Pereira, certainly emphasises the necessity of carefully considering the possibility of a gumma in obscure cases of ascites and giving the patient full doses of iodide of potassium in suspicious cases.

I am, Sirs, yours faithfully,

Jan. 5th, 1904. F. DE HAVILLAND HALL.

THE POINT OF PRIMARY GONORRHŒAL INFECTION IN THE FEMALE.

To the Editors of THE LANCET.

SIRS,—On previous occasions you have courteously permitted me to encroach on your valuable space and I now ask again the same privilege in order to make a few observations on a subject which has interested me very much during the 25 years I have had the honour of belonging to the profession. I write in the interest of the general practitioner who, like myself, may be beyond the pale of laboratories, &c., and not in any sense pretentiously. I say this not to disarm criticism but rather to court it from those who are in a position to teach us.

There is a great number of women, especially primiparæ, who suffer from fever after childbirth and in whose cases it is simply impossible to lay the blame on the accoucheur or any other person who has participated in the event. These cases in the past oftentimes were recorded as "idiopathic," or the physician, after going over every step in the conduct of the labour and finding nothing wrong so far as he could judge, decided that there must have been a leak somewhere and mutely blamed himself for some act of omission or commission which he could not recall. Nowadays the word "idiopathic" has almost, if not quite, disappeared from our vocabulary, but the cases still remain to puzzle the unfortunate medical attendant and they are those to which I desire, with your permission, to draw attention.

For a number of years I have been in charge of the venereal hospital of this city where all the licensed prostitutes are examined twice a week and where the "free lances" captured by the police are taken, often in squads every day, for examination. Thus several thousand examinations are made annually. When any one of these prostitutes, licensed or clandestine, is found suffering from any form of venereal disease she is detained for treatment until recovery. The first thing to be noted in such a service was the fact that almost every prostitute who had been such for any time suffered from cervical endometritis. This was no new discovery, but as time went on I noticed that women with urethritis or vaginitis almost invariably had endometritis (cervical) also. The combination might not even then have aroused any particular line of thought, but have been accepted as quite *en règle*, had I not observed on several occasions a woman "slated" for cervical endometritis a few days later developing a urethritis without in the interval having had any opportunity for sexual contact. On making a microscopic examination of the cervical discharge in a few of these cases of endometritis only I was able not infrequently to recognise the diplococcus of Neisser and even to make cultures. Many times the microbe could not be demonstrated but abler men than I have been baffled, especially if the case be chronic. After eliminating all doubtful cases of former infection there have remained 154 complete observations on indubitable first "doses." As a natural consequence I was led to conclude that the teaching of both the English and French schools in which the vagina or the urethra is said to be the starting point of infection was *erroneous* and that the primary *point of attack* is the cervix, the other parts being contaminated secondarily.[1] In other words the contagion descends and does not ascend. This is the rule and the exceptions are rare and accidental. Has it been demonstrated that the gonococcus has the power to climb or of innate locomotion? I herewith emphatically express a doubt of the direct surface extension of gonorrhœa from the vulva upwards to the womb, and my object is not to raise a quibble but has a very serious bearing on the possibility of preventing the terrible after-results in those women who have unfortunately contracted the disease. At present I believe our energies are all misdirected We direct our efforts to the treatment of the urethra or vagina hoping to avert the infection of the uterus when in reality the evil has already been consummated.

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[1] THE LANCET, Feb. 20th, 1892, p. 422

[1] In the German Congress of Gynæcology held in Vienna in 19 Wertheim had the audacity to give it as his opinion as against al comers that "next to the urethra the most frequent site of gonorrh infection is the uterus. The infection of the uterus frequently place directly and in many cases it alone is infected." Since then I not know that he has advanced. I go a long step forward, putti womb in the forerank and the other organs well behind. I across the record of this special congress after having completed above communication. Had I known in time that anyone had so near my own opinion (so near and yet so far) I should not written this letter.

There is no need for me to speak of the teachings of Schroeder, Pozzi, Doléris, Bumm, Steinschneider, Goenner, Döderlein, Strauss, Kaltenbach, Fehling, and a host of others who recognise the gonococcus as one of the causes of puerperal septicæmia, in contradiction to the opinion of Czernewiski[2] that the streptococcus pyogenes causes all the septic lesions of parturition. Many of these have been hovering over the idea above indicated but have never asserted it as a fact Perhaps they have had some reason for not interpreting the observations they made as I have done, and I may justly be censured as an incompetent observer. I am cognisant, too, of the work of recent years on the gonorrhœal infection of certain organs through continuity of mucous membranes but at least these membranes are differently "shod" than the vagina, their secretions are not inimical to the life and propagation of the gonococcus as is that of the vagina, nor are they inhabited continually by a horde of other germs which are ready to prey on a succulent animalcule. The vagina, in its upper fourth especially, and more so in pregnant women, is a perfect nest for pathogenic microbes, for the most part attenuated (Winter) and deprived of their virulence, except when aroused by some special cause such as the invasion of the gonococcus Then they arise in their might to expel the invader. In the male urethra, for example, things are very different. It is lined throughout with columnar epithelium except at the meatus where it is laminated (Gray). Its mucous membrane is full of all kinds of crypts and ducts lined with the same kind of epithelium, forming underground railways, so to speak, which can serve for the conveyance of the microbe to the posterior urethra, prostate, &c., and which serve, too, as shelters from its enemies, chemical and otherwise[3] Cases have likewise been reported of the direct passage of the germ up [illegible] ucing uretero-pyelonephritis. [illegible] this requires first a gonorrh[illegible] nsider that the microbe simply crosses the gap by means of the urine, thence into the ureters, the mucous membrane of which is exactly like that of the urethra, and so up into the kidneys. This mode of infection I do not accept as proven, not even by Arpad Gerster's celebrated case[4] On the other hand, the ascent through the lymphatics in such cases is easily understood owing to the peculiar course of the ureteral lymphatics, their mode of penetrating the renal cortex, and their distribution in the spaces between the uriniferous tubules.[5] Albarran[6] shows that this lymphatic communication could not be interrupted even by ligating the ureter. The other mode of transmission is the circulatory or metastatic, as we have it in almost every organ in the body—in the heart, the brain, the spinal cord, the joints, the muscles, and the *tendons*; even in the blood stream itself and in the milk of nursing women have living gonococci been demonstrated.[7] By these two paths it is an established fact that an *intercurrent gonorrhœal nephritis* may be produced, but it appears still more than doubtful that the gonococcus can reach the kidney by simple locomotion. Much less then ought we to expect to see the uterus infected from the vagina (*for reasons above stated*) by [illegible] nor by the [illegible] e lymphatics, belong to s[illegible] blood-vessels [illegible] mb.[8] In the virgin bride it is true that the infection may enter the system through the breach of continuity made in rupturing the hymen, but as the hymen is a part of the vagina, and as a true, special, and independent membrane does not exist (Budin) what is said of the vagina is applicable to the hymen.

In the act of coition the uterus does not remain passive. It has its orgasm, too, being at the physiological moment violently contracted—that is, when in its normal position. An anteverted uterus, for example, is too degenerated in its musculature to be able to get up a respectable contraction, and hence such uteri are as a rule sterile. When this physiological contraction passes off and there supervenes the condition of relaxation a strong suction is made which draws the semen just deposited in the cul-de-sac of Douglas into the cervix, where the columnar ciliated epithelium wafts the zoosperm onwards and inwards. Suppose now that the woman's companion has gonorrhœa, the pus of which must naturally be ejaculated from his penis together with the semen, what is lacking for the development of a cervical clap? Both are sucked in together and the alkaline mucus of the cervical canal favours the gonococcus while destructive to all other microbes introduced from without save the bacillus of tuberculosis. Once introduced into the sacred precincts only time is necessary for the production of those conditions first made known by Noeggerath who by his work made us revise the pathology of the female pelvis.

Not the prostitute alone is victimised in this manner. The bridal bed is in many cases as true an altar of sacrifice as is any funeral pyre provided by the Hindoo. How often has it been necessary for men to postpone their wedding day on one pretext or another in order to get rid of an inconvenient recent clap? How often have the said claps been "cured" by some lazy or ignorant member of our profession (for there are such), or by some druggist, or by a prescription loaned for the occasion by some tried friend. The "running" has stopped apparently and no one has given the prospective groom the two glass test or the beer test and so, guiltily innocent, he gets married. We all know of such cases, but how many are there that we do not know of. The profession is not entirely blameless in this matter. Our teaching should be as clear on the d[illegible] to an innocent woman as it is [illegible] medical men, if any, fail to w[illegible] the dangers that are ahead ar[illegible] cure, but we fear that many d[illegible] clients, when in truth the danger is possibly more serious in these than in those. As far as the wife is concerned, perhaps, a syphilis were a kinder fate and as for the offspring pathology has not yet said nearly its last word. In the case of such a pair it follows, as the night the day, that the poor woman contracts the disease. Her mucous membranes are still soft and tender and the disease has a splendid field for cultivation. If she had had several children she might, perhaps, have escaped paying the full penalty, but being a nullipara she is a sure subject for the hideous catastrophes which follow fast, that is, if she should conceive in the early days of her marriage On the other hand, if she does not become pregnant very soon she is likely to be sterile, for she is then in a similar case to the prostitute whose chances of conception are relatively very slim. The Spaniards have an adage to explain this: "El camino bien pisado no da grama" ("The well-trodden road does not produce grass"), but I believe the sterility in such cases to be more often due to the cervical inflammation which prevents the impregnation

It is not the object of this letter, however, already too [illegible] in women generally but only [illegible] children. Suffice it to say that [illegible] allest of the woes which befall the infected barren wife The diseased pregnant woman may have little to indicate her proximate peril until it is upon her. Any troubles she may have during her pregnancy are set down in good faith to her condition by herself, by

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[2] Zur Frage von den Puerperalen Erkrankungen, Archiv für Gynäkologie, Band xxxiii., Heft I.

[3] See a paper by Bransford Lewis on the Rôle of the Posterior Urethra in Chronic G[illegible]

[6] Annales des Maladies des Organes Génito-urinaires, p. 503, 1899.

[7] I am indebted to a paper by Dr. Le[illegible] ology of [illegible] subject, [illegible] "direct [illegible] to ap-

[illegible] mphatics of the Kidneys (Gray). The lymher wise good neighbours, and even by her medical adviser. And so she goes patiently on, like the doomed ox, to her fate. In the 24 hours more or less of labour, while finally expelling the child, the uterus in its upheavals has had all its sinuses opened to receive the poison which may have lain dormant during the foregoing months.[9] And now the woman has an attack of "idiopathic puerperal fever." That is all. It may not be the gonococcus itself which produces all the turmoil, indeed, very likely it is not, but the toxins, which are quite capable of finding their way either by the tubes or preferably by the uterine lymphatics to the peritoneum, where they have things all their own way. I have notes of 30 cases of primiparæ, with history of infection, who suffered from this form of puerperal fever. These were all personal cases and the writer can vouch for the aseptic management of the labours. In the after light thrown by more recent studies I can recollect many others not noted as such who undoubtedly belonged to the same category. The patients in these cases often do not die, they only become lifelong invalids. In their after-life these martyrs generally suffer at each menstrual period. There is always some trouble; even a fresh urethritis has been seen to occur month after month at that epoch. These patients rarely become pregnant a second time, but if they do they are liable to abort[10] and a hard time they have, running the same gamut as in their confinement at full time.

In my notes in prostitute cases there are several of *puellæ* with chronic endometritis who followed their vocation without giving disease to their "friends" during the most part of the month, but who invariably infected those men who had the fortune to enjoy their embraces on the nights immediately succeeding menstruation. These are the cases, too, where men are infected by women while menstruating. It is not the menstrual fluid (I am not forgetful of M. Gautier's researches on that liquid) which gives the urethritis, but the stored-up gonorrhœal pus or its equivalent which at that time comes down into the vagina together with the blood. Cases of urethritis contracted from women with leucorrhœa will likewise stand investigation many times. That such cases are of a benign type as a rule simply indicates that the virus has been attenuated *more homœopatico*. It is taught that when an organism has lived a saprophytic existence for some time its virulence is greatly diminished. Still, some of the most virulent cases I have ever had in my practice were said to have been derived from "whites." I am, Sirs, yours faithfully,

Guatemala City, Central America. J. H. ARTON, M.D.

THE ADMINISTRATION OF CHLOROFORM TO MAN AND TO THE HIGHER ANIMALS.

To the Editors of THE LANCET.

SIRS,—Will you permit me to reply briefly to Dr. J. Blumfeld's criticisms, in THE LANCET of Jan. 9th, p. 122, of some remarks of mine in your issue of Dec. 19th, 1903, p. 1757? I must have very imperfectly expressed my meaning since Dr. Blumfeld attributes to me the view that the patient's safety does not depend on the care and skill of the anæsthetist but upon the particular instrument he uses. This amounts to an almost Gilbertian suggestion that the anæsthetist's responsibility would be limited to turning on the supply tap of his apparatus at the commencement of the operation and turning off the tap at its conclusion, while in the interval he allows his attention to wander. Dr. Blumfeld very rightly, as I venture to think, controverts this view with an admirably reasoned argument in which the suggestion is carried to its logical conclusion—absurdity. Unfortunately, however, I do not hold such a view and did not, as I think, advance it. The middle paragraph of my letter contained evidence of my recognition of the existence and importance of "that uncontrollable factor—the character of the respiration."

My contention was, and is, that the anæsthetist is in a much more scientific position when he supplies to the patient a vaporous mixture the exact quantitative composition of which he not only knows but can vary with precision as the necessity of the case requires and when he can completely control the quantity of such mixture supplied than when he is administering a mixture the quantitative composition of which he can only guess at and can only vary its composition by the same inaccurate means. It seems to me that in either case every whit as much care and skill is required during administration. Since of those two elements of danger in the production of anæsthesia, the character of the respiration and the strength of the vaporous mixture, the former cannot be controlled, while the latter apparently can, then the extent to which this control can be exerted is a measure of the extent to which the danger from this element can be minimised. Such a view does not imply that all danger can be removed from the operation of administering an anæsthetic.

Dr. Blumfeld's remarks on the limitations of the various forms of apparatus mentioned are valuable, particularly so as they are probably the result of his experience. An apparatus which does not allow sufficient variation of dosage would indeed be inefficient. With his concluding remarks on the necessity of experience and teaching in the use of anæsthetics for all who may have to administer them I am in entire agreement. I am, Sirs, yours faithfully,

Bromley, Kent, Jan. 9th, 1904. W. J. LINDSAY.

GLANDULAR FEVER.

o *the Editors of* THE LANCET.

SIRS,—In connexion with Professor J. W. Byers's article on Glandular Fever in THE LANCET of Jan. 9th, p. 84, it may be of interest to give a short note on a somewhat similar epidemic which occurred here in September last. Seven cases came under my notice and common symptoms in all were as follows: (1) rise of temperature; (2) slight sore-throat; (3) a unilateral swelling of the glands in the neck situated in front of the sterno-mastoid muscle and just below the angle of the jaw; and (4) a discharge of pus and mucus from the nose. Five of the cases had a purulent discharge from the ear on the same side which commenced at the same time as the swelling of the glands; these were the first five cases that occurred, the last two not having any discharge from the ear. The first two cases were the most severe, an intense cellulitis forming round the swollen glands. This was incised but practically no pus escaped. A swab was taken from the throat of the first case and sent to be examined for diphtheria but proved negative. Films were made of the pus from the ears and wounds and on being examined microscopically I found that the only bacterium present was the pneumococcus. I got Dr. F. W. Eurich, the city bacteriologist, to grow cultures from the pus and he confirmed my result as to the condition being a pure pneumococcal infection and remarked that he was struck with the fact that the swab previously sent to him had also given an almost pure culture of the pneumococcus. As several other cases of pneumococcal infection, such as abscesses in the vicinity of the knee-joint, a case of mastoiditis, &c., have since come under my notice here, it would be of interest to know if the abnormal atmospheric conditions of the last few months have had any effect in causing this coccus to take a special action like the above.

I am, Sirs, yours faithfully,

J. KENNEDY MATHESON,
House Surgeon, Children's Hospital, Bradford.

Bradford, Jan. 11th, 1904.

RADIUM IN THE BATH WATERS.

To the Editors of THE LANCET.

SIRS,—So much public attention has lately been drawn the presence of radium in our thermal waters that I sl like with your kind permission to say a few words as to bearing that this substance may have upon the h, therapeutics of Bath. Into the general facts as to the in which the discovery came about it is not necessary to enter, they have been sufficiently described in the lay press. There is one point, however, which calls for attention. The presence of radium was demonstrated in the sediment which deposits in the tanks and baths, and not as is imagined by some in the sands which are washed up with the water as it rises to the surface. Whether it is in these as well is not yet known, the interesting fact remains that radium is in the waters themselves. The sediment which was examined is the same that may be seen collecting in the corners of an empty bath, especially at the Mineral Water Hospital, and it also gives the drinking glasses their characteristic rusty stain. It follows then that radium in homœopathic doses is taken into the system when the water, which is pumped straight from the spring to the glass, is drunk. It is hardly necessary to point out that the presence of radium in the water does not alter and does not extend the list of those forms of illness which are benefited here. The medical profession will fully recognise this fact and it is to be trusted that the laity will not be encouraged to entertain hopes on this subject which are doomed to disappointment.

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[9] Menge and Kronig say: "Gonorrhœal puerperal fever is to be regarded as due to an infectious process, already existing in the body, not as an example of autogenesis."

[10] The tendency to abort observed in the gonorrhœal woman comes from a "placentitis decidualis" (Vial). It is worthy of note that it is suspected, if not quite puerperal convulsions are the result of a nepl ine gonorrhœal infection, conveyed probably l be remembered that the terminal branches vein empty into the left renal vein. To connect our former empirical ideas of the pathological condition underlying these cases (pressure on the renal veins) we have only to go a step further and, given a stasis from pressure, it is easy to understand how the gonococci from the womb reaching this point and being detained and finding a suitable culture medium (human blood being the best) should spread and in colonies invade the kidneys. This may be considered fanciful but I leave it so.

The question is, however, of interest as to whether or not in radium we have solved the hitherto unknown quantity which determines the therapeutic action of our waters. There are some members of the medical profession who do not believe that there is any special therapeutic action in waters which, like those of Bath, contain very little mineral matter and who think that, except perhaps for the influence on the mind, any water would do as well. Such, indeed, was my own opinion when I first went to the Mineral Water Hospital. In the past 14 years, however, I have seen many cases in which after fair trial elsewhere benefit has at last resulted here. If we have not known, and do not know, to what the benefit is due, still using the waters empirically, we have only been doing with them as we do with nearly all the medicines we prescribe, and experience has justified our action. So little is known of radium, and nothing of its action when taken internally, that we are at least justified in thinking that its presence may explain what we have so far been unable to understand.

In the current number of THE LANCET the question is asked as to whether radium is the cause of the heat in our thermal waters. I think with the direct evidence of volcanic action before us as supplied by the presence of lava in the sands it is not necessary to seek further for an explanation of the heat. I am, Sirs, yours faithfully,

Jan. 11th, 1904. PRESTON KING.

*** Dr. Preston King must have misread the annotation in our issue last week on this subject. The question there asked was "Can the healing properties of the waters have anything to do with radio-activity?" There was no suggestion made of radium offering an explanation of the *heat* of the waters.—ED. L.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Pasteur Institute at Kasauli.—The Bombay Government on Hospital Fees.—The Plague Epidemic.—The French Government and the Destruction of Rats.

AN excellent record is presented of the third year's work of the Pasteur Institute at Kasauli. Inoculation for rabies s becoming better recognised by the natives of India and although the great distance of some parts from Kasauli acts as a deterrent to many the facilities for remaining under reatment have been well arranged for and are highly appreciated. Out of 584 patients treated there were only ix failures and these occurred entirely in the case of persons bitten by animals suspected of rabies but not proved to have had the disease. Among 104 patients bitten by animals proved to be rabid and among 70 patients bitten by animals certified as rabid there was not a single case of failure. The animals by which the bites were inflicted were 500 dogs, 59 jackals, three cats, one mule, and ne fox. Antirabic serum has been prepared with a view to improve the treatment in badly bitten and late cases by diminishing the time required to produce immunity. The animals used for this preparation are young healthy ponies which have been prepared with large doses of "fixed virus." Another stroke of good work has consisted in the preparation of antivenene on a large scale. Over 1000 bottles have already been distributed and Lieutenant-Colonel D. Semple, R.A.M.C., expects to be able to supply the demands from the whole of India. Typhoid fever "vaccine" and anthrax "vaccine" were also produced and diphtheria and tetanus antitoxins are in course of preparation. I am very pleased to hear that the financial position of the institute is sound and that it is becoming an establishment for the advancement of bacteriological science as well as a teaching centre.

A recent resolution of the Bombay Government upon the question of fees at hospitals supported by the State from persons who are not to be classed as poor determines that no change shall be made at present. It is considered that if the people were deprived of European medical advice by charging more than nominal fees they would resort to ignorant quacks and native botanists. Persons are considered as poor who are in receipt of less than 20 rupees (£1 6*s.* 8*d.*) per mensem. Others slightly better off have to pay small sums for food or for special accommodation or attention. A further class of persons is made to include those who have to pay for advice and treatment at the dispensaries. The Government is considerate to practitioners and lays it down that where there is a qualified private practitioner the collector of the district may fix such rates as shall encourage private practice and discourage the use of State-aided dispensaries by persons able to pay.

The plague mortality throughout India fluctuates between 16,000 and 18,000 but for this week 17,295 deaths are recorded. For the corresponding week last year 14,200 died from plague. There is a slight increase in the Bombay Presidency and in the United Provinces. The prospects are very disheartening because the returns show how widely the disease has spread and how severe it is in places. In the Bombay districts the number of deaths as compared with the seizures is appallingly high but this may be because the deaths only are recorded and very few living cases come to notice. In the crowded populations of the Central Provinces and Berar the deaths are about ten times as numerous as in the corresponding period last year. Central India has come on the register this year and reports about 1000 deaths weekly. Bengal is once more showing a recrudescence—the Patna district especially suffering. The seaports of Bombay, Calcutta, Karachi, and Rangoon return but few cases. In Kashmir (Srinagar) the plague is developing very rapidly and severely, the type being pneumonic. All the cases are fatal. The outbreak is said to have spread from a common origin. Out of the 30 medical officers engaged two years ago for inoculation work in the Punjab for an impossible scheme only about five remain. In one or two districts last year some thousands of people were inoculated but in all the others practically nothing was done. At present there is nothing doing but the recrudescence has not yet started in the Punjab.

By a decree of the French Government recently circulated in India the destruction of rats on all vessels arriving from an infected port is compulsory. If done in port some recognised method must be adopted or it will be done by the port authorities if desired. Considering how infested with rats nearly every vessel is and the farcical regulation of some companies for keeping a few cats on board to absolve them from liability against action for the destruction of cargo this decree promises to accomplish benefits other than against plague.

Dec 25th, 1903.

METROPOLITAN HOSPITAL SUNDAY FUND.—At a meeting of the Council of the Metropolitan Hospital Sunday Fund, held at the Mansion House on Jan. 7th under the presidency of the Lord Mayor, the Rev. Prebendary Ridgeway, Mr. R. de Q. Quincey, and the Rev. A. Fleming were appointed members of the general purposes committee to fill vacancies. The committee of distribution is now constituted as follows: the Lord Mayor, Sir Sydney Waterlow, Lord Stamford, Sir Savile Crossley, M.P., Sir William Church, K.C.B., P.R.C.P. Lond., Captain J. Cundy, Mr. Robert Grey, Mr. Herman Hoskier, Mr. F. H. Norman, and Mr. Alfred Willett.

TRIPLE COMPULSORY VACCINATION IN FRANCE.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

No. I.—EFFECT OF THE NEW LAW ON FOREIGNERS.

A GREAT change is being gradually wrought in French institutions. The need of practical legislation in matters of public hygiene has long been keenly felt. The existing laws were of a vague character and left matters too much to the discretion of elected bodies. The latter, on their side, while often recognising the necessity of action, were too much at the mercy of their electors to venture on any drastic measures. But now at last a law has been enacted which constitutes a Public Health Act and this orders and compels the local authorities to put into practice measures which for the most part were but subjects of discussion. As often happens when a legislature is behind the age it is not content with a gradual advance but takes a sudden leap and finds itself first where it used to be among the last. This is the case in that portion of the new French Public Health Act which deals with vaccination. At the International Congresses of Hygiene the French representatives used to speak enviously of Great Britain, Germany, and other countries where vaccination is compulsory. Then they apologetically explained that though vaccination was not *de facto* obligatory every effort was made to render it indispensable in practice. Thus education was obligatory but no child was admitted into a school who had not been vaccinated. Military service was obligatory but no soldier was allowed to join his regiment who had not been vaccinated. In all State employments and in the employment of railway companies, &c., no one was accepted who had not been vaccinated. Nevertheless, the French delegates at the Congress felt sorely the inferiority of the position. All this was mere manœuvring, not to circumvent the law, but to make it appear as if a law existed when in reality there was no law. All this is changed now. Not only is there a law but it is a triple-barrelled law, for it compels every French subject and every foreigner living in France to be vaccinated not merely once but three times. Here is the actual text of the law of Feb. 15th, 1902, on the protection of public health as modified by the law of April 7th, 1903, which is to come into force one year after its promulgation:—

> Article 6.—Anti-small-pox vaccination is obligatory during the first year of life, as also revaccination during the course of the eleventh and the twenty-first year.
>
> The parents and tutors are personally held responsible for the execution of this measure.
>
> Regulations will be issued by the public authorities in keeping with the advice given by the Academy of Medicine and the Consultative Committee of Public Hygiene of France fixing the measures necessary for the application of the present article.

Thus it is now no longer permissible or legal for a person residing in France to endanger the health of his neighbours by refusing to take the precautions that will most probably prevent his becoming a centre whence small-pox may be spread to others. At Nice, some two years ago, I remember describing the perplexities of the authorities in regard to an English antivaccinationist. When the epidemic of small pox broke out in this town during the season of 1901 and 1902 the victims were principally unvaccinated Italian labourers. The garrison, consisting of 3800 soldiers, was at once revaccinated, and though the soldiers when on leave generally frequented the part of the town where small-pox was most prevalent not a single case occurred among these troops. But adding to the soldiers the men and women employed at the State tobacco factory and the railway and tramway lines there were altogether some 10,000 persons who could be compelled to be, and consequently were, revaccinated. Out of these 10,000 persons 14 contracted small pox before they were revaccinated and two others managed to avoid being revaccinated and they also had small-pox None of the others suffered from the disease and thus 10,000 persons lived in the midst of a small-pox epidemic and after revaccination there was not a single case of small-pox among them. It was in the face of these facts that an English lady, calling herself a Christian Scientist, went about among the American and British residents at Nice persuading them not to be revaccinated. The authorities were perplexed. On the one hand they were anxious to show the greatest courtesy and consideration to all foreigners who went to winter at Nice, but the epidemic was frightening their winter guests away and here was a lady doing her best to increase the prevalence of the disease. Suggestions were made to expel her from the territory, at least of Nice, if not of France. But then no law had been broken or defied since vaccination was not obligatory; it would therefore seem a very arbitrary act to compel the Christian Scientist to leave the town. However, the difficulty was solved in a very effective though untoward manner. This lady had, in any case, the merit of consistency, for she would not allow herself to be revaccinated. Thus unprotected she contracted small-pox and died in a few days and the authorities were relieved in this suggestively dramatic manner of the embarrassment that her presence and action had created.

Now, with the new law no such difficulty would be possible. To persuade a person not to be vaccinated is to persuade him to break the law and therefore action can be taken. But apart from this general principle the regulations to which allusion is made in the third clause of Article 6 quoted above have now been issued and they contain a special article relating to foreigners. Not only do the regulations apply to all persons without any distinction being made with regard to the nationality of such persons but Article 10 expressly states:—

> The foreigner who shall have established his residence in France is subjected, for himself and for his children, to the prescriptions of the present regulations in the place where he resides.

This enactment will be found in the decree of July 27th, 1903—published in the *Journal Officiel* of July 31st, 1903—"dealing with the public administrative regulation of vaccination and revaccination in virtue of Article 6 of the law of Feb. 15th, 1902." This decree is signed by the President of the Republic, M. Emile Loubet; by the President of the Council and the Minister of the Interior and of Public Worship, M. E. Combes; and by the Minister of Justice, M. Vallé Then there is also a ministerial circular to the prefects, dated August 7th, 1903, dealing with compulsory vaccination and revaccination according to Article 6 of the law of Feb. 15th, 1902 This circular has for its object to explain the various articles of the regulations and under the heading "Application to Foreigners, Article 10," there occurs the following passage:—

> All the prescriptions which precede are applicable, in virtue of Article 10, to foreigners, for themselves and for their children The importance of this assimilation from the prophylactic point of view could not, Monsieur le Préfet, escape your notice. If the foreigners who come and install themselves on our territory are [illegible] benefit by the guarantees which the application of the new law will give to the French populations it is just that they should not be able to escape from the obligations which the law imposes so as to [illegible] [illegible] id this, too, in such a manner as would [illegible] whom these foreigners propose to live [illegible] . . . are henceforth inexcusable.

In other words, foreigners will not in future be allowed to endanger the French people by living in their midst if they have not been properly vaccinated. Doubtless it will be somewhat difficult to apply such a regulation to mere tourists but the law will be enforced in exactly the same manner on the foreigner residing in France as on French subjects themselves. All this will take time to organise and to carry out but now the necessary regulations and instructions have been issued and the first steps in this direction have been taken.

(*To be continued.*)

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

University Lectures.

ON Jan. 5th Sir Oliver Lodge, D.Sc., LL.D, F.R.S., Principal of the University, delivered two lectures in the town hall on the subject of radium. At the first of these lectures, which was delivered in the afternoon, the Chancellor, the Right Hon. Joseph Chamberlain, presided and most of the members of the staff were present in academicals. The hall was crowded with an audience consisting of governors, donors, and other citizens. Admission was by tickets which were, for the most part, distributed gratuitously, but a certain number for reserved seats were sold in order to defray the necessary expenses of the occasion. There was a great demand for these tickets and it is rumoured that much higher prices than those charged by the University were offered to those who, by early application, had come into possession of them. The lecture was illustrated by experiments and by lantern slides. In the evening Sir Oliver Lodge repeated the lecture for the benefit of working men who were admitted free. On this occasion the chair was taken by the Lord Mayor who at the conclusion of the lecture very heartily thanked Sir Oliver Lodge for his address. A circular has been sent out to members of the medical profession in the district stating that at the request of the Dean of the Faculty of Medicine Sir Oliver Lodge has consented to deliver a course of four lectures on those parts of physics which are of especial interest at present in connexion with medicine. The lectures will be delivered on the four successive Thursdays in February in the medical theatre of the University and will deal with the following subjects:—(1) Production and Properties of Cathode Rays; (2) Production and Properties of Roentgen Rays; (3) Production and Properties of Ultra-violet Light; and (4) Production and Properties of High-frequency Alternating Currents. Admission will be by tickets which are obtainable gratis on application to the ean of the Medical Faculty.

Notification of Small pox: a Curious Case.

The following correspondence opens up a matter of con-derable importance in connexion with the question as to bether the health officials, when aware that a domestic rvant has been in contact with a case of small-pox, are ound to inform the employers of the servant or should, s they did on this occasion, allow them to remain in norance. The gentleman in question in this case would ertainly seem to have had just grounds for complaint in at he was not apprised of the state of affairs, that his aid was not obliged to submit herself to vaccination, and hat he has been subjected to great anxiety, annoyance, and xpense on account of the failure of the health officials to ive him that information which it certainly seems that it vas their duty to afford him. The case is fully explained in he following letter addressed to the health committee:—

> One of my maids spent the evening of Sunday, Nov. 22nd, at her rother's house. On the Monday or Tuesday following one of the nmates of that house was removed to the small-pox hospital. My naid was traced and noted by your officials as a "contact" and was isited at my house by one of them. She was taken ill on Friday ast (Dec 4th), was seen by my own medical man, who at once called n Dr. McCrindle, and her case was diagnosed as one of small pox nd on the same evening she was removed to the hospital. I know othing of the case nor of what had transpired until I returned ome on Friday evening but, fortunately, my wife was in the ouse and her promptness has, I trust, prevented any serious conse-uences. The fact, however, remains that no communication, official r otherwise was made to me or to my wife of the case, nor were ny steps taken by your people to get the girl vaccinated or to have er clothing disinfected. This omission has unnecessarily involved ive other people in the danger of infection, has made my house uspect, and has thrown upon my wife and myself a burden of anxiety which it is impossible to exaggerate. I am unable to discover any ossible excuse for such treatment and I shall require that the matter e thoroughly investigated.

The following is the reply of the chairman of the health committee and it certainly seems scarcely calculated to give confidence to householders that their interests are being considered by the health committee as they might be considered:—

> The health committee at their meeting yesterday had under consideration your letters of the 7th and 9th inst. They have very carefully inquired into the whole circumstances which have occurred in [illegible] st [illegible] it [illegible] ve [illegible] of your servant's contact with the disease. If she had been sent away from your house at the time that the medical officer of health became aware of her contact and had subsequently developed small pox, it [illegible] ised vaccination and dis- [illegible] at the time the medical [illegible] g —— under observation [illegible] el that it is a matter of [illegible]

It will be observed that the letter makes no attempt to explain why the employers were left uninformed as to the risk which their servant had run, still less does it state why the health officials neglected to insist upon her being at once revaccinated. In the event of their having suggested re-vaccination and having met with a refusal it would have been doubly their duty to inform the employers as to the state of affairs.

Sister Dora Convalescent Home.

The convalescent home founded in memory of the lady best known in Walsall and elsewhere as Sister Dora seems to be in financial difficulties. It is situated at Milford, near Stafford, and a meeting has recently been held there to consider the report of a county committee which was appointed some time ago to consider whether the advantages of the home could not be retained for Staffordshire, a proposal having been made that the services of the institution should be placed at the disposal of patients from Leicestershire and that it should be managed by a committee representing that county. The committee reported that in the past the home had mainly relied for its support on the hospitals of the county but that with two exceptions the response made to recent appeals had been disappointing. Some of the leading hospitals had, however, not been able to give a definite answer on account of the short time which was allowed to them for arriving at a decision. It was thought that some further assistance might be expected from these sources. The Wolverhampton Hospital committee had passed a resolution that in the event of Lord Dartmouth who is Lord Lieutenant of Staffordshire and was chairman of the committee in question, being able to give an assurance of support from the county of Stafford of a subscription list of £250 per annum at least it would be able to take over the home under certain conditions The Staffordshire General Infirmary committee under certain conditions would guarantee £100 a year. In addition the committee had promises of about £150 but some of these were "ear marked" and must not be counted twice over. It had promises of further contributions which would amount to about £50 With these facts before it the county committee passed a resolution that if more time were allowed there would be no difficulty in raising the necessary income as no effort had yet been made to canvass the county systematically. The report having been considered it was proposed that a further period of six weeks should be allowed to the county committee but that if at the expiration of that time it should appear that the amount required by the Wolverhampton Hospital committee was not forthcoming the committee should lease the home to the Leicestershire authorities. The Bishop of Shrewsbury moved an amendment that the condition and affairs of the home should be referred to the Charity Commissioners for their consideration. This was seconded by Sir Thomas Salt but met with no other support and eventually the motion as above was carried by 12 votes to two.

Jan. 12th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

A Portable Bath Fatality.

ONE can scarcely take up a periodical without seeing advertisements of various portable hot air or vapour baths. Presumably, therefore, the sales must be numerous enough to pay more than the cost of advertising, and yet it is seldom that any accident from their use becomes publicly known. It is, however, clear that they ought to be used carefully and with common sense. This is shown by the evidence given at an inquest held on Jan 6th in Manchester. A young woman 21 years of age went upstairs to have a vapour bath in what the father described as "a folding bath, about three feet square, with a sloping top and a hole for the head." In a few minutes she called out "Oh, mother, I am burning," and rushed out of the bath room. She was terribly burnt, was attended to by a neighbouring medical man, and then taken to the infirmary where she died in a [illegible] that she was [illegible] l as the lamp [illegible] and began to pour in some methylated spirit when it exploded. The father said that the sides of the lamp would be nearly red hot and she did not wait till it had cooled. Nothing remained of the bath but the bare wire framework. The bath room was a "charred mass" and the windows were blown out. The coroner, Mr. E. A. Gibson, made some strong remarks on these baths which, he said, it was "highly reprehensible to put on the market" when it was obvious that they were nothing but death-traps. "He had known in his own experience other cases where people had been burnt under similar circumstances, though not fatally. He could not speak strongly enough against it." These baths are evidently dangerous things and if used at all should be used with great caution.

How We are Undermined.

Reverting to the thoughts suggested by the Hanley tragedy, disused mining shafts are not the only dangers that beset our paths. In Blackburn the other day a girl was almost engulfed but rescued just in time to save her from that fate. She was, however, so seriously scalded that she soon afterwards died. The hole where the ground gave way was soon enlarged considerably by the falling in of the road. It is thought that the occurrence was caused by a leakage from a collapsed brick culvert into which a factory discharges waste hot water. It is not often, perhaps, that education suffers from school-houses sinking, but at Northwich, well known as a centre for subsidences, a school has just been closed from this cause. It may be in the recollection of some that a few years ago at Northwich a man was in a stable attending to a horse when the floor suddenly gave way and though the man was just able to escape the horse was swallowed up and seen no more. Such facts as these should make the authorities more alive to the dangers associated with the underground operations necessary for our comfort and convenience and more careful in seeing that all possible means are used to guard against these dangers which are very likely to become more common as time brings change and decay.

Notification of Pulmonary Tuberculosis.

The Medical Guild of Manchester has protested against the proposal of the city council to seek Parliamentary powers for the compulsory notification of pulmonary tuberculosis. It states that medical men realise that public opinion is not ripe for such a "drastic proceeding" and considers that "the present system of voluntary notification, which gives the medical attendant discretionary powers in his private practice," is sufficient. It suggests that it would be well to await the results of the experiment of compulsory notification now being tried at Sheffield. The Lord Mayor passed on the letter of protest to the Parliamentary subcommittee who passed it over to the sanitary committee, by whom it has been "entered on their minutes."

"What is White Pepper?"

A grocer was summoned before the Manchester county magistrates on Jan. 5th for selling pepper "not of the nature, substance, and quality demanded by the purchaser." It had been found on analysis to contain nearer 20 than 15 per cent. of bleached pepper husks. Pure white pepper consists of the kernel of the berry. The analysis was made by Mr. Collingwood Williams, one of the county analysts, in conjunction with Dr. Campbell Brown. The magistrates were presumably not satisfied with this analysis, for, after the adjournment, the stipendiary intimated that the bench had decided to try the case on the analysis submitted by the Government chemists, which showed that the proportion of husks, more or less bleached, was about 4 or 5 per cent. The case was adjourned that the prosecution might communicate with the Government chemists and if necessary call their experts. It would be interesting if experts could explain the great discrepancies often occurring between the Somerset House analyses of milk and other articles of food and those of the provinces. It would seem that sending samples to London in some way tended to their purification.

Jan. 12th.

WALES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS.)

Poor-law Administration in Pontypool.

AT the last meeting of the Pontypool board of guardians Mr. F. T. Bircham, a Poor-law inspector of the Local Government Board, stated that in the last ten years the population of the union, which is now approaching 50,000, had increased 14 per cent. and the rateable value had increased 28 per cent. but the amount of pauperism had decreased 15 per cent. The expenditure, however, had increased nearly 20 per cent., accounted for principally by the improved accommodation provided for the sick poor. The Pontypool workhouse is a well-equipped institution, among other recent improvements having been the installation of electric light. Mr. Bircham spoke in complimentary terms of the administration of this institution. At the previous meeting of the board it was reported that at meal times only one mug was provided for six or seven persons in order to save the labour of washing up, but the master was very properly instructed to provide each inmate in the future with a separate mug.

By-laws under the Employment of Children Act.

In order to ascertain which employments exert the most pernicious influence upon children the medical officer of health for the Rhondda (Dr. J. D. Jenkins) has suggested to the district council that before framing by-laws under the Employment of Children Act it should obtain from the head teachers of elementary schools and from the school attendance officers a return giving particulars of all children employed for wages.

Bristol Workhouse Infirmary.

The proposals of the Bristol board of guardians in connexion with the provision of infirmary accommodation for the sick poor have already been referred to in THE LANCET[1] There are at present two workhouses in the city, each having accommodation for between 1100 and 1200 inmates, one at Stapleton and the other at Eastville. At the latter institution there are several buildings constructed of wood and of wood and iron which have been condemned as entirely unsuitable for the purpose to which they are put In 1901 it was decided to erect near the Stapleton workhouse a new infirmary and buildings for the imbeciles and for children and to abandon the Eastville workhouse. A competition among architects resulted in the selection of plans which received the approval of the Local Government Board and in September, 1902, a committee of the board of guardians recommended the acceptance of tenders for the erection of the buildings named at a cost of £130,000. This recommendation, however, only received the support of 25 members of the board and was not adopted. The next definite proposal of the board provided for the retention of the Eastville workhouse for the able-bodied and for the aged inmates who were in good health and for the treatment of the sick and infirm at Stapleton where a new building for 250 patients was to be erected, together with an entirely separate block for 500 imbeciles, this latter to be under independent management. This scheme was not approved by the Local Government Board which pointed out the difficulties connected with the adaptation of old buildings to modern requirements. A committee of the board of guardians was then formed to devise a scheme which would be acceptable to the Local Government Board as well as to those guardians who opposed the adoption of the infirmary scheme. This committee reported to a special meeting of the guardians held on Jan. 8th and its recommendations were adopted by 34 members of the board, 18 voting against them. This latest proposal provides for the retention of the Eastville workhouse (with the removal of the wooden structures and three of the five wood and iron pavilions) where would be housed the aged and infirm, the able-bodied, casuals, and married couples; for the adaptation of the block at present used for imbeciles as an infirmary for the chronic sick; for the erection of four new pavilions for the acutely sick, and of a block for lying-in cases together with new receiving wards. The cost of these extensions is estimated at £50,565 and there would be a total accommodation for 1354 inmates. At the Stapleton workhouse it is proposed to make alterations at a cost of £6360 which would make the existing accommodation sufficient for 1398 inmates who would include the acute sick, the aged and infirm, able bodied women with babies, casuals, and married couples. For the imbeciles and epileptics it is proposed to establish a separate institution to accommodate 724 inmates at a cost of £100,000. The total expenditure would thus be nearly £157,000 and there would be accommodation in the three institutions for 3476 inmates. The opponents of this scheme, which has yet to receive the sanction of the Local Government Board, point out that the expenditure of a large sum of money upon altering existing buildings can never be satisfactory and that there would still be two workhouses with a duplication of administrative expenses.

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[1] THE LANCET, Oct. 4th, 1902, p. 952, and May 30th, 1903, p. 1549.

Low Death-rates in the West of England.

The death rates in the city of Bristol during 1903 compare very favourably with those recorded in previous years. In 1893 the death-rate from all causes was 18 8 per 1000 and since then there has been a steady fall until last year when 14 2 per 1000 was recorded. The death-rate from the principal zymotic diseases was 1·1 per 1000 in 1903, compared with an average rate during the previous ten years of 1·9 per 1000. Still more satisfactory is the low rate of infantile mortality. In 1899 this was equal to 157 per 1000 births and in no recent year has there been a lower rate than 130 per 1000 births, but in 1903 the number of deaths under one year was equal to 116 per 1000 births. At the meeting of the Wellington (Somerset) urban district council, held on Jan. 7th, it was reported that 91 deaths occurred in Wellington during 1903, corresponding to a rate of 12·45 per 1000, the lowest since the records had been kept. At the meeting of the Bath sanitary committee, held on Jan. 6th, it was stated that 751 deaths occurred at Bath during 1903, being the lowest number of deaths registered since records have been kept; in 1902 the deaths numbered 911. At the meeting of the Chard town council, held on Jan. 7th, it was reported by the medical officer of health that the death-rate for 1903 was 13 per 1000, being the lowest rate for the past 12 years. Only two deaths occurred from the zymotic diseases—namely, one from diphtheria and one from whooping-cough.

Jan. 11th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Royal Infirmary: Annual Report.

THE annual general meeting of the court of contributors to the Edinburgh Royal Infirmary was held in the City Chambers on Jan. 4th, the Lord Provost being in the chair.
The [illegible] it has been for years.
The [illegible] ich was submitted by
the [illegible] the total number of
patients under treatment during the year ending Oct. 1st 1903, was 10,484; of these, 4921 were discharged cured, 3480 were relieved, 603 were discharged on other grounds, and 758 died, leaving 722 patients in the infirmary at the end of the year. Of those cases 3831 were medical and 5931 were surgical. The total number treated showed an increase of 523 over the total treated in the previous year. The average daily number of children treated was 63, against 62 in the previous year; the average daily number of patients was 743, against 725; the largest number of these on any one date was 773, against 770. The average time each patient was under treatment was 25·8 days, against 26·6. Of the cases admitted Edinburgh furnished 5053, Leith 539, and the country 4209. In the out-patient department 31,801 patients had been treated. The ordinary income amounted to £32,685 11s. 1d., as against £32,621 6s. 4d. in the preceding year. The voluntary contributions showed a net decrease over all of £139 14s. 8d. The revenue from hospital tickets and income-tax recovered had amounted respectively to £244 12s. and £62 11s 8d. more than in 1902. The ordinary expenditure amounted to £47,600 18s. 1d., or £407 7s above that of the previous year, an increase which was more than accounted for by the increase in the average number of occupied beds. The expenditure for the year, including out patient department, per occupied bed was £64 1s. 3¾d., or a decrease of £1 0s 7d on the previous year. There had been a reduction of 7s. 0¼d. in maintenance and of 10s. 9¼d. in medical expenditure for each occupied bed. The legacies and donations of £100 and upwards amounted to £47,002 16s. 3d. The average number of nurses and probationers during the year was 210; there were 642 applications for admission during the year, as against 627 in the previous year. The managers had introduced several changes in the nursing department during the past year, the principal being as follows: 1. The abolition of the practice of taking nurses for a two years' course of training. All nurses must now go through a three years' curriculum. 2. The dividing up of the one year's night duty into two periods of six months with an interval of at least six months' day duty. 3. A system of preliminary examination for candidates. Various new works had been completed during the past year. The bathing department was opened in February and had supplied a want long felt. In three surgical pavilions plumbing and drainage reconstruction had been commenced. Fire escape staircases had been completed in all the medical blocks and the escapes on the surgical side had been so perfected as to reduce danger from fires to a minimum. Arrangements had been made with the fire brigade to have a fireman constantly in attendance in the infirmary. The ophthalmological and ear and throat pavilions had been completed and furnished and were now occupied. A very much improved skin department and a medical electrical department were being arranged for. At the convalescent house, Corstorphine, 1290 patients had been admitted during the year; of these, 985 remained the full period of three weeks, during which they gained on an average 4·46 pounds in weight. A new rule had been introduced with regard to the medical staff to the effect that ordinary physicians and surgeons should retire at the age of 65 years. The rule, however, was not to apply to those members of the staff who were at present serving their second or third term of five years in charge of wards or to the professors. Further, the charge of the women students' wards was henceforth to be regarded as a full charge and was to count towards the full term of office. The report was unanimously adopted. A motion was then made by Mr. J. F. M'Lennan, advocate, that the age limit should be applied to the professors as well as to the extramural physicians and surgeons. Sir Charles Pearson moved as an amendment that the question be remitted to the managers. On a vote being taken the motion was carried by 46 votes as against 23 for the amendment.

Theories of the Determination of Sex.

At a meeting of the Aberdeen University Medical Society held on Jan. 8th Mr. J. Arthur Thomson, the professor of zoology, gave an address on the Determination of Sex. He said that there were three theories which of the many that had been put forward had, in his opinion, stood the most severe modern tests. The first of these was that *ab initio* there were male and female ova and male and female spermatozoa, the coalition of corresponding elements resulting in a male or a female. This dimorphism was noticeable in rotifers, in some crustaceans, and, according to Dr. Beard of Edinburgh, in the common skate. The second theory was that the production of male or female offspring depended on the relative freshness or staleness of the male and female elements at the time of fertilisation, the offspring following the sex of the relatively more vigorous progenitor. This theory was supported by the observations of many breeders of domestic animals. The third theory was that environment, e g., nutrition, gave to an originally indifferent embryo the
bias to the side of masculinity [illegible]
rally producing males and go[illegible]
This theory was not opposed [illegible]
first theory it was supposed that the sex was wholly dependent on dimorphism or in the second theory on the relative freshness or staleness of the two elements. It was rather complementary to the two previous theories. The same hydra could be made at one time by good feeding to produce only ovaries and at another time by starvation to
produce only testes. [illegible]
could be made male or [illegible]
respectively with the gr[illegible]
the prothallus of a fern. Similar experiments had been made on caterpillars, but must now be regarded as irrelevant, for there was definite evidence that the sex was predetermined, quite apart from external conditions. In ordinary circumstances the frog's spawn produced 57 per cent. of females and 43 per cent. of males. The percentage of females could be raised to 68, 81, and 92 by feeding the animals with meat, fish, and frog respectively. Unfortunately these results were vitiated, as was also the case in caterpillar experiments, by the mortality not being recorded. The view that there was an essential masculinity about the spermatozoon or an essential femininity about the ovum was untenable. Each element contained characteristics of the other element in addition to its own. The drone bee came from an unfertilised egg. Parthenogenesis was also seen in the plant lice, which could produce offspring in a hot-house for four years without the intervention of a male. The first brood of the wild humble bee consisted of females

born in the spring, but in autumn, or when the temperature was lower, males made their appearance. Out of the five eggs of a sparrow-hawk three became males and two females, male and female alternating; one could not, he thought, physiologically conceive an ovary being able to liberate alternately an *ovum which should become a* male and one which should become a female. The rotifer hydatina had two sorts of eggs, large and small. The large eggs produced only females, the small eggs only males, and no amount of change in environment could produce a male from a large egg or a female from a small egg. Among animals higher in the scale of development mice were very suitable to experiment with as they were ready for reproduction when seven weeks old and, if they were not allowed to suckle their young, could produce a litter every three weeks. Professor Thomson thought that there was at least a strong probability that every ovum of an organism with separate sexes had from the first a predisposition towards becoming a male or towards becoming a female, but that this predisposition might be altered by the nutrition of the ovum, by changes in the period before fertilisation, by fertilisation itself, and by environmental influences (of nutrition, temperature, &c.) during embryonic or even larval life, until the period was reached when the sex of the offspring was fixed. The probability was that many factors determined the result and that insistence upon any one was almost certain to be fallacious.

Jan. 12th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

University Education in Ireland.

THE question of university education for Ireland would seem to be about to enter again into the sphere of practical politics. It will be remembered that the commission appointed by Lord Cadogan reported against the Royal University as a possible solution of the problem, while Trinity College was expressly excluded from its consideration. Since then the board of the University of Dublin has offered to establish a Presbyterian chapel without the precincts of Trinity College and a Roman Catholic chapel as well if required. A very important letter has recently appeared from Lord Dunraven dealing with the whole matter. Lord Dunraven's proposal is not new but it carries weight on account of the favourable way in which it has been received. His suggestion is that the University of Dublin should be enlarged in order to include not only Trinity College but a fully endowed and equipped college in Belfast to meet the requirements of the Presbyterian students who form the majority there and a third similarly endowed college in Dublin to satisfy the feelings of the Roman Catholics who chiefly centre there. He suggests that the latter might be called "King's College" and that it would be open to Protestant students just as Trinity College is open to Roman Catholics now.

The Fate of Dr. J. R. Welland, Lieutenant R.A.M.C.

Dr. J. R. Welland, Lieutenant R.A.M.C., whose death is reported as having occurred in the recent fighting in Somaliland, was educated at Rossall School and Trinity College, Dublin. He was a thoroughly good man at his work and also a fine oar, stroking the Trinity College crew at Henley four years ago. His death, for there seems no doubt that the worst has happened, will be much felt.

Royal Victoria Hospital, Belfast.

At a meeting of the board of management of the Royal Victoria Hospital, Belfast, held on Jan. 7th, it was announced that the Misses Riddel, of Beechmount, Belfast, had contributed £10,000 to the funds of the hospital as a memorial of the late Mr. Samuel Riddel, a member of one of the oldest and most respected Belfast families. £2000 are earmarked for a residence for the medical superintendent. One of the unnamed wards is to be called the "Riddel" ward. 100 guineas were also handed in as a first instalment of the proceeds of an amateur concert organised by the employés of one of the mills of the York-street Flax Spinning Company of Belfast.

The Poor Consumptive in the North of Ireland.

Mr. R. Brown, the local secretary of the Society for the Prevention of Consumption and other Forms of Tuberculosis, writes to the Belfast press contrasting the car taken in Ireland to stamp out small-pox, while 10,000 times as many deaths are due to consumption, to prevent the spread of which little is done. Some attention is being drawn to the matter in Belfast, but Lisburn, says Mr. Brown is in a worse condition with regard to consumption, while the rural districts are being more than decimated by the whit plague. He urges the urban and rural councils to mak a rate (as has been done in Cork) so as to bring the benefits of sanatorium treatment within reach of all sufferers The educating effect of a month's residence in such institutions would be of the greatest value. Mr. Brown points ou. how utterly unsuited for the purpose of sanatoriums workhouses would be while there are numbers of country houses with beautiful, well-sheltered grounds lying vacant all over Ireland which would suit admirably. It is not want of opportunity but want of interest which prevents progress in the matter.

Jan. 12th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Out-patients at the Hospitals and Dispensaries.

THERE is at Paris in the hospitals and dispensaries of the Assistance Publique a very complete system for the giving of gratuitous advice and the poor may there obtain all necessary information for the treatment of illness in their own homes. Advice has always been given hitherto in the course of the day and generally in the forenoon, but the municipal representative for the Quartier du Mail, M. Léopold Bellan, will at the next meeting of the municipal council propose that similar opportunities should be given in the evening as well. His arguments in support of the innovation will be as follows. Under the present arrangements many workmen lose too much time in attending the hospitals and sometimes their employers object to it. They put off seeing a medical man as long as possible and from this cause derangements of health which might perhaps have been insignificant if treated at the beginning become aggravated through neglect, until the patient is at last unable to work and may even have to go into a hospital. This misfortune would be avoided if advice were given in the evening when the working classes have left their employment for the day. Even as a question of municipal interest there would be an advantage in poor persons having an opportunity of seeing the medical officers of the Assistance Publique as soon as they felt themselves unwell, for if the illness were taken in time fewer days in hospital would have to be paid for and less relief would be required for destitute families. M. Bellan knows that the medical officers of the Assistance Publique have a great deal to do and he does not wish to overwork them. He only wishes that the experiment should be tried of having one or two evening attendances a week in each hospital district *(circonscription hospitalière)* which could be done by their medical officers giving two hours in the evening once every three weeks. M. Bellan professes to know that the Assistance Publique takes a favourable view of his proposal.

A Victim of Hypnotism.

A remarkable and complicated case has just come before the judicial authorities at Versailles. A woman is alleged to have committed suicide in consequence of the criminal machinations of a person who hoped to inherit the property of the deceased and accordingly suggested suicide to her. It will have to be ascertained in the first place whether the facts are as stated and in the second place whether the offence, if any, is punishable, for questions relative to hypnotism were not foreseen a century ago when the statute was drawn up. An outline of the case is as follows. A married couple named C., very respectable people of independent means living at Marly-le Roi, had for neighbours a married couple named M. The two families soon became friendly but Monsieur C., finding that his wife's head was turned by spiritualistic procedures with which Monsieur and Madame M. occupied themselves, forbade the latter to come to his house. Until the death of Monsieur C.

two years ago the M. family kept themselves in the background, but the prosecution alleges that Madame M. now resumed her former acquaintance with his widow and easily gained her confidence. Monsieur M., it should be remarked, was very old and infirm and seems not to have known what was going on. The two women practised table turning, invoking various spirits, and among them that of the late Monsieur C., who was constantly made to say that he was impatiently waiting for his wife to rejoin him. The widow's mind soon became affected and her health declined by degrees. The *séances* were held every day and at last the deceased insisted that his wife must come to him not later than the end of the year 1903. According to the prosecution Madame M. in the darkened room imitated the voice of Monsieur C. Moreover, she obtained from Madame C. a will in her own favour disinheriting the natural heirs of the testatrix. The widow told everybody that she could not long survive her husband and that she would disappear before the end of the year. Towards the second fortnight of December she directed her tradespeople not to supply her with anything more and she died suddenly on Dec. 22nd. The death was at that time supposed to be due to natural causes and the funeral took place, but when it was found that the deceased had bequeathed everything to Monsieur and Madame M. suspicion was aroused and a judicial inquiry was opened. [illegible] will be very difficult to determine whether the cause [illegible] death was natural or not It will also be matter r consideration whether Madame C. at the instigation of r friend hastened her own death for the purpose of joining her husband, and whether the mental excitement of e spiritualistic meetings might have contributed to the tal issue. During a search made by the police at the sidence of the M family numerous pamphlets on occult iences, spirit photographs, and bottles of laudanum and gitalis were discovered. A similar search was made at the sidence of Madame C., but all her correspondence, papers, id accounts were found to have passed into the possession Madame M. who is now in prison at Versailles. The ecropsy showed that death was due to rupture of the uscular wall of the heart, a lesion which would dispose of ie hypotheses of poisoning or suicide, but portions of the iscera have nevertheless been taken for analysis.

Sleeping Sickness.

The readers of THE LANCET will not have forgotten the ccount[1] which I have already given of this strange disease [illegible] of the tsetse fly. Three [illegible] were recently shown before [illegible] vere then transferred to the hospital of the Association des Dames Françaises at Auteuil. he youngest of the three, Bobenghi by name, died on ec. 7th, 1903, at the age of 14 years. The final stage of his llness was one of those cataleptic attacks which frequently ccur in young patients suffering from sleeping sickness. On Jan. 6th, 1904, Makaya, aged 30 years, succumbed n his turn. His death was unexpected, for he seemed to be [illegible] o be less ill than the remaining [illegible] ived him but who, nevertheless, is [illegible] particular complications but his attacks of sleep were more profound than usual. Saloman lept nearly all day and could with difficulty be awakened to ake nourishment. Sleeping sickness continues to make errible ravages in French Congo and in three years' time out of 100,000 negroes 38 000 have fallen victims to it. Despite the efforts of Dr. Wurtz and of the other medical men who are studying the disease but little advance has yet been made as to its treatment. Makaya lived for six months after being bitten.

Jan. 12th

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Sodium Sulphocyanide in the Treatment of Syphilitic Headache.

Dr. Pauli recommends sodium sulphocyanide (NaCNS) in he treatment of syphilitic cephalalgia. In the pre eruptive tage of syphilis, when painful headache occurs, small doses of this substance (from four to eight grains per day) have a salutary effect. Also in the later stages of syphilis if there is tormenting dull headache not confined to any particular region and with characteristic exacerbation during the night 30 grains of sodium sulphocyanide per day are often very useful.

A Peculiar Skin Disease in Butchers.

Dr. Matzenauer has observed six cases of a peculiar dermatosis in persons employed in butchers' shops. The patients had thickening of the skin on the hands and fingers very similar to keratoma The thickening might amount to as much as one-fifth of an inch and the surface of the skin was so thickly covered with pits and depressions that it almost resembled a sponge; the affection was localised on the palm. There was never any inflammation surrounding the callosities. The disease showed the same appearance as keratoma palmare (et plantare) hereditarium, but it differed from that condition inasmuch as it did not develop in childhood but only in adult life and disappeared when the patients changed their occupation. It was also different from chronic eczema with callosities. In keratosis arsenicalis the thick hard skin has a coarse uneven surface, not the peculiar sponge-like honeycombed surface of the dermatosis now described. All the patients worked in butchers' shops, where they were employed in removing hair from pigs by immersing them in hot water and rubbing them with colophony. The disease was due to the combined effect of hot water and colophony. Hot water itself caused only eczema lotricum, as met with in laundresses and bath attendants, but colophonia made the epidermis loosen and swell and this was the cause why butchers used it for the removal of hair from the carcasses of pigs. Histological examination of the skin in this disease showed only pure hyperkeratosis.

Reflex Effects on the Pulse.

The researches of Dr. Heitler have already shown that mechanical irritation (1) of the region of the liver or heart, and (2) of the sternum, skin, muscles, bones, and mucous membranes increases the volume of the pulse. Further investigations have proved that mechanical irritation of the above-mentioned regions may also cause a diminution of the pulse. Percussion on the region of the liver, heart, or sternum makes the pulse rise, but pressure on the same regions reduces the pulse during the continuance of the pressure. In many individuals Dr. Heitler observed that diminution of the pulse was produced by shutting the eyes and that the pulse increased again on opening the eyes. This effect was evidently due to the influence of light.

Jan. 11th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Prevalence of Scarlet Fever.

SCARLET fever has become epidemic to an alarming extent at Mount Morgan, Queensland. The hospital accommodation is taxed to its utmost limits and arrangements have been made for extra temporary accommodation for the patients.

Preservatives in Food.

In March last the Board of Health of New South Wales made certain regulations with regard to the use of preservatives in food to which reference has been previously made in these columns. In consequence of representations from various industries affected by these regulations a select committee of the Legislative Assembly was appointed to inquire into the question. The conclusions of the committee were as follows:—

[illegible] mental committee and [illegible] the amount fixed as permissible by the regulations of the Boards of Public Health both in New South Wales and Queensland.

[illegible] regards milk, if there is sufficient care in handling and [illegible]

maintenance, expansion, and [illegible]

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[1] THE LANCET, August 29th (p. 636), Oct. 31st (p. 1263), and Nov. 14th). 1403), 1903.

this nutritious article of food within the reach of every householder at a reasonable price, the use of 18 grains of boracic acid to the pound is necessary.

6. That the use of 35 grains of boracic acid to the pound of butter and 35 grains of boracic acid to the pound of concentrated milk and 18 grains of boracic acid to the pound of table cream will cause no injury to health and should be permitted.

7. That having in view the right of people to know what any food stuff consists of, vendors of those articles containing preservatives should include on the label on the package, tin, or containing vessel, and in conformity with the rest of the label a statement setting forth the nature and quantity of the preservative contained therein; and in cases where a label is not ordinarily fixed then a special label to that effect should be affixed.

And your committee recommend that the regulations made under the Public Health Act should be amended and brought into conformity with the above conclusions.

The Birth-rate Commission.

The President of the Birth-rate Commission in New South Wales has applied for an extension of time in which to send in a report. It is believed that evidence taken will show that it is the women of the community who are opposed to families, partly on the ground of the physical pain of childbearing and partly owing to the restriction of duties and pleasures resulting from maternity. The evidence of druggists is said to show that there is a large sale of "preventives," chiefly to women of the upper and middle classes. The distaste for child-bearing is shown to bear a corresponding ratio to "intellectual" status. This goes side by side with postponement of marriage in the same classes, and curiously enough, with certain nationalities. For example, the births to women born in New South Wales average considerably lower than to those born in any part of the United Kingdom and most European countries.

Infant Mortality.

Not only is there a declining birth-rate but also an excessive infantile mortality in New South Wales. With a view of diminishing this in Sydney Dr. W. G. Armstrong, the health officer, has recommended that a formula for the proper care and feeding of infants should be prepared, printed, and sent by post to all households in thickly populated and poor districts in which a birth had been registered during the last six months.

Care of Neglected Children.

At a conference of the Christian Union Senator Dr. Mackellar stated that during the last 20 years between 11,000 and 12,000 children had been dealt with by the State Children's Relief Board. He found that children whose fathers had deserted them and whose mothers were unable to support them numbered 2885; in 690 cases the fathers were in gaols and the mothers were destitute; in 282 the fathers were drunkards and the mothers were unable to support them; in 3284 the fathers were dead and the mothers were unable to support them; in 318 the mothers were prostitutes; in 137 the children were foundlings; in 31 the fathers had deserted them and the mothers were living in adultery; and in 97 the fathers were dead and the mothers were living in adultery. He had very good evidence that these children, removed from their vicious surroundings and placed in properly conducted homes, were no worse than the ordinary members of the community.

Lunacy Bill in Victoria.

The Bill to amend the Lunacy Act has been further considered in the Victorian Parliament. The proposal to create a Board of Lunacy was abandoned The salary of the inspector-general, whose responsibilities are very great without a board, was increased to £1500 a year. A provision was inserted that the inspector general must be a medical man.

Proposal to remove the Metropolitan Lunatic Asylums.

A deputation waited on the Premier of Victoria recently to urge that the present sites of the lunatic asylums at Kew and Yarra Bend should be sold and that new buildings should be erected on a less valuable site farther from the city. It was pointed out that the present buildings were so faulty in construction as to be quite unsuitable for the proper treatment of the insane. There were about 800 acres in the asylum reserves valued at £200 an acre. Plenty of land within ten miles of Melbourne suitable for the purpose could be obtained for £10 an acre. The Premier replied that he would take the proposals into consideration and would consult his colleagues but he could promise nothing.

The Treatment of Consumption.

The treatment of consumption by special hospitals and sanatoriums is far from satisfactory in Australia. In New South Wales the movement to commemorate the late Queen Victoria took the form of a fund to establish homes for consumptives. The committee took over the existing home at Thirlmere, which contains 42 beds, and it is always full. The last report shows that 136 patients were received for the year, of whom 96 recovered sufficiently to be able to resume their ordinary duties and in three the disease was completely arrested. During last year the executive committee decided to build another home for the treatment of those afflicted in the very early stage of the disease. Land was purchased and wards to accommodate 20 patients were built, together with administrative quarters for the matron, the nurses, and the resident medical officer. This entailed an outlay of about £5000 and the home or sanatorium, which is situated at King's Tableland, Wentworth Falls, was opened in February last. The committee feels that it is incumbent upon it to supply still further accommodation and this will mean the using up of most of the funds, and will further reduce its income. Neither the public nor the Government, however, seems inclined to provide the necessary funds. In Victoria there are two sanatoriums, one at Echuca, and the other at Macedon, and two country hospitals take a limited number of cases. The provision is utterly inadequate. The committee of the Austin Hospital takes advanced cases and is still squabbling with the Government and the residents of Heidelburg about providing more accommodation with the money given by Mr. Kronheimer for the special purpose.

Hospital Affairs.

At the Royal Prince Alfred Hospital, Sydney, Dr. C. B. Blackbourne has resigned the position of medical superintendent and Dr. A. H. Macintosh has been elected in his place. Dr. Blackbourne and Dr. E. Fairfax have been appointed assistant physicians; Dr. H. Taylor Young has been appointed assistant gynæcologist, and Dr. H. Russell Nolan assistant surgeon for diseases of the ear, the throat, and the nose. The matron, Miss M'Gahey, has resigned and the board will invite applications for her post in Great Britain, Canada, and America

The British Medical Association and the Australian Natives Association in New South Wales.

A well-attended public meeting was held at the Balmain town-hall recently to discuss the relations between the Australian Natives Association and the medical profession. The chairman explained the position of the Balmain branch of the Australian Natives Association. It had been formed in June, 1901, had become affiliated with the Balmain United Friendly Societies' Dispensary, and for 12 months matters had gone along smoothly. Then the dispensary board had been urged by the British Medical Association to sever its connexion with the Australian Natives Association, and in May, 1902, a conference between the dispensary board and the medical officers had taken place, the latter taking up the position that the Australian Natives Association was not a genuine benefit society established for philanthropic purposes but for political purposes, and that it was a society prejudicial to the interests of the medical profession Mr. Martin, president of the Australian Natives Association, said that the British Medical Association had singled out the Australian Natives Association for public attack—and he said public advisedly—because it was a new society and therefore it was thought one that would be easily crushed and made an example of. If it beat the Australian Natives Association then it would go for the other friendly societies. The British Medical Association had no sympathy with friendly societies and had frankly admitted that it would like to see them "wiped out."

Obituary.

The profession in Melbourne has suffered a great loss by the sudden death of Dr. William Butler Walsh in his forty-ninth year, he having been born at Pau, France, in 1854. Dr. Walsh was the son of the late Rev. E Walsh, a clergyman of the Church of England. He was educated at the Tipperary grammar school and at Trinity College, Dublin, where he graduated as B.A. and M.D. He was also a Fellow of the Royal College of Surgeons in Ireland. For two years he acted as medical officer to the P. and O. Company. He arrived in Melbourne in 1881 and soon established a very extensive practice in Kew. A few months ago he established himself in Collins-street, Melbourne, as a consulting physician. Dr. Walsh was for some years examiner in anatomy in the University of Melbourne. He was recently appointed assistant physician to St. Vincent's Hospital and was a vice president of the Medical Society of Victoria. Dr. Walsh enjoyed in a peculiar manner the esteem of the profession, not only on account of his capability but also because of his great personal charm, his gentle, courteous, considerate manner, his strict maintenance of the best traditions of the profession, and his high moral character, qualities which also gained him the personal friendship and love of all his numerous patients.—Dr. R T. Wylde, who died recently at Semaphore, South Australia, was one of the oldest medical men in that colony. He took his M R C.S diploma 60 years ago. He was the author of a useful book on floriculture and, in his day, was a most popular and capable physician enjoying a large practice.

Dec. 8th, 1903.

Obituary.

ROBERT JAMES BLAIR-CUNYNGHAME, M.D., F.R.C.S., M R.C.P. EDIN., J.P., F.R S. EDIN.

Dr. R J. Blair Cunynghame, who died on Dec. 23rd last at his residence in Edinburgh, was for many years an assistant to the late Professor Saunders who held the chair of pathology in the University of Edinburgh and frequently lectured for him. Though a man of independent means he studiously followed his profession and at various times held several important appointments. He studied medicine in London, Berlin, Prague, and Vienna, and graduated as Doctor of Medicine in the University of Edinburgh in 1862. In the same year he obtained the gold medal of this University for forensic medicine. Four years later he obtained the Fellowship of the Royal College of Surgeons of Edinburgh, of which College he was made President in 1892, and became a Member of the Royal College of Physicians of Edinburgh in 1877. He was a Fellow of the Royal Society of Edinburgh and at one time President of the Royal Medical Society of [illegible] a member of the Edinburgh [illegible] and was an examiner at the Ro[illegible] Edinburgh. He held the post c[illegible] in the Registrar General's department in Scotland, was a late physician of the Royal Hospital for Sick Children, Edinburgh, and was at one time resident physician to the Royal Infirmary, Edinburgh.

HENRY BOYD CARDEW, M.R.C.S. ENG., L.R.C.P. LOND.

Mr. Henry Boyd Cardew, who has just died at his residence, Oriel Lodge, Cheltenham, after a very short illness, was the elder son of Major-General Henry Cardew, a retired officer of the Royal Artillery. Upon leaving Cheltenham College, where his early education was received, he entered at St. Bartholomew's Hospital and eventually took the diplomas of the Royal College of Surgeons of England and the Royal College of Physicians of London in 1890. Returning to Cheltenham he became house surgeon at the General Hospital, retiring from the position of senior house surgeon in 1894 to undertake private practice. But he continued for several years later to hold the position of honorary medical officer to the branch dispensary of the hospital and to the Victoria Home. The deceased was a distinguished figure in local sport and athletics, in the promotion of which he was an energetic worker, and he often figured as a judge at various gatherings, more particularly so at aquatic sports. He was married in 1895 to Miss Agnes Moore, third daughter of Mr. Thomas Moore, F.R.C S., of Blackheath, and leaves a widow and four young daughters to mourn his death. The deceased, who was only 37 years of age, was one of the most popular medical men in Cheltenham and one of the best known and most highly esteemed members of local society.

JOHN ANDERSON, M.R.C.S. ENG.

MANY from the Buchan district of Aberdeenshire will hear with deep regret the news of the death of Mr. John Anderson, which took place on Dec. 9th, 1903, at his residence, The Crescent, Longside, Aberdeenshire, in the ninetieth year of his age. Although it is about a quarter of a century since Mr. Anderson gave up the extensive practice which he carried on in town and country and retired into private life, he is still well remembered by the older natives of the town and district. He was the last survivor of his compeers in Peterhead, Mr. Patrick Jamieson, F.R.C S. Edin., who for long was contemporary with him, having died a few years ago. Mr. Anderson was educated at the University of Aberdeen and became M.R C S. Eng. in 1836. Of somewhat bluff exterior he was a man of kindly disposition and was recognised as a devoted and skilful medical adviser. His wife died about ten years ago and he is survived by an only daughter.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At the primary examination held recently the following candidates passed in the subjects indicated :—

PART I.

Biology.—E. G Brisco-Owen and A. Samuel, Cardiff; and M. V. Webb Royal Free Hospital.
Chemistry.—C J. Wolfe Edinburgh.
Materia Medica and Pharmacy.—J. M. Lynch, Cork, and M. Rathbone, Royal Free Hospital.

PART II.

At[illegible]
Hospita[illegible] J. M. Lynch,
Cork; a[illegible]
Physiolog[illegible]spital; H. J.
Dusko[illegible]ersity College
Hospita[illegible] Lynch, Cork;
and H[illegible]

THE ROYAL FREE HOSPITAL.—Princess Christian [illegible] accompanied by Princess Victoria of [illegible] Royal Free Hospital, Gray's-[illegible]on last, and distributed the [illegible] which she had provided for the patients and nurses.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The annual charter dinner will be held at the College on Saturday, Feb. 13th. His Excellency the Lord Lieutenant has graciously accepted the invitation of the President and council to be present at the dinner. As the accommodation [illegible]present will of necess[illegible] at the dinner [illegible] guest whom they m[illegible] Royal College of Surgeons, Dublin.

DONATIONS AND BEQUESTS.—Miss Louisa and Miss Mary Lawrence have given a donation of £500 to the appeal fund in connexion with St Bartholomew's Hospital in memory of their father. An additional £500 is promised in 1905.—By the will of the late Mr. John Penn, M.P. for Lewisham, a sum of £2000, free of duty, is bequeathed to the Miller Hospital and Royal Kent Dispensary, Greenwich.—Mr. Philip Hedgcock has by his will left £1000 to the Sussex County Hospital, £300 to the Brighton Hove, and Preston Dispensary, and £300 to the Sussex Eye Hospital.

VACCINATION EXPENDITURE.—At a meeting of the Helston (Cornwall) board of guardians held on Jan 2nd it was reported that for the four years 1896-99 previously to the passing of the recent Vaccination Act, 1380 primary vaccinations were performed in the Helston union at a total cost of £314 There was no case of revaccination During the four years subsequent to the enforcement of the Act—namely 1900-03—there were 2317 primary vaccinations and 561 revaccinations performed, the expenditure being £529. Several of the guardians expressed great surprise at the increase in the expenditure and a committee was appointed to petition the Local Government Board on the subject.—At the meeting of the Warmley (Gloucestershire) board of guardians, held on Jan. 5th, it was stated that in the Kingswood, Oldland, and Siston district for the four years preceding the passing of the Vaccination Act 837 vaccinations were performed at a cost of £37, whereas during the four years following the enforcement of the Act there were 845 vaccinations which involved an expenditure of £285. It was also reported that in another district of the union the cost for the four years preceding the Act was £11, while for the four years following the enforcement of the Act it was £130.

Centenarians.—Mrs. Eliza Jenkins, of Otterford, near Taunton, attained the age of 105 years on Jan. 1st; she is stated to be the oldest resident in the county of Somerset.—Mrs. Ann Davies, of Penralltffynnon, Cardiganshire, died very recently, aged 103 years.

Royal Waterloo Hospital for Children and Women, Waterloo road S E, Founded a.d. 1816.—Three original plays specially written by officers of the Channel Fleet were produced at the Queen's-gate Hall, South Kensington, on Jan. 13th, on behalf of this institution which has for the greater part of a century relieved over a million poor children and which is now in urgent need of £50,000 for rebuilding.

The late Mr. D'Arcy Sugden.—Mr. D'Arcy Sudgen died at his residence, Buckfastleigh, Devon, on Dec. 30th, 1903, from pneumonia following typhoid fever which he contracted in the discharge of his professional duties. He was the third son of the late Mr. W. Sugden of Bath and received his medical education at St Bartholomew's Hospital, taking the qualifications of L.R.C P. Lond. and M R C S. Eng. in 1876 and 1877 respectively. Mr. Sugden was for some time in Queensland, Australia, where he held appointments at the Maryborough Hospital and the Bundaberg Hospital. He went to Buckfastleigh about two years ago and at the time of his death was 50 years of age.

Folkestone Medical Society.—The annual meeting of this society was held on Jan 8th at the house of the President, Dr. T Eastes. The following officers were elected:—President: Dr. W. J. Tyson. Vice-Presidents: Dr T. Eastes, Dr. J. Hackney, and Dr. C E. Perry. Committee of Management: Mr. J. W. Thornton Gilbert, Mr. J. R. P. Phillips, Mr. H A. Powell, Dr E. G. Sworder, and Dr. L. Wainwright. Library Committee: Mr. A. Randall Davis, Mr. J. Keay, and Mr. F B. Madden. Honorary secretary and treasurer: Dr. J. E G. Calverley. It was decided to make the following donations from the society's funds: to the Epsom College, £2 2s.; Kent Benevolent Society, £1 1s.; and the Folkestone District Nurse, £1 1s.

Presentation to a Medical Practitioner.—On Jan 7th, at the St John's Jubilee Room, Worcester, there was a large gathering of patients and friends of Dr. J. Ronald Polson, when an elaborately illuminated congratulatory address and a silver tray were presented to Dr. and Mrs. Polson. Dr. Polson, who has practised at St. John's since 1887, has earned the affection of the whole of the inhabitants of St. John's and district and his marriage was made the occasion of presenting to him some tangible form of their esteem. The tray bore the inscription: "Presented to Dr. and Mrs. J. Ronald Polson upon the occasion of their marriage, Feb 29th, 1903, by friends and patients of Dr. Polson. 'I was sick, and ye visited me.'" The subscribers numbered nearly 400, embracing all sorts and conditions of men differing in creed and politics.

Literary Intelligence.—The Orient Press, late the Primrose Press, announces the early appearance of "The Duties of the Heart," translated from the Arabic of Rabbi Bachye, with an introduction by Edwin Collins; "The Sayings of Confucius," "The Odes of Confucius," and "The Sayings of the Brothers of Sincerity." The teachings of this interesting sect, which flourished in Persia and Arabia in the ninth and ten centuries, will be edited with an introduction by Dr. Paul Brönnle. Dr. S. A. Kapadia, secretary of the Northbrook Society, has the general superintendence of the works upon Indian religions and literature which the Orient Press intends to place before the public.—With the February number of *Knowledge* a development of its scope and contents is contemplated by its directors. It has during its 22 years' career been chiefly devoted to astronomy and the natural sciences, but in future it will add physics, electricity, and applied science to these subjects. In order the more suitably to effect this alteration *Knowledge* will be amalgamated with the *Illustrated Scientific News* and will be issued under the title of *Knowledge and the Illustrated Scientific News*.

BOOKS, ETC., RECEIVED.

Association of American Physicians (Secretary, Dr. Henry Hun, 149, Washington-avenue, Albany, N Y.).

Transactions of the Association of American Physicians. Eighteenth Session, held at Washington, D.C., May 12th, 13th, and 14th, 1903. Vol. XVIII. Price not stated.

Baillière, Tindall, and Cox, 8, Henrietta-street, Covent-garden, W C.

A Pocket Dictionary of Hygiene. By C. T. Kingzett, F.I.C., and D. Homfray, B.Sc. Second edition. Price 2*s* 6*d*.

Browne and Nolan, Limited, Nassau-street, Dublin.

Transactions of the Royal Academy of Medicine in Ireland. Vol. XXI. Edited by John B. Story, M B., F.R C.S, General Secretary. With index, Vol. I. to XX, compiled by E J. McWeeney, M D. Price not stated.

City of London Book Depôt, White-street, Moorfields, E C.

Cusack's Biology. By William E. Clarke, A R.C S. (London), Lecturer in Biology at the Day Training College, Moorfields, E C. Part I., Plant Life. Part II., Animal Life. Price 2*s*. 6*d*. net.

Dawbarn and Ward, Limited, 6 Farringdon-avenue, E.C.

The Insurance Blue book and Guide for 1903-04. Edited by Arthur Champness. (Thirty first year of publication.) Price 2*s*. net

Harper and Brothers, 45, Albemarle street, W.

New Conceptions in Science. By Carl Snyder. New and revised edition. 1904. Price 7*s*. 6*d*. net.

Pentland, Young J., Edinburgh and London.

The Edinburgh Medical Journal. Edited by G. A. Gibson, M D., F.R C P Edin., and Alexis Thomson, M.D., F.R.C.S. Edin. New series. Vol. XIV. Price not stated.

Sanitary Publishing Company, Limited, London.

Disinfection and the Preservation of Food. Together with an Account of the Chemical Substances used as Antiseptics and Preservatives. By Samuel Rideal, D Sc. London, Fellow of University College, London; Fellow of the Institute of Chemistry, of the Chemical Society, and of the Sanitary Institute of Great Britain. Price not stated.

Southern Surgical and Gynæcological Association (Secretary, Dr. W. D. Haggard, Nashville, Tenn.).

Transactions of the Southern Surgical and Gynecological Association. Vol. XV Fifteenth Session, held at Cincinnati, Ohio, Nov. 11th, 12th, and 13th, 1902. Edited by W. D. Haggard, M.D. Price not stated.

The Baker and Confectioner, Limited, 61 and 62, Chancery lane, W C.

Studies for the Bakehouse: being Lectures delivered to the Ayrshire Class. By A Kirkland, Irvine. Price not stated.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward to The Lancet *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

Andrew, William, M.B., C.M Edin., has been appointed Public Vaccinator for the Lezant District by the Launceston (Cornwall) Board of Guardians.

Barker, F. J., M.B., C.M. Glasg., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

Barwell, Harold, M B. Lond., F.R C S. Eng., has been appointed Assistant Surgeon to the Metropolitan Ear, Nose, and Throat Hospital, Grafton-street, Fitzroy-square.

Bonney, W. F. Victor, M.S., M.D. Lond., F.R.C.S. Eng., M.R.C.P. Lond., has been appointed Lecturer in Practical Midwifery in the Middlesex Hospital Medical School.

Candler, George, B A. Cantab., L.R.C.P. Lond., M R.C S., L.S A., has been appointed Medical Officer and Public Vaccinator for the Black Torrington, Bradford, and Cookbury Districts of the Holsworthy Union (Devon).

Emanuel, J. G, M.D. Lond., M B., Ch.B. Birm., M.R.C.P. Lond, has been appointed Physician to Out-patients at the Birmingham and Midland Free Hospital for Sick Children.

Grey-Edwards, H., M.B., B Ch. Dub., has been appointed Honorary Ophthalmic Surgeon to the Carnarvonshire and Anglesey Infirmary.

Lister W. T., B A., M.B., B.C., F.R.C.S., has been appointed Assistant Surgeon to the Royal London Ophthalmic Hospital, City-road, E C.

Mackenzie, E. G., M.B. Toronto, has been appointed Clinical Assistant to the Chelsea Hospital for Women.

Milward, F. Victor, B A, M.B., B.C. Cantab., F.R.C.S Eng., has been appointed Surgeon to Out-patients to the Birmingham and Midland Free Hospital for Sick Children.

Norman, R. H., M.D. Lond., B S., M.R.C.S., L.R C.P. Lond, has been appointed Assistant Anæsthetist to the Great Northern Central Hospital.

Price, E. O., M D., C.M. Edin., has been appointed Honorary Medical Officer to the Carnarvonshire and Anglesey Infirmary.

Stanm. L. E., M.D., B.A., B.Sc. Lond., has been appointed Medical Officer to the British Home and Hospital for Incurables, Streatham Common S.W.

Thornton, Bertram, M.R.C.S. [illegible] has been appointed Medical Officer of [illegible]

Young H. C. Taylor, C.M., [illegible] Assistant Gynæcological S[illegible] pital, Sydney, New South Wales.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Bradford Workhouse and Hospital.—Resident Assistant Medical Officer, unmarried. Salary £125, with rations, apartments, and washing.

[illegible]—House Surgeon, unmarried. [illegible] and apartments [illegible]

[illegible] iseases of the Chest, Victoria- [illegible] for six months. Salary at rate of £30 per annum, with board, washing, and residence.

[illegible]renth Asylum (Training School and Industrial Colony), near [illegible] and washing.

[illegible]spital for Sick Children, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £20, with board and residence.

[illegible]ds General Infirmary.—Ophthalmic and Aural House Surgeon. Board, lodging, and washing

[illegible]eds Public Dispensary.—Junior Resident Medical Officer. Salary £100 with board and lodging.

[illegible]cester Infirmary.—Assistant House Surgeon. Salary £80 per annum, with b[illegible]

[illegible]erpool, David [illegible] Surgeon Salar[illegible]

[illegible]erpool Dispen[illegible] per annum, with board and apartments.

[illegible]tional Hospital for the Paralysed and Epileptic, Queen-square Bloomsbury, W.C.—Registrar. Honorarium of 50 guineas.

[illegible]pa Westray, Orkney.—Lady Medical Officer and Public Vaccinator. Salary £[illegible]

[illegible]chdale I[illegible] d. Salary £100 per [illegible]

[illegible]yal Buc[illegible] Surgeon, unmarri[illegible] and apartments

[illegible]yal Ear Hospital, Frith-street, Soho, W.—Honorary Assistant Anæsthetist.

[illegible] Mary's Hospital, Paddington, W.—Casualty Physician. Salary £75 per annum.

[illegible]oke on Trent, North Staffordshire Infirmary and Eye Hospital, Hartshill.—Assistant House Surgeon for six months. Honorarium of £25 with board, apartments and washing.

[illegible]ctoria Hospital for Children, Tite street, Chelsea, S.W.—House Surgeon, for six months Honorarium of £25, with board and lodging.

[illegible]estminster General Dispensary.—Honorary Surgeon.

[illegible]rk County Hospital.—House Physician. Salary £100 per annum, with board, residence, and washing.

Births, Marriages, and Deaths.

BIRTHS

[illegible]peman.—On Jan. 9th, at 57, Redcliffe gardens, S.W., the wife of Monckton Copeman, M.D., F.R.S., of a daughter.

[illegible]yward.—On Jan 8th, at Stert-street, Abingdon, the wife of M Cecil Hayward, M.A., M.B., of a daughter.

[illegible]fell.—On Jan 13th, at the Briars, West Hill road S.W., the wife [illegible], the wife [illegible]ester, the [illegible]

MARRIAGES.

[illegible]rdy—Van Breda.—On Jan. 7th, at Wynberg, Cape Town, Major William Edmund Hardy, R.A.M.C., to Florence Minnie, eldest daughter of S. Van Breda, of Hauptville, Wynberg.

[illegible]ayfair—Leighton.—On Jan. 11th, at St. Andrews, N.B., by the Rev. Canon Winter, Ernest Playfair M.B., M.R.C.P., son of the late Sir R. Lambert Playfair, K.C.M.G., to Harriet, daughter of the late Henry Forester Leighton, and grand-daughter of the late John Hall Maxwell, C.B., of Dargavel.

DEATHS.

[illegible]nders.—On Jan. 3rd, at Nice, Charles Edward Saunders, M.D., [illegible]M.R.C.P. Lond., D.P.H. Camb., aged 60 years.

[illegible]obalds.—On Jan. 5th, Arthur John Arundel Theobalds, M.B., [illegible]C.M., of Wargrave, aged 34 years.

[illegible].B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

AN UNDESIRABLE HANDBILL.

The following handbill has been sent to us for our opinion, with a statement that it has been distributed from house to house in the Openshaw district of Manchester.

INDUSTRIAL DISPENSARY

68 BOSWORTH STREET, OPENSHAW.

Open Daily from 9 to 10 A.M., and from 6 to 9 P.M.

Advice and Medicine,	6d.	Visit and Medicine,	1/6.	Midwifery Cases,	15/-.

Resident Physician and Surgeon·

J—— M——, L.R.C.P., M.R.C.S., L.S.A., &c.

(Ex-House Surgeon Preston and Bolton Infirmaries).

THE DISPENSARY WILL BE

OPENED on and after MONDAY, NOV. 16th, 1903.

By Order of the Committee.

We often have to refer to handbills of this kind and there is nothing about J. M.'s specimen that is particularly bad. His fees for advice and visiting are the same that medical officers of many dispensaries have to adopt, while his fee for midwifery is actually a little higher. But such offers of economical medical services should not be distributed broadcast to the patients of other medical men. The only advertisement to which the medical officer of a dispensary is entitled is that which he earns by conducting his professional business in a capable manner.

A CURE FOR STUTTERING.

We have received a pamphlet through the Church Agency, Limited, entitled "A Permanent Cure for Stuttering," written by Herr Theodore Jacobs, who is styled the director of an international institute for the treatment of stuttering The pamphlet goes into the question of the origin of stuttering and purports to show that the infirmity is usually psychical and the author narrates cases in proof of this and also in proof of his ability to remedy the condition. He [illegible] possible to do so as the same thing does not suit everybody." Quite so, but we can imagine many cases the cure of which is not quite so simple as Herr Theodore Jacobs imagines. What, in such circumstances, becomes of the boarder at "Schloss X——"—a somewhat dignified name for a three-storeyed house with a door in the middle and three windows on each side? What becomes of him if conversation with the "Professor" or his assistant leads to no good result? We perceive that payment is made for board, lodging, and instruction in all branches one month in advance, the sum demanded being very moderate We perceive, also, that every boarder who neglects his studies can be dismissed without any part of his payment being returned It seems to us that Herr Theodore Jacobs, when he got hold of a severe case, could always send the patient away as an idle student and need not return the cheque We are not suggesting that this will happen or that it has happened. We are pointing out that, for all the prospectus shows to the contrary, it might happen.

STREET MAPS FOR PUBLIC REFERENCE.

To the Editors of THE LANCET.

Sirs,—How many Londoners are there who can boast that they even superficially know the topography of the city wherein they live? I would suggest that if we require maps to guide us rightly around the Zoological Gardens, parks, and other public places, we require them far more to guide us in the intricate labyrinth of London streets. I know that there are lots of excellent pocket maps to be obtained but it seems to me that large maps might well be provided out of the rates Why cannot we have official maps of London neatly framed in weather proof cases displayed in convenient and important parts of the metropolis to guide the weary wayfarer who cannot carry a Kelly's Directory in his head? I am, Sirs, yours faithfully,

DÆDALUS.

London, Jan 9th, 1904.

BIRD "PRESERVING."

"A fine specimen of the rose coloured pastor was shot the other day by Mr. Buggins of —— It has been entrusted to the care of Mr. Juggins, taxidermist, for preservation." So, or in some similar way, runs an all too common paragraph in the daily press. Mr. E. Kay Robinson thinks as we do that such exploits are pitiable and he writes to the *Times* of Jan. 11th to put on record a rare piece of self-denial on the part of a gamekeeper at Holkham who might have shot a waxwing on two occasions but preferred to "preserve" it in another way. Mr. E. Symonds, the gamekeeper in question, deserves the public compliment that has been paid him. How many people seem to regard collecting dead specimens as a proof of knowledge of live animals. And how often the keen collector is really quite ignorant of natural history, though by the help of manuals he can class his flower, his beetle, his moth, or his bird.

RED OR BLACK INK FOR PLACARDS.

To the Editors of THE LANCET.

SIRS,—Your correspondent remarks very sensibly and very usefully on the tendency of the red ink with which many placards are printed to fade and on the indistinct appearance of initial letters in red as compared with the remaining letters of a word in black.

No colour is so cheap, so easy to print, or so permanent as black; some reds, however, such as those made with oxide of iron, sulphide of mercury or alizarin (from madder), are very fairly permament, but many of the most beautiful reds being made from anilin are very fugitive.

The best initials, in my opinion, are those in which the form of the letter is of the same colour—say black—as the rest of the word, its ornamental surroundings being of a different colour—say red.

A plain initial in black, the rest of the word being in red, though not common, would probably prove a good arrangement for catching the reader's eye.—I am, Sirs, yours faithfully,

THEODORE MAXWELL, M.D. Cantab., B.Sc. Lond.,
Honorary Secretary, Amateur Printers' Association.
Woolwich Common, Jan. 11th, 1904.

THE PRESCRIBING OF NAPHTHALIN.

To the Editors of THE LANCET.

SIRS,—In a well-known text-book on "Diseases of Children" it is stated: "Naphthalin is an effective anthelmintic for threadworms." I am writing to ask how it should be dispensed to overcome the disagreeable taste and what dose is suitable for a child five years old and what for an adult. I am, Sirs, yours faithfully,

Jan. 12th, 1904. M.D. (VICT.).

*** The average adult dose of naphthalin is two to 15 grains, which may be given in cachets or in pills. Numerous references to its employment for threadworms are given in Martindale's Extra Pharmacopœia.—ED. L.

FRENCH QUACK MEDICINES.

A CORRESPONDENT has sent us a circular which he found slipped between the pages of a French magazine and which sets forth in the usual style the advantages of a preparation for anæmia, called Confiture de St. Vincent de Paul. Our correspondent says that an advertisement of the same "cure" also frequently appears in the pages of English Roman Catholic newspapers. There is nothing more disgusting than the way in which vendors of quack medicines call in the aid of religion to puff their wares and some religious houses are not above selling quack medicines. St. Vincent de Paul was a very able organiser and a shrewd man of the world, as well as a saint, and were he alive now he would certainly view with disfavour the attempt to extract money from the pockets of the sick by the attaching of his name to what is probably a simple purgative.

THE JUNGFRAU RAILWAY.

MR. George E. Walsh, writing on Mountain-climbing Railways in a recent number of the New York *Electrical Review*, says that the station at Eigerwand which has just been opened is the third station on the electric railway up the Jungfrau and is at an altitude of 9405 feet The electric railway commences at Scheidegg where the steam railway from Lauterbrunnen and Grindelwald ends. This point is 6160 feet above sea level. The first station is at Eiger and the second station is at Rothstock, which is at an altitude of 8270 feet and is two miles from the starting point. The fourth station is at Eismeer and has an altitude of 10,355 feet. This station is completed and the line as far as here is nearly ready for operation. From this point the line will run in time to Jungfraujoch, 11,090 feet, and eventually to Jungfrau, a total height of 13 488 feet, the actual summit of the mountain having a height of 13 670 feet. The gradient of the road in its first four sections is from 15 to 25 per cent. One of the many obstacles which the engineers had to encounter was the employment of men able to work in such a rarefied atmosphere. At 10,000 feet altitude comparatively few men can do hard work for many hours a day; but the selected men from the north of Italy were able to respond to the demands made upon them better than was expected. Mountain sickness frequently thins their ranks and fresh hands have to be obtained from below, but these new men have to be accustomed to the high altitudes by degrees. At 13,000 feet they may have to work in shifts of two hours at a time and then to return to lower levels for rest and recuperation. The company constructing the line pays great attention in every way to the health and comfort of the men. The gauge of the railway is 39 inches. The locomotives are worked by two three-phase motors of various types. The following is reproduced *verbatim*: "The trains are made up of a small locomotive and two trailers coupled on behind. Complete this train weighs about 28 tons and the two trailers will accommodate 80 passengers. The speed of the train is not great, nor is it desirable that it should be, as passengers ascending the mountain frequently desire to study the scenery at different points as they advance. It is intended that the trip up to the summit shall consume about one hour and 40 minutes. This gives the passengers the opportunity to accustom themselves to the change of atmosphere. A sudden rise to the top of such a mountain is dangerous to many people, but with a slow rise it is estimated that not 1 per cent. of tourists will be unpleasantly affected by the air. The train runs on the maximum gradients of 25 per cent. at a speed of 8 5 kilometres [about five and a half miles] per hour, but even this speed will not be maintained at all seasons of the year. Those suffering from mountain sickness can be let off at almost any place along the line where medical attendance can be obtained."

THE LATEST PHASE.

THE modern cheap magazine or periodical is distinguished by the amount of shady advertisements out of which it makes its profits. In a recent number of a periodical, entitled *Home Chat*, appears the following: "Medicine at half price. For 6d. and stamped addressed envelope, I will give you, in English, a copy of your doctor's prescription, whereby you will save half the cost of dispensing same, and know what you are taking; faithful copies guaranteed.—Templeton, 13, Cobden Road, Brighton." We do not know who Templeton may be but we presume that he is a pharmaceutical chemist. How the mere fact of a prescription being in English will save half the cost of dispensing we do not understand, but we think it gross impertinence of Templeton to try to interfere between a medical man and his patient, neither should we have the slightest confidence in his guarantee.

THE MOTOR-CAR IN MEDICAL PRACTICE

IN continuation of the article on motor cars which we noticed in THE LANCET of Jan. 9th, p. 134, Mr. A. D. Pithie, L.R.C.P., L.R.C.S. Edin., in the *Car* of Jan. 6th gives his experience of the use of a motor in a country practice.

THE RELATIONS OF HOSPITALS AND LOCAL DISPENSARIES.

To the Editors of THE LANCET.

SIRS,—It is a pity that some definite alliance between the hospitals and the dispensaries (private, provident, and eleemosynary) situated in their neighbourhood cannot be negotiated. In the matter of a second opinion, for instance, why should not the hospital staffs act as consultants for the dispensaries while they are on duty at the hospital? At present when the medical officer of a dispensary wants a second opinion on a case he knows he has only the hospital to which he can appeal. But he knows also that if he sends his patient with a note to the hospital the chances are that he will see that patient no more and will receive no reply to his note. Of course, this is not the case if the letter be sent to a personal friend on the staff, but one cannot always be bothering friends. But it will be admitted that to lose sight of interesting cases is annoying, and yet it is the case at present, except in the special circumstance mentioned above. The patients are absorbed into the hospital either as out- or in-patients and no more is heard of them. If matters were properly arranged the hospitals would act as consultants for the poorer practices and the dispensaries would offshoots of the hospitals for the purpose of obtaining local knowledge and thus eliminating those cases for which hospital charity was not required. These are the cases which at present clog the hospital out-patient and casualty departments and cause waste of the funds urgently needed in other directions.

I am, Sirs, yours faithfully,
W. H. KESTEVEN.

A MEDICAL AUTOMOBILE CLUB.

AN automobile club confined to members of the medical profession has just been formed at Newark, U.S.A., under the title of the Physicians' Automobile Club of New Jersey. The club has been organised for social purposes only, although the establishment of a club garage may be decided on later, while it is hoped to secure a reduction in the costs of motor accessories by purchasing these jointly. A feature of the meetings of the club will be discussions of a practical nature on the various parts of the motor car and the methods of taking care of the same.

RACIAL DEGENERATION.

To the Editors of THE LANCET.

SIRS,—Will any of your readers advise me where to obtain [illegible] statistics or notes on the subject of racial degeneration? Such source as army recruiting would be valuable.

I am, Sirs, yours faithfully,
Thornleigh, Swinton, Rotherham, Jan. 10th, 1904. B. C. STEVENS.

During the week marked copies of the following [illegible] have been received: *Coventry Herald, Birmingham [illegible], Reading Mercury, Mining Journal, Local Government [illegible], Liverpool Courier, Westminster Gazette, Pall Mall Gazette, [illegible] News, Irish Times, Nottingham Guardian, Aberdeen Free [illegible] (Weekly), Hertfordshire Mercury, Windsor and Eton [illegible] Standard, South Wales Daily News, Walsall Advertiser, [illegible] Advertiser, &c.*

ETEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 14th, 1904.

Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
29 83	S.W.	0 04	49	48	41	43	46	Foggy
29 82	W.	0 01	51	48	39	39	40	Cloudy
29 86	S W.	0 06	54	50	39	42	44	Cloudy
29 65	S.W.	0 10	51	47	37	40	41	Overcast
29 63	S W.	0 03	54	52	41	45	46	Foggy
29 27	S.W	0 32	67	56	46	52	53	Raining
29 98	W.	0 07	66	47	43	41	43	Cloudy

edical Diary for the ensuing Week.

OPERATIONS.

[illegible] , St. [illegible] M.) [illegible] M.) [illegible] uare [illegible] M.). [illegible] idon [illegible] St. [illegible] est- [illegible] lege [illegible] 30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat 30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), roat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea P.M.).

NESDAY (20th).—[illegible] P.M.), Royal Free [illegible] P.M.), St. Thoma [illegible] P.M.), St George's [illegible] St. Mary's (2 P.M.) ational Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan 30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt Northern entral (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.) ondon Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square 30 A.M.), Guy's (1.30 P.M.).

SDAY [illegible] 30 P.M.), [illegible] eorge's (1 [illegible] 30 P.M.), [illegible] ondon (2 P [illegible] letropolitan [illegible] 2 P.M.) Sa [illegible] Samaritan (9.30 A.M. and 2 30 P.M.), Throat olden-square (9 30 A.M.), City Orthopædic (2.30 P.M.), Soho-square 2 P.M.)

URDAY (23rd).—Royal Free (9 A.M.), London (2 P.M.), Middlesex 1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.) Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.) Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic .M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the ral London Ophthalmic Hospitals operations are performed daily.

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SDAY [illegible] aries' Hall, Blackfr [illegible] of Farmer: Home [illegible] Dr. T. W. Kelynac [illegible] Pulmonary Tuberc [illegible] Value of [illegible] are, W.).— [illegible] ing Water [illegible] , W.C.) — [illegible] n Districts [illegible] , Hanover- [illegible] volution of [illegible] loomsbury- [illegible] Prof. R. B. [illegible] W. Gadd: [illegible] ver-square, [illegible] Discussion.

[illegible] S, &c.

[illegible] Hospital, [illegible] es of the [illegible] Hospital, [illegible] al Remarks

ATIONAL HOSPITAL FOR THE PARALYSED AND [illegible] to (Queen- [illegible] a. [illegible] ndon Hos- [illegible] Practical

[illegible] Graduate Course.)

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.). 6.15 P.M. Dr. M. Dockrell: Syphilis. (Chesterfield Lecture.)

THE HOSPITAL FOR SICK CHILDREN [illegible] 4 P.M. Dr. Batten [illegible]

FRI [illegible]

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3 30 P.M. Dr. Batten: Family and Hereditary Disease.

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THE INDEX TO THE LANCET.

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A Lecture
ON
OLD UNREDUCED DISLOCATIONS OF THE SHOULDER-JOINT,
INCLUDING FIVE HITHERTO UNPUBLISHED CASES OF OPERATIVE TREATMENT, IN ONE OF WHICH GOLD PLATE WAS BURIED FOR 40 DAYS.

Delivered in the West London Post-graduate College on Dec. 21st, 1903,

BY C. R. B. KEETLEY, F.R.C.S. ENG.,
SENIOR SURGEON TO THE WEST LONDON HOSPITAL AND LECTURER ON CLINICAL SURGERY IN THE WEST LONDON POST-GRADUATE COLLEGE.

GENTLEMEN,—Dislocation of the shoulder-joint is the commonest of dislocations and one of the most liable to remain unreduced. This liability may be explained in the following way. The joint is thickly covered with both muscle and fat in the middle-aged males who are most liable to this injury, so that when swelling supervenes a wrong or doubtful diagnosis is apt to be made. The patients are not infrequently alcoholic and therefore careless of their persons and dilatory in reporting themselves to their medical attendant or in presenting themselves at hospital. The injury is not always a very painful one. Possibly one reason why it is sometimes confounded with fracture is that it usually is complicated with some minor fracture, especially with fracture of the greater tuberosity of the humerus. We have learnt this from the practice of operating on unreduced dislocations and also from the use of the x rays. The great majority of these dislocations are subcoracoid and it will be remembered that their reduction is usually attempted either by extension combined with leverage obtained by using the surgeon's foot or fist as a fulcrum or else by manipulation, using the attachment of the coraco-humeral ligament to the edge of the glenoid cavity as a fulcrum and often also combining with the manipulation extension applied to the upper end of the arm and at right angles to its long axis so as to prize the head of the humerus from beneath the coracoid or the clavicle. And it is not uncommon to combine with any method direct pressure with the fingers over the head of the humerus with a view to pushing it into the glenoid cavity.

The most justly popular of the manipulation methods is Kocher's and there is no better extension method than that known as Astley Cooper's—namely, with the heel in the axilla. Kocher's method, as is well known, is based mainly on the consideration that the upper and outer part of the capsule, including especially the strong bands which extend from the coracoid process to the humerus on each side of the bicipital groove, remains untorn. In order to relax this the upper arm is rotated strongly outwards. Previously, in order to bring the head of the humerus firmly against the edge of the glenoid, the elbow is pressed against the flank and, in resistant cases, backwards and towards the spine as well. Then the arm is raised in an antero-posterior plane up towards the front of the shoulder. The head of the humerus ought then to have been by these manipulations levered into position on the edge of the glenoid opposite the rent in the capsule and ready to slip into place as soon as the humerus is rotated inwards. Measures like these frequently succeed in old dislocations as well as in new, especially if they are used with skill, patience, and perseverance. (Great force should not be employed on account of its dangers.) Thus Kocher reduced 12 out of 13 dislocations by manipulation. Their age was as follows: one of three weeks, two of five weeks, three of seven weeks, four of three months, and two of four months. Other surgeons do not seem to have been quite so successful, though Kocher's pupil, Oeppi, says that one can reduce an old as easily as a recent dislocation. It is difficult to avoid a slight feeling of scepticism, especially when one has inspected the interior of an old unreduced shoulder-joint. The usually accepted limit for even attempting reduction of dislocated shoulders has long been three months. It is well known that success has occasionally followed attempts on much older cases, but only rarely. And many dangerous accidents have resulted from the employment of even moderate force. No reasonable person can suppose that a very old unreduced dislocation can be freed from its adhesions and from its new capsule, and a place remade for it in the glenoid now firmly adherent to overlying soft tissues and often to fragments of bone without the exercise of force.

SYMPTOMS.

Those of an old unreduced dislocation differ in some points from those of a fresh one. Instead of swelling and effusion of blood there is wasting of the deltoid and of other muscles. The absence of the head of the humerus from the glenoid and its presence elsewhere thus become very obvious. On the other hand, in some old cases the original projection of the elbow from the side becomes lessened, but not in all, at least until a very considerable time has elapsed. In some cases time and exercises increase the range of movement of the displaced shoulder-joint, but in others time diminishes it. The freedom of movement of the scapula on the trunk tends to increase. As a rule there is no difficulty in recognising an old dislocation of the shoulder, because the absence of the head of the humerus from the glenoid can be felt so easily as well as seen. Whether or not there is also a fracture is less easy to determine, but the x rays can be of great assistance. Neither in a skiagram nor even in the course of an open operation is it always possible to be sure whether abnormally placed bone has been chipped off, torn off, or altogether newly formed.

PROGNOSIS.

The longest series of cases of old dislocation of the shoulder treated at one hospital under one surgeon with which I am acquainted is that given by J. Finckh in his admirable account of the experience of Professor Bruns in the Tübingen Clinic. It includes exactly 100 cases. In 27 of these reduction was not attempted and in 73 it was. In nearly two-thirds of these 73 it was successfully effected. Much, of course, depended on the age of the dislocation. After the ninth week failure became usual—there were only two successes out of 16. Up to the ninth week 46 out of 55 were reduced—i.e., 84 per cent.:—

In the 2–3 week were 20 cases, of which 19 were reduced ... ... = 95 per cent.
In the 3–6 week were 24 cases, of which 20 were reduced ... ... = 83 per cent.
In the 6–9 week were 11 cases, of which 7 were reduced . ... = 64 per cent.
} = 84 per cent.

I think these figures give a very just idea of the general prognosis and that Finckh sums up the position well in the following words: "If no complication coexists the prognosis of dislocations two to four weeks old is absolutely favourable, up to the ninth week very good, since up to this point of time nearly four-fifths of all the cases were reduced. Cases of longer duration than nine weeks were only exceptionally reduced without a cutting operation." I will deal with the prognosis of cutting operations when I describe them under the head of treatment.

The non-operative reduction of old dislocations is attended with the same risk of accidents as is that of recent ones. First, as regards anæsthetics, there appears to be a special danger attached to the administration of chloroform to facilitate the reduction of dislocation of the shoulder-joint. Kocher states that Marchand collected 134 deaths from chloroform, of which no less than 11 occurred in reducing dislocations of the shoulder. I seldom or never permit chloroform to be given in such cases myself. In one of the few exceptions I have permitted to this rule for many years the patient was himself a surgeon and had his own way; but in one case in which I was about to attempt reduction of a hip chloroform was given contrary to my wish and there resulted a death from anæsthesia which to the survivors, including myself, was one of the most painful catastrophes I have ever witnessed. The great majority of recent shoulder dislocations and not a few older ones need no anæsthetic at all; and if one is required gas or ether should be given. If the patient struggles when the reduction has commenced one of two courses should be adopted: (1) either the surgeon should proceed without any more anæsthetic at all being administered, hoping to effect the reduction quickly; or else (2) he should desist altogether and the anæsthetist, carefully avoiding all hurry, should patiently and watchfully get the patient well under. I give this advice because deaths from anæsthetics have occurred in the following way. The patient has shown signs of consciousness as soon as the surgeon, commencing to operate, has touched some sensitive tissue or organ. The anæsthetist has then attempted to hurry the patient into a state of profound anæsthesia. The breathing has gone wrong or ceased a second or two before the anæsthetist, whom a long series of successful administrations has made unsuspicious, has realised what has happened. It has then been too late to retrieve the situation. If the breathing stops while strong extension is being used the surgeon should always desist.

Secondly, as regards *risk to vessels*. It should be remembered that serious accidents of this kind have occurred with the use of force described by reliable men like Mr. T. Holmes, for example, as moderate or even as "slight." The Tam O'Shanters and Souter Johnnies who form so large a proportion of these cases are apt to have unsound vessels, as, indeed, are more abstemious people of advanced middle age, and even in the healthiest subjects the adhesions and new fibrous tissue formed around the displaced head of the humerus frequently adhere to the axillary vessels. The great majority of old unreduced dislocations affect persons between the ages of 40 and 60 years. Another remarkable fact about these cases is that even with a perforated axillary artery there may be no loss of radial pulse at the wrist. This was observed both in Holmes's and in Callender's cases. There is also sometimes little or no pulsation of the large axillary swelling which forms and usually keeps increasing and is accompanied by pain in the arm which may become very severe and by the general signs of hæmorrhage, such for example, as pallor and restlessness. Nor is there always a bruit.

Thirdly, with regard to *injury to nerves*, minor nervous troubles such as pins and needles and numbness in the fingers occur sometimes and usually pass away, especially if assisted by rubbing and galvanism. But more serious troubles, including great pain, also occur and used to be regarded as the principal indication for operative measures which then generally took the form of excision of the humeral head. More rarely dislocation of the shoulder occurs in conjunction with such severe injury of the brachial plexus that surgery vainly attempts to afford a remedy. These terrible cases of injury to the brachial plexus or its roots more frequently, however, follow falls on the shoulder which do *not* cause dislocation. Dislocations of the shoulder, though they often are caused by falls on the shoulder, are more frequently the result of falls on the elbow or the hand. Even complete motor and sensory paralysis of the arm complicating dislocation of the shoulder is sometimes seen to pass off without operative treatment.

With regard to *complication by fracture*, the most common is that in which the greater tuberosity is broken off; the next most common is fracture of the surgical or anatomical neck. Less frequent are fractures of the edge of the glenoid fossa. I cannot give any trustworthy figures. The use of the x rays and the practice of operative reduction are showing that old figures bearing on these points are erroneous. Great œdema of the arm is sometimes seen.

With regard to the prognosis in cases of dislocation of the shoulder which remain unreduced, if observed for some years they are sometimes seen to improve wonderfully in the matter of usefulness. Not that the degree of all-round mobility of the new and abnormally placed joint becomes at all comparable to that of the old but it increases up to a certain point and is supplemented by increased mobility of the scapula. Nevertheless, the majority of unreduced dislocations of the shoulder are seen, even after many months, to inflict on their subjects great disability, especially in fulfilling the functions of the toilette. When nerves are compressed, pain and even paralyses further complicate the case and may be incurable without operation.

PATHOLOGY.

Of the changes in the relations of the bones I could not hope to equal, much less to improve upon, the description given by Sir William Flower in Holmes's "System of Surgery," second edition, vol. ii., p 813. Writing of fresh dislocations of the common or subcoracoid variety he says: "The head of the humerus lies on the anterior surface of the neck of the scapula, immediately below the coracoid process, in front of, internal to, and rather lower than, its normal situation. That part of the anatomical neck which separates the articular surface from the great tuberosity rests upon the anterior edge of the glenoid fossa. The subscapular muscle is raised from the neck of the scapula and stretched over the front of, or above, the head of the humerus. The muscles from the back of the scapula are drawn tightly across the glenoid fossa or one or more of them may be ruptured or detached from the bone. A portion or the whole of the greater tuberosity is frequently separated, when it may be drawn into the glenoid fossa by the action of the muscles inserted into it or may be retained in connexion with the humerus by the periosteum or the capsular ligament. The long tendon of the biceps is rarely, if ever, injured. (Footnote.—As Dr Hamilton has recently asserted that, contrary to what has been affirmed by Sir Astley Cooper, the tendon of the long head of the biceps is often broken asunder or detached completely from its insertion (op. cit., p. 535) I may mention that the statement in the text is founded on examination of numerous specimens and reports of dissections)." The truth is that the long head of the biceps is occasionally but exceptionally torn from its attachment. In all the 44 cases given in brief abstract in Reerink's collection of unreduced dislocations treated by arthrotomy or by excision this accident is not once noted. But it is significant that in the only two cases of which a *full* anatomical description is given by the same author (quoting from Jössel) the biceps tendon was torn from the glenoid cavity in one case and ended as a small fibrous band in the bicipital groove. The biceps tendon was intact in all the five dislocated shoulder-joints I have operated on myself. "The muscles that descend from the coracoid process to the humerus are stretched by the projection of the head of the bone forwards and the great vessels and nerves are displaced inwards Occasionally the circumflex nerve is pressed upon to such an extent as to cause paralysis of the deltoid muscle," &c.

In old unreduced cases "in process of time a new shallow socket is formed upon the anterior surface of the neck of the scapula, partly by absorption of old bone and partly by deposit of new around its edge." In subcoracoid dislocations "the new cavity is formed more or less at the expense of the anterior portion of the glenoid fossa, which is gradually worn away, so that in some cases the original socket is finally almost entirely lost. A corresponding change takes place in the head of the humerus; where it rests upon the edge of the glenoid fossa absorption occurs, so that a groove is excavated, usually between the articular head and the great tuberosity. With continued friction this increases in size simultaneously with the change in the scapula; the two accommodate themselves to each other and utimately the head of the latter bone presents a double articular surface, separated by a vertical ridge, the posterior portion being part of the old glenoid cavity, the anterior the newly formed socket. These respectively articulate with the two sides of a wide groove placed vertically on the head of the humerus, and thus a rude kind of joint, which allows of a certain amount of motion, is formed." "The under surface of the coracoid process, especially near its tip, is almost always found smooth and eburnated, having entered into the formation of the new articulation."

The above changes in the glenoid and in the humeral head do not take place in intracoracoid dislocations, and in subglenoid cases the scapular new articular surface is formed "on the upper part of the anterior border of the inferior costa of the scapula, encroaching considerably upon the lower and anterior part of the glenoid fossa" (Flower).

This does not by any means end the account of the salient anatomical features of an old unreduced dislocation of the shoulder. The new joint, as seen in an open operation, is not so much the result of absorption as of new formation. In or near its edges, or parts of them, is found new bone, often in the form of separate osteophytes. The cavity is deepened by fibrous tissue which surrounds the head of the humerus, forming a new capsule and closing the hole in the old capsule. This fibrous tissue is partly due to degeneration of the muscles which stretch over the head of the humerus and is partly derived from such fragments of capsule, of fat, of cellular tissue, of fascia, and of aponeurosis as lie in contact with the dislocated head. In a few weeks it becomes more and more impossible to distinguish these various components, which, so to speak, fuse together. A thin layer of cartilage may form on the new joint surface of the scapula, but in the glenoid fossa the cartilage either altogether disappears or leaves only a few scattered "islands" behind. The new capsule has a glistening interior surface as if lined with synovial membrane, which apparently secretes a rather scanty synovial or pseudo-synovial fluid. The glenoid fossa is filled with tissue, sometimes formed by adhesions of the outer part of the capsule and of the external rotator muscles and sometimes partly of these and partly of bone torn from the greater tuberosity of the humerus. The head of the humerus besides being altered in the manner already related is often greatly changed as a sequence of fractures of the greater tuberosity or of the anatomical or of the surgical neck. This change is usually increased by the formation of callus, of osteophytes, and of ossifications in the attached muscles. In one case it was described as resembling in shape the upper extremity of the femur. In one of my cases it was greatly increased in the transverse diameter.

TREATMENT.

The choice lies between, on the one hand, endeavouring to make the best of this new joint by exercises, massage, and electricity, and on the other attempting to effect reduction by means of (1) manipulation or extension; (2) open incision; and (3) excision. Subcutaneous division of soft parts

otic operation.

were reported

atomical neck

followed by an endeavour to place the upper end of the shaft into the glenoid has been recommended. I should be loth to try this mode in the case of the shoulder because I have seen it so utterly fail in the case of dislocation of the head of the radius at the elbow. After a mere division of a bone the fragments, even when carefully displaced, lie alongside each other and tend to unite ultimately. Passive movements are usually too painful in such cases to be used effectually.

The attempt at reduction without cutting.—This may reasonably be tried any time up to the end of the fourth month except in old people with atheromatous arteries. First of all Kocher's method should be applied (1) without anæsthesia and (2) with ether or with chloride of ethyl. As it is *not* involuntary muscular contraction which makes the difficulty the anæsthetic is given to prevent pain and need not always be pushed to the most profound depth. Remember what has already been written above about the danger of chloroform in this class of cases. Kocher's method having failed, extension and circumduction may be tried. The means of counter-extension should not press upon the folds of the axilla. To prevent this Skey invented his knob. In the absence of such an instrument some large firm pad should be placed in the axilla and the counter extending force made to bear upon it. The extension should be made in four directions: (1) extension in the line of the axis of the humerus downwards; (2) counter extension upwards; (3) from the upper part of the humerus just below the insertion of the pectoralis major, outwards; and (4) counter-extension to force 3, from the side of the chest across the thorax. If a machine is used my fracture extension machine will do, *but a dynamometer must be employed.* The degree of force justifiable would depend on the age and development of the patient. I think 100 pounds is the outside which should

by pulling one end of a simple loop or by cutting a cord with a sharp knife, which should lie open and close at hand. Guérin reported a case in which the forearm was torn off. After the forcible extension and rotation a second trial of Kocher's method may be made. There should be no hurry. Many accidents have followed such attempts at reduction, even when reported as having been of gentle character.

Fracture of the surgical neck of the humerus is not very frequent. It occurred in four out of the 73 cases in which reduction was attempted in von Bruns's clinic. Of these four,

n a case recorded by

he reduced the upper

A false joint some-

follows. The functional result may then be good. A false joint followed a case of Albert's in which the surgical neck broke and he pulled the head into the glenoid with two hooks. This was, of course, an open operation. The shaft of the humerus has been broken in employing Kocher's method. Limited paralyses, e.g. of the fingers, are sometimes caused but they are usually only temporary. However, main cords of the brachial plexus are said to have been torn. Flaubert reports a case.

The structure especially endangered is the axillary artery. Many cases have been collected by Flaubert, Malgaigne, Callender, Le Fort, Willard, Marchand, Körte, and Stimson. In Stimson's collection of 44 cases the axillary vein alone was ruptured in three (Froriep, Price, and Hailey), although he thinks the last one doubtful, and the artery and vein together in two (Platner and Baum). In most of the others the axillary artery or one of its branches was injured, but in some the source of the hæmorrhage remains uncertain. The upper was always the part of the artery injured. In a minority of the cases only a small opening was found and that on the anterior wall of the artery (see, e.g., Callender's case, op. cit). In more than half the cases the dislocation was recent (less than three weeks old). Sometimes it is certainly caused by the dislocation and not by the reduction. Often great force had been applied. As I have already written Callender and *Holmes say the force used in their* cases was moderate or even slight. Stimson says that "the accident is most to be apprehended when the elbow is raised in abduction to the height of the shoulder, or is carried, as in Callender's case, across the chest and face in a wide movement of circumduction; and for this reason, that in these movements the dislocated head of the bone is turned downward into the axilla and the vessels which lie upon its inner side are pressed down before it and put upon the stretch, while those branches which run almost directly outward, the subscapular and circumflex, and are fixed to the tissues amid which they branch, are directly and forcibly elongated."

The symptoms of rupture of the axillary artery vary. Sometimes, as in Callender and Holmes's cases, a large diffuse swelling appears quickly in the axilla and grows to an alarming size, discolouration also appearing, but no pulsation and little or no bruit, while even the radial pulse may be little affected. In other cases the ordinary signs of aneurysm, pulsation and bruit, are present. Some cases have been so chronic and the tumour so small that aneurysm has

have been incised. Rupture of

est a serious accident, but the

e other authors mentioned, being

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It is re

any ope

the accident to amount to 70 per cent.

In a case of rupture of the axillary artery associated with dislocation of the shoulder I should be disposed (1) to place a temporary ligature on the subclavian; (2) to clear blood and clots out of the axilla, to tie any branch of the axillary found torn or the axillary itself if it was torn in two or nearly in two, but to leave it untied if there was merely a small oval hole in it (as occurred in 5 cases out of 32); this small hole I would close by suture if that operation proved easy; in any circumstances I should pack the axilla carefully with antiseptic or aseptic gauze. (3) If the patient's condition was not of the best, I should immediately inject neutral saline solution either subcutaneously or into one of the veins exposed by the operation. Owing to the everyday practice of clearing out glands, surgeons nowadays are much more at home in operating on the axilla than were the surgeons, great men as some of them were, who reported the cases collected by Stimson.

After the operation careful bandaging would be, of course, essential and should fix without compressing the whole arm and hand to the trunk. If the dislocation still required reduction, and especially if attempts at reduction had been made and failed, it would probably be best to defer trying to reduce it. But all would depend on the age and condition of the patient and on the age of the dislocation.

Other modes of using extension besides (1) manual force, (2) the old-fashioned pulleys and (3) machine extension are (4) continuous elastic extension and (5) the use of Stimson's perforated couch. Continuous elastic extension is mentioned by Ceppi as having been used by Legros, Th. Anger, and A. Després. The use of a dilatable indiarubber bag in the

Cock in a case of 25 days'

axilla,

An air pad of rubber

standi

was firmly bandaged to

was pl

pad on the third day

the side.

reduction had taken place. Stimson's couch is perforated to permit the arm to pass through A weight of ten pounds is attached to the hand which, of course, hangs down beneath the couch. Its dragging gradually effects reduction. This is obviously a very simple plan, not alarming to the patient, and, I should think, not likely to be very painful.

Two other forms of diabetic bread are very useful—casoid bread and casoid meal bread.[2] Both are practically free from starch and sugar and are thoroughly reliable. These preparations are composed chiefly of casein. Chemical analysis (by E. J Parry, B.Sc) shows that the casoid meal bread contains 38·9 per cent. of proteids and 13·9 per cent. of fat. Some diabetic patients prefer the protene bread, some the casoid meal bread, and many like the casoid bread best. I think the patient may be safely allowed to take the one he likes best or to combine them in any way as all three specimens are quite satisfactory.

Aleuronat and cocoanut cakes are also of service.[3] They may be prepared in the following manner. Two ounces of desiccated cocoanut powder are mixed with a little water containing a small quantity of German yeast. The mass is then formed into a paste and this is kept for half an hour or longer in a warm place. The small amount of sugar contained in the cocoanut is almost entirely decomposed by the fermentation produced by the yeast and the cocoanut paste becomes spongy. Two ounces of aleuronat, one egg beaten up, and a small quantity of water, in which a little saccharin or saxin has been dissolved, are now added to the cocoanut and the whole is well mixed until a paste is formed. This is spread out on a tin and divided into cakes which are baked for 20 or 30 minutes. In a case of diabetes of medium severity I found that the daily sugar excretion was reduced by 2000 grains and the daily amount of urine by 80 ounces when aleuronat and cocoanut biscuits were given in place of white bread. Almond or cocoanut biscuits can also be prepared according to the directions just given, aleuronat being omitted and only cocoanut powder or almond flour being used.

Milk contains about 4 per cent of objectionable milk sugar, but it also contains a large percentage of valuable fat and albumin. Cream contains less milk sugar and about seven times the amount of fat; it may be allowed in all forms of diabetes. In some cases of diabetes ordinary milk does not increase the sugar excretion; in such cases it may be allowed freely. In other cases milk increases the sugar in the urine and in these cases a substitute is desirable. I have prepared an artificial milk, practically free from sugar, which may be taken in unlimited quantities by diabetic patients in all forms of the disease. Four tablespoonfuls of cream are added to a pint of water and well mixed. The mixture is allowed to stand in a cool place. At the end of 12 hours the fat of the cream will have floated to the surface. (It can be skimmed off with a teaspoon and on examination it will be found practically free from milk sugar which will remain dissolved in the pint of water.) The cream fat is skimmed off from the surface of the water in the first vessel and then placed in another vessel, and to it are added water, the white of an egg, and a little salt (and a trace of saccharin if desired) A palatable artificial milk can thus be prepared which is practically free from milk sugar. (The egg albumen may be omitted or added according to the patient's preference.) A sugar-free milk (prepared according to the directions given by Dr. R. Hutchison) can also be obtained,[4] which is of much service to diabetic patients; it may be diluted with water or soda-water.

As regards beverages those which are free or almost free from carbohydrates can be taken (indicated in the diet sheet shown at the lecture). I believe that ordinary beer and many non-alcoholic forms of beer are injurious Also it is desirable that the amount of alcohol in the form of spirits should be very limited, especially in the milder forms of the disease.

Many patients suffering from the milder forms of diabetes derive much benefit from a visit to Carlsbad or Neuenahr. It is difficult to estimate what share the drinking of the waters of these spas may have had in the causation of improvement. But it appears probable, from the observations of continental physicians, that the drinking of the waters at the spas whilst *hot* from the spring has some effect in diminishing the sugar excretion. In the severe forms of diabetes a visit to these spas is useless and often the long journey has a most injurious effect on the patient.

TREATMENT BY DRUGS.

Whilst it must be admitted that we have no sp
remedy for diabetes I believe that several drugs have
tinctly beneficial action. I think I have demonstrated c
that two drugs at least—salicylate of sodium and as
given separately or combined—have a definite acti
diminishing the sugar excretion in *certain* cases of dia
of the milder forms. These conclusions are based on
observations made on cases of diabetes in the wards c
Ancoats Hospital. The patients have first been kept fc
or 14 days or longer on ordinary hospital diet or on
similar to that which they were taking before admiss
the hospital. During this period no drug has been
except a few minims of peppermint water and the
excretion has been determined daily. It has thus
possible to estimate the constant sugar excretion apart
drug treatment. Then for a period of two or three we
longer salicylate of sodium or aspirin has been given.
sugar excretion has diminished. The drug has been
discontinued and peppermint water given (the diet
kept unaltered). The sugar excretion has increased. Si
observations have been repeated on the same patient,
times on many occasions, with the result that whils
salicylate of sodium or aspirin was being taken the
excretion has diminished. I have published records of
cases in 1901 and 1902[5] Since these dates I have had si
favourable results in other cases of the mild form
diabetes in hospital and private practice. (Charts sho
the good effects of these drugs on the sugar excretion
shown at the lecture. In some of the cases the lecture
indebted to Dr. F. G. Hack and previous house physicia
the Ancoats Hospital for assistance in the sugar estimati
The diminution of the sugar excretion has not been d
the occurrence of any complications and the patient
felt quite well whilst taking the drugs.

Neither sodium salicylate nor aspirin is a specific
diabetes. I have never found any definite diminutic
the sugar excretion under the action of these drugs in
most severe forms of the disease; also in some of
milder forms they have not had any marked effect; b
other cases of the milder forms I believe I have obta
conclusive evidence of their beneficial action. As reg
the mode of administration, I have usually given soc
salicylate in peppermint water, commencing with
grains three times a day and increasing up to 15 gr
three, four, or sometimes five times a day if necess
With large doses it is important to watch for toxic sympt
and to discontinue the drug if these occur. Pure nat
sodium salicylate is the better preparation. Aspirin is
given as a powder—ten grains twice a day, rapidly increa
the dose up to 15 grains four or even five times a day.
best to order the aspirin powder to be taken in a little w
to which a drop of lemon juice has been added. Soda-w
or alkalies should *not* be taken just after the aspirin pow
otherwise the drug would be liable to decompose in
stomach and cause gastric symptoms. Some patients
the sodium salicylate better than aspirin; others
aspirin better. This latter drug is less liable to cause to
symptoms in large doses. Sometimes cases are met w
in which one of these drugs can be taken but not the ot
Recently, I have often combined the two drugs with g
results, giving sodium salicylate up to 15 grains three
four times a day and one powder of aspirin, 15 grains,
night. Whenever the two drugs are given it is import
to commence with small doses and steadily to increase
quantity, watching for bad effects.

By a restricted diet, by the use of casoid or prote
bread, sugar-free milk, &c., along with the administrat
of salicylates or aspirin, often satisfactory results can
obtained in the milder forms of diabetes. (See chart
the end of this article.) The salicylates and aspirin are
service especially, because they often enable satisfacto
results to be obtained without the employment of an ab
lutely rigid diet. Cases are, however, sometimes met w
in which salicylate and aspirin cannot be taken owing
the disagreeable symptoms that they produce even in sm
doses.

Many other drugs have been used in the treatment
diabetes, and it is probable that opium, morphia, codei
sumbul, uranium nitrate, arsenic, and antipyrin have
certain cases some beneficial effect. An objection to th
first three drugs is their constipating action, and this

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[2] Prepared by Messrs. Callard and Co., Regent-street, London.

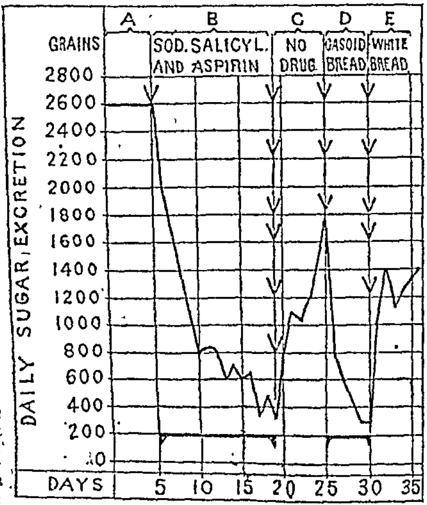
[3] Aleuronat is a vegetable albumin, first recommended for diabetic patients by Professor W. Ebstein. Recently he has employed other forms of vegetable albumin, ergon, roborat (recommended by Loewy and Pickardt), and casein (recommended by Schreiber). See Handbuch der praktischen Medicin: Ebstein and Schwalbe. Stuttgart, 1901.

[4] This milk can be obtained from Messrs. Clay, Paget, and Co., 23, Ebury-street, Eaton-square, London, S W.

[5] Brit. Med. Jour., March 30th, 1901, and Dec. 27th, 1902.

especially undesirable in the most severe forms of the disease, since constipation appears to predispose to the onset of coma. It is important, therefore, when these drugs are given that care should be taken to keep the bowels regular In the most severe forms of diabetes, in which the urine gives a deep brownish-red colouration with perchloride of iron, I believe the alkaline treatment, bicarbonate of sodium in large doses, is of some service in postponing the onset of coma The dose should be steadily increased up to two, three, or four drachms or more daily. The bicarbonate is best taken in frequent doses in soda-water or milk. It is very important not to produce gastric disturbances by the sodium bicarbonate, but it is remarkable how well these large doses are usually taken by diabetic patients.

Chart showing Influence of Salicylates and Aspirin, and also of a Rigid Diet, on the Sugar Excretion in Diabetes.



A, Period of 20 days five only represented on the chart. Ordinary hospital diet, including usual amount of white bread and milk but excluding potatoes and sugar, which had not been taken for several years. Peppermint water one drachm three times a day. Sugar excretion practically stationary, average 2690 grains daily. On the twentieth day sugar excretion 2626 grains. B, Diet kept the same. Sodium salicylate 15 grains four times a day + aspirin 15 grain [illegible] grains. [illegible] aspirin [illegible] cretion [illegible] same except [illegible] eal [illegible] to [illegible] oid [illegible] int [illegible] ily. [illegible] tra- [illegible] ity [illegible] amount, [illegible] to [illegible] ounces daily during first week]

Isolation Hospital for Teignmouth.—At the [illegible]eeting of the Teignmouth (Devon) urban district council [illegible]eld on Jan. 12th it was decided to apply to the Local [illegible]overnment Board for sanction to borrow £7100 for the [illegible] of an isolation [illegible] The hospital [illegible]

Laryngological Society of London.—At the [illegible]elfth annual general meeting of the above society, held [illegible] Jan 15th, the following were elected officers for the [illegible]suing year:—President: Dr P McBride. Vice Presidents: [illegible]r. A. A. Bowlby, Dr. Percy Kidd, Mr Charters J. Symonds, [illegible]d Dr. W. Milligan. Honorary treasurer: Mr. W. R. H. [illegible]ewart Honorary secretaries: Dr. E Furniss Potter and [illegible]r. P. R. W de Santi. Council: Dr. W Permewan, Mr R [illegible]ake, Mr. L. A Lawrence, Dr. L. H. Pegler, Dr J. Walker [illegible]ownie and Dr James Donelan. In the evening the annual [illegible]nner of the society was held at Prince's Rooms, Piccadilly.

ON CERTAIN NEW METHODS OF BLOOD EXAMINATION WITH SOME INDICATIONS OF THEIR CLINICAL IMPORTANCE.

By A. E. WRIGHT, M.D Dub.,
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An exhaustive examination of the blood is impossible with the present methods of collecting blood from the patient. When the blood is collected into tubes or capsules and is allowed to clot there the serum alone becomes available for examination. When blood films only are prepared we are confined to a histological examination of the corpuscular elements. When, lastly, blood is drawn off into a diluting fluid for the enumeration of the corpuscles we are tied down to this particular examination. These limitations can be transcended by drawing off the blood into a calibrated capsule charged with a measured quantity of citrate of soda solution. The blood thus prevented from clotting furnishes for our examination all the different blood-elements: red corpuscles, white corpuscles, blood-platelets, and plasma. The red corpuscles are furnished in a form in which they can be employed indifferently for histological examination and for quantitative estimation. Even more than this is achieved in the case of the white corpuscles. These are furnished in a form which admits not only of their histological examination and enumeration but also of the measurement of the phagocytic power which accrues to them in the plasma or as the case may be in any other medium which may have been substituted for this.

Method of collecting blood into a calibrated capsule charged with a measured volume of citrate of soda solution.—The capsule with recurved limb already figured by me in previous papers[1] is the form of capsule best adapted to the procedure described below. For the purpose here in question it is charged with a quantum of citrate of soda such as suffices to keep the blood which is received into it liquid. The capsule is further furnished with a fiduciary mark to indicate the point to which it is to be filled in with blood. The calibration of the capsule and the filling in of the measured charge of citrate of soda solution can be accurately and expeditiously carried out by the aid of a pair of automatic pipettes. The respective cubic capacities of these are so adjusted as to stand to each other in the quantitative relation which is to obtain between the blood and the citrate of soda solution.

Method of making the automatic pipettes.—The smaller of the two automatic pipettes is made as described in a previous paper in The Lancet[2] The procedure is varied only in the respect that 50 cubic millimetres, more or less, in lieu of 5 cubic millimetres, of mercury are employed and in the respect that the orifice of the pipette is in the course of construction drawn out into a point in the flame of a peep light. The larger automatic pipette which serves for calibrating the blood capsule is made in the following way.

A piece of glass tubing is taken in hand. It is drawn out into a [illegible] stem and this is again drawn out into a sharp point. [illegible] matic pipette a volume of mercury [illegible] 00 cubic millimetres and accurately [illegible] is introduced into the neck of the [illegible] pass down some little distance into [illegible] 1) is [illegible] the [illegible] the [illegible] the [illegible] the [illegible] it in such a manner as to bring the [illegible] indicated by A in Fig. 2 The fiduciary mark into [illegible] is by the aid of the flame of a peep light narrow tube thus obtained [illegible] the fiduciary mark into a tube of such fineness as [illegible] out at the fiduciary [illegible] This done [illegible] ng back the [illegible] d to place a [illegible] he mercury [illegible] ng out the [illegible] The [illegible] the mark B and breaking it off [illegible] y. A thick layer of sealing-wax [illegible] This effected, a covering tube is [illegible] wider tubing and breaking it prepared by [illegible]

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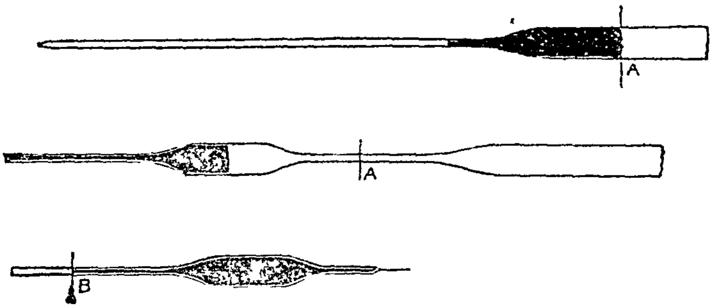
[1] Brit Med Jour, Feb 5th, 1893; Proceedings of the Royal [illegible] 1902, The Lancet, July 25th, 1913, p. 214.

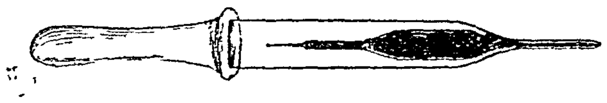
[2] Thrombosis in Typhoid Fever, The [illegible]

Figs. 1, 2, 3.



across just below the neck. Into this covering tube we insert the measuring tube from above and draw the capillary stem down through the neck. Finally, we apply heat in such a manner as to melt the sealing-wax and to make an air-tight joint (Fig. 4).

Fig. 4.



Method of calibrating the blood capsule and charging it with the citrate of soda solution.—Having broken off the points of both the recurved and of the straight limbs of the blood capsule the larger automatic pipette is taken in hand. Placing a rubber teat over the upper end and making pressure upon this a negative pressure is established in the interior. The orifice of the automatic pipette is now inserted into a reservoir of mercury and the metal is allowed to flow in until the bulb is full. When this has been accomplished the point of the pipette is withdrawn from the mercury and is brought in contact with the orifice of the recurved limb of the blood capsule (Fig. 5). By pressing upon the teat the mercury is in an almost automatic manner transferred to the capsule. The mercury in the blood capsule is shaken together and the capsule is tilted in such a manner as to bring a column of mercury back to the neighbourhood of the orifice through which it was introduced. The height at which the mercury is standing in the recurved limb and in the barrel of the capsule is now marked off with a glass writing pencil. The smaller automatic pipette is now taken in hand (Fig. 6). A negative pressure having been established in its interior a small bead of mercury is drawn into the orifice of the tube. The point of the pipette is then transferred from the vessel of mercury to a vessel containing a 4 per cent. citrate of soda solution made up in physiological salt solution. On relaxing the pressure on the teat the pipette sucks up the citrate of soda solution until the bead of mercury which is carried up in front of the column of fluid arrives at the terminal hair-fine tube and there establishes a block which prevents any further intake (Fig. 6). The point of the pipette is now applied to the orifice of the recurved limb, pressure is made on to the teat, and the watery fluid transfers itself to the capsule in an even more automatic manner than was the case with the mercury. The charged capsule may either be immediately employed or its ends may be sealed and it may be put aside till required.

Fig. 5.

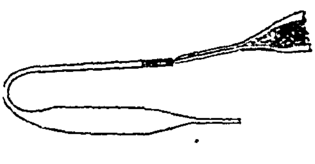
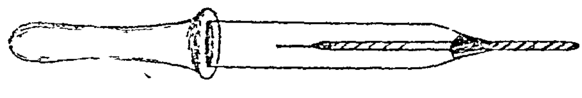


Fig. 6.



Method of filling in blood from the finger.—The extremities of the capsule having been broken off a prick is made in the side of the finger with a hypodermic needle. A handkerchief is then wound round the digit from above downwards in such a manner as to render the extremity of the finger definitely turgid. Pressure is now made upon the pulp and the blood as it emerges from the prick is received into the recurved limb of the capsule to con mingle there with the citrate of soda solutio When the blood has reached the fiduciary ma the upper end of the capsule is warmed such a manner as to rarefy the contained ai The upper limb is then immediately sealed u As soon as the glass has cooled and the co traction of the air has drawn up the blo from the recurved limb into the body of tl capsule, this last is shaken to effect thoroug mixture of the citrate of soda and blood.

Appearance of the blood as it settles down in the capsule.—The advantage of the method begins to exhibit itself with a very few minutes. Figs. 7, 8, 9, which are taken fro actual specimens, exhibit the appearances of three differe bloods. Fig. 8 represents a blood drawn from a patie suffering from Bright's disease. The volume of the co puscular sediment is approximately normal. The plasm has a milky aspect. Fig. 7 represents blood taken fr a patient the subject of extreme anæmia.[3] The chara teristic feature of the blood is the small volume of t corpuscular sediment. Fig. 9 represents blood drawn fro a leucocythæmic patient.[4] The exaggerated depth of t layer of white corpuscles is the salient feature. A notic able feature also is the reduction in the red corpuscl Equally characteristic is the appearance of the blood in cas of jaundice. Here, and the same holds true also in so cases where active hæmolysis is going on, the plasma definitely yellow.

Fig. 7.

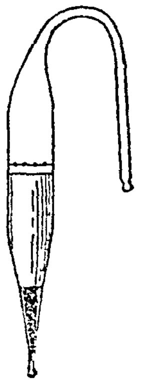


Fig. 8.

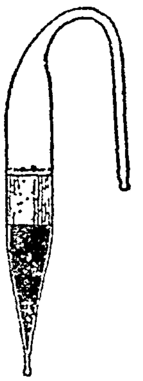
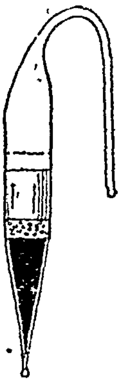


Fig. 9.



Further procedures.—The further procedures may undertaken at any convenient time after the withdrawal the blood. Opportunity is thus afforded for the conveyan of blood to the laboratory or, if need arises, for its tran mission by the post. In the following I will confine mys to describing certain new developments in connexion wi the methods of blood examination.

Quantitative estimation of the corpuscular elements.—T defects of the hæmocytometric method are well understoo They are summed up in the fact that the results of a blo count may deviate from the truth to practically an unlimit extent if the calibration of the apparatus is at fault or if t operator is either unwary or wanting in skill. A furth regrettable feature in the hæmocytometrical method is t unsuitability of the method for purposes of demonstratio The enumerator alone can take personal cognisance of t results. The only alternative which at present offers is t measurement of the corpuscles by the hæmokrit. While t principle of this method has met with general approval i particular application in the hæmokrit is open to obje tion on the ground that it involves recourse to a highl geared centrifuge and manipulation of somewhat delica apparatus. In point of fact, nothing of this kind necessary. The volumetric measurement of the corpuscles can be carried out in a perfectly effective manner by the simple procedure of filling in citrated blood into a capillary tube which has been marked off into a series of divisions of equal cubic capacity. In the case where the result of the measurement is required with the minimum of delay the graduated stem of the capillary pipette may be broken off short at the neck and the hand centrifuge may be called into use. Ordinarily the blood may simply be left to sediment overnight. By the next morning sedimentation will be practically complete and the number of volume divisions occupied by the corpuscles can be read off at a glance. As indicated in Figs. 11 and 12 the number of volumes of corpuscles corresponding to ten divisions of the undiluted blood may range from one or below one in cases of very extreme anæmia to six divisions (or a little less) in the normal adult male. The following is a method which allows of the division of a capillary pipette in an expeditious manner into any desired number of divisions of equal cubic capacity.

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[3] The number of red corpuscles in this patient's blood, as determin by the hæmocytometer, was 650 000 per cubic millimetre.

[4] The number of leucocytes in this patient's blood—as determin by the hæmocytometer—was just over 500,000 per cubic millimet The diagnosis of leucocythæmia was arrived at in the course of a f minutes by the appearance of the blood as it settled in the capsule.

FIG. 10.

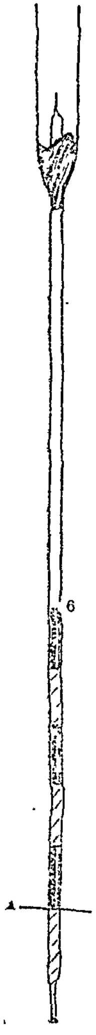


FIG. 11.

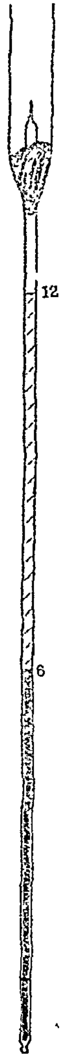


FIG. 12.

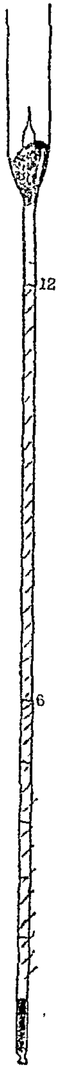
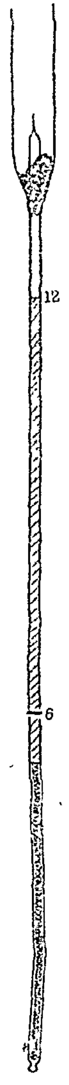


FIG. 13.



Instructions for dividing the stem of a capillary pipette into any desired number of divisions of equal cubic capacity.—Take in hand a piece of glass tubing drawn out into a capillary stem and draw it out below into a fine point. The capillary pipette thus obtained may be employed just as it is, or it may if desired be formed into a throttled pipette similar to the pipettes shown in Figs. 10 to 13. In any case fit a tightly fitting rubber teat upon the upper end of the pipette and inscribe a mark upon the stem at a distance from the orifice corresponding to about one-twelfth of its total length. Making pressure on the teat and holding the pipette at a considerable angle to the vertical thrust the pointed end below the surface of some mercury which has been placed in a watch glass and which has been covered in with water. Now let the mercury run up and fill the tube up to the fiduciary mark A, Fig. 10, then push the point of the pipette out through the mercury into the water and let a similar volume of this last pass up into the tube. Withdrawing again the point of the pipette under the cover of the mercury, go through the whole manœuvre again until the tube has, as is shown in Fig. 10 been filled in with a series of six alternate volumes of water and mercury. This done withdraw the point of the pipette from the watch glass and mark off with a pencil a series of six divisions. Having marked off these six (which will be all that will be required for the measurement of the corpuscular sediment), bring the series of six alternate volumes of mercury and salt solution further up into the tube, and *taking off in this measurement from the* sixth division inscribe upon the upper end of the capillary stem a fiduciary mark corresponding to the twelfth division.

Instructions for filling in the graduated capillary pipette with citrated blood.—Shake up first the contents of the blood capsule in such a way as to bring into suspension the corpuscles which may have settled down. Then fitting a teat to the graduated pipette draw up into it from the capsule exactly 12 volumes of citrated blood. Dealing as we are with a five sixths dilution of the blood these 12 divisions will correspond to 10 of the undiluted blood. After rectifying the position of the column of blood in the tube, seal up the pointed extremity of the tube in the flame of a peep light and—unless in [illegible] is to be employed—place the [illegible] a rack. Figs 11, 12, and 13 [illegible] furnished by filling in in this [illegible] pipettes respectively with normal blood and with blood from a case of extreme anæmia and a case of Bright's disease.

Preparation of blood films from corpuscular sediment.—When we desire to proceed to the histological examination of the corpuscles we may with advantage make our films either from the corpuscular sediment generally or as the case may be *from a particular stratum of the corpuscular* sediment, diluting in each case with such amount of plasma as may be convenient. This method of procedure enables us even in the case of the most extreme anæmias—where this is by the ordinary technique impossible—to concentrate in the microscopic field a sufficiently large number of the corpuscular elements to make an effective histological examination. The procedure promises further advantages, for judging from the fact that it is possible by diluting the blood with an equal bulk of physiological salt solution to obtain the white corpuscles separate from the red it will probably be found possible by an appropriate dilution of the blood to bring together into a particular stratum of the sediment the particular elements which happen to constitute the object of our search. By this process of levigation it may, for instance, prove possible to bring together, as the case may be, red corpuscles charged with malaria parasites, nucleated red corpuscles, and free living parasitic elements of all kinds.

Method of preparing slides for the reception of blood films.—In connexion with the histological examination of the blood passing reference may appropriately be made to, perhaps, the most important factor involved in the preparation of a blood film. This factor is the preliminary treatment of the slide. Popular prejudice to the contrary notwithstanding, it will be found that the really important thing in connexion with the slide is to secure that its surface shall be rough. The polishing of the surface and the defective adherence between the blood and the slide which results from it furnish the opportunity for the piling up of the corpuscles one upon the other under the influence of the surface tension of the fluid. The polishing of the slide is, in other words, directly responsible for the patchiness of the ordinary blood film. I find it to be a wise procedure to boil all slides in strong caustic potash until their surface has become definitely hazy. It is hardly necessary to point out that such haziness, dependent as it is upon inequalities of the surface, altogether disappears when the oil or, as the case may be, the Canada balsam is placed upon the slide.

Estimation of the quantity of blood platelets.—Milkiness of the blood fluids is a characteristic feature of the blood in many cases of diabetes and Bright's disease. It is met with also as a temporary and less conspicuous phenomenon in the healthy in the course of active digestion. This condition of the blood—it is commonly misnamed lipæmia—appears in point of fact to depend upon an extraordinary excess of blood platelets[4] Two points of interest with regard to these may be noted—first, that blood which contains platelets in quantities sufficient to render the plasma absolutely milky is not more coagulable than ordinary blood; and secondly, that it may be possible—and this has been suggested to me by my friend, Captain Stewart R. Douglas, I.M.S.—to proceed to the enumeration of the platelets in citrated plasma. This suggestion has its justification in the circumstance that the platelets do not in the case of citrated blood run together into clumps and they remain in suspension indefinitely after the settlement of the corpuscles.

Quantitative estimation of the amount of albuminous substance in the plasma or serum.—We shall remain in ignorance with respect to the causes of many œdemas and with regard to the proper method of treating these conditions just so long as we neglect in dealing with these disorders to investigate the character of the circulating blood fluid and of the lymph. What is perhaps most urgently required for such an investigation is a method of determining the content of the blood in albuminous substances. Until a better method shall have been elaborated the following will, I think, render useful service.

Principle of the method.—The method here proposed aims at the determination of the degree of dilution to which the blood may be subjected before it loses the property of coagulating into a stiff jelly when subjected to a temperature just below that of boiling water. The apparatus required is a capillary tube, a little mercury, water at a temperature just below boiling point, and a glass-cutting knife, or in default of this a pair of small bone forceps. The material subjected to examination may be any sufficiently concentrated albuminous fluid. In particular it may be the plasma, serum, blister fluid, or pericardial, pleuritic, or ascitic effusion.

Procedure.—The first step in the procedure is to make an appropriate series of dilutions of the fluid. In dealing with blood I have commonly employed in addition to the undiluted serum dilutions of $\frac{5}{6}$ths, $\frac{4}{6}$ths, $\frac{3}{6}$ths, $\frac{2}{6}$ths, and $\frac{1}{6}$th. A series consisting of undiluted serum and in association with this $\frac{7}{8}$ths, $\frac{6}{8}$ths, $\frac{5}{8}$ths, $\frac{4}{8}$ths, and $\frac{3}{8}$ths dilutions of serum would be more appropriate.

The dilutions first spoken of are made as follows. The stem of a capillary pipette is, by the method already described above, divided into six equal divisions. By the aid of a rubber teat this tube is filled with serum up to the fifth division. One volume of physiological salt solution is then aspirated into the tube and the whole is blown out and mixed upon a glass slide. Four volumes of this mixture are re-aspirated into the tube and an additional volume of diluting fluid is added. This furnishes a dilution of $\frac{4}{6}$ths. After it has been mixed upon the slide three volumes of the mixture are re-aspirated and again an additional volume of salt solution is added, furnishing a $\frac{3}{6}$ths dilution. Of this, two volumes are re-aspirated into the tube and a third volume of diluting fluid is added. This furnishes a $\frac{2}{6}$ths dilution. Lastly one volume of this dilution is re-aspirated and it is diluted with one volume of salt solution furnishing a dilution of $\frac{1}{6}$th.

The alternative series of dilutions above referred to would be prepared either on exactly the same principle as above or as follows. By taking three volumes of serum and adding one of diluting fluid, then taking two of the $\frac{3}{4}$ths serum and one of diluting fluid, and lastly, by taking one of $\frac{2}{4}$ths serum and one of diluting fluid we obtain a series of dilutions corresponding to $\frac{3}{4}$ths, $\frac{2}{4}$ths, and $\frac{1}{4}$th serum. Taking this preliminary series of dilutions and, in addition, undiluted serum we proceed to obtain the intermediate dilutions as follows. Mixture of equal volumes of undiluted serum and $\frac{3}{4}$ths serum would give us $\frac{7}{8}$ths serum mixture of equal volumes of $\frac{3}{4}$ths serum and $\frac{2}{4}$ths serum would give us $\frac{5}{8}$ths serum, and mixture of equal volumes of $\frac{2}{4}$ths serum and $\frac{1}{4}$th serum would give us $\frac{3}{8}$ths serum.

Having obtained the appropriate series of dilutions our next step is to draw up these progressive dilutions into a capillary inspissation tube and to separate them off one from the other. Our graduated tube may do service as our inspissation tube or we may employ for this purpose any other capillary tube which has been drawn out at its extremity into a sharp point. In either case we proceed as follows. We draw up first one volume of the highest dilution, then carefully avoiding, here and at all subsequent stages of the procedure, the intrusion of bubbles of air we draw into the point of our pipette a pellet of mercury of sufficient size to divide off securely from the next dilution of serum. We in this way take up into the tube the whole series of dilutions of serum, dividing off in each case by mercury. This process accomplished we seal the point of the tube in the flame, taking care as we do so not to include any appreciable quantity of air. We now plunge our inspissation tube into a vessel of water which has just begun to cool down after having been brought to the boil. After waiting from three to four minutes we withdraw our tube from the water and fit to its upper end a rubber teat in the collapsed condition. Leaving the negative pressure thus generated to do its work uncontrolled and taking the tube into one hand and a bone forceps into the other we proceed to snip off the point of the pipette. By so doing we ascertain whether the clot which has been formed in the undiluted serum is or is not competent to resist the pressure of the atmosphere. If it holds fast we snip away the capillary stem piece by piece. As our successive lines of section traverse the successive mercury pellets we take note in each case that we are passing from one dilution of the serum to the other. Finally, we arrive at the point where the coagula proximal to the line of section yield to the negative pressure. When this happens and the column of clotted fluid is carried up into the expanded end of the pipette we take note of the fact that we have exceeded the limits of dilution in which the serum when coagulated by heat offers effectual resistance to the pressure of the atmosphere. Tested by the above method the blood of normal male adults gives a resistant clot in a maximum dilution of four sixths to three-sixths.

Remarks on the above method.—While the method described above makes no pretence to absolute accuracy it will be found, when put to the test, by making a series of successive estimations of any sample of blood, to yield very concordant results within the range of calibre which is dictated, on the one hand, by considerations of the amount of serum ordinarily available and, on the other hand, by the limit imposed by the considerations that the capillary tube must not be so fine as to offer sensible resistance to the passage of fluids nor be so weak as to be incapable of resisting ordinary strains. In connexion with the clinical application of the method it may be interesting here to call attention to the information which was furnished by the method in a case of œdema of the feet which was when first seen supposed to be referable to double femoral thrombosis supervening upon typhoid fever. In this case the method of examination here in question revealed that the content of the blood in albuminous substances was reduced to the point at which the clot formed by heating the undiluted serum was quite incompetent to resist the pressure of the atmosphere. The same held true of the lymph obtained by the application of a blister. In view of the unlikelihood of thrombosis occurring under such conditions, and further, in view of the negative result of Widal's test, the treatment by citric acid which had been inaugurated with a view to limiting the extension of the presumed clot was abandoned and magnesium sulphate was administered with a view to concentrating the blood. Under this treatment the œdema rapidly disappeared and the serum yielded on heating a resistant clot.

Estimation of the content of the plasma in fibrinogen—In concluding this paper reference may be made to the circumstance that an estimate of the amount of fibrinogen in the plasma can be formed by the very simple device of heating citrated plasma in a tube up to a temperature of 60° C The plasma in hæmophilia when examined by this method yields, as compared with the normal plasma, a notably diminished volume of fibrinogen.

Lower Seymour-street, W.

QUEEN VICTORIA JUBILEE INSTITUTE.—A movement has been started in Wiltshire by the Duchess of Somerset for the establishment of a nursing association connected with the Queen Victoria Jubilee Institute.

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[4] The identification of the particulate matter in milky plasma with blood platelets is warranted by the characteristic staining reaction obtained with Leishman's stain.

INTRAPERITONEAL RUPTURE OF THE BLADDER IN A GIRL, AGED FIVE YEARS,

WITH SEPARATION OF THE RIGHT OS PUBIS AT ITS EPIPHYSEAL LINES; ABDOMINAL SECTION; SUTURING OF THE BLADDER; RECOVERY.

BY H. BETHAM ROBINSON, M.S. LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON TO, AND SURGEON IN CHARGE OF THE THROAT DEPARTMENT, ETC., AT, ST. THOMAS'S HOSPITAL; SURGEON TO THE EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL.

IN *September, 1901, an interesting* summary of all the recorded cases of traumatic rupture of the bladder appeared by Alexander in the *Annals of Surgery* and previously to this statistical papers dealing with the same subject had been published by Kerr, in the *Annals of Surgery*, vol. xvii , 1893, and by Miles, in the Transactions of the Royal Medical and Chirurgical Society, vol. xxvii., 1895. From a perusal of these papers it will be of interest that the following case is the youngest that has been operated on (according to available records) up to date; there have been two cases of children seven years of age and one of nine years of age.

Traumatic rupture of the bladder, whether extraperitoneal or intraperitoneal, may exist alone or very frequently is attended by damage to the pelvic girdle; if the rent is extraperitoneal the broken pelvis has probably played a part in causing the wound, whereas in the intraperitoneal form it may be only an accidental associate due to the same crushing force: an accepted explanation in the latter is that it may be the crowding back of a full bladder on the sharp lumbo-sacral angle. In this particular case the bladder had been distended and from the tender years of the child was abdominal in position. Although the bladder wound in this case had an accompanying damage to the pelvis the latter did not cause it; the wheel passed obliquely over the abdomen from left to right, causing the bladder rent to be also oblique and lower on the same side as the fractured pelvis.

On March 11th, 1903, the child was playing in the road when she was knocked down by a cart, the wheel passing over her abdomen. This occurred at 2 P.M. and at 4 30 she was brought to the hospital and admitted. She was pale, restless, and very collapsed, with a feeble pulse of 128 and respirations 28, with grunting expiration. Her temperature was 97° F. Breathing was almost entirely thoracic in character but the upper part of the abdomen moved fairly; the lower part was rigid, moved very little on respiration, and was tender even to gentle palpation. On light percussion in the flanks there was evidence of the presence of a small quantity of intraperitoneal fluid and the *whole abdomen* appeared to be considerably distended. The child complained of pain and kept calling out that she wanted to pass urine but on trial she was quite unable to do so. The catheter withdrew about a couple of teaspoonfuls of nearly pure blood with a urinous odour. On manipulation of the pelvis soft crepitus could be obtained which was due to diastasis of the right os pubis at its epiphyseal lines. At 9.30 P.M., the immediate shock having passed off, the abdomen was opened by a three inch incision in the mid-line and there was not found any blood extravasation in the cellular tissue. On incising the peritoneum a collapsed bladder was found which was brought up into the wound. On the superior surface was a rather oblique rent running from *one obliterated* hypogastric artery to the other side through which the mucous membrance prolapsed and out of which a few drops of bloody urine could be squeezed; on the left side the rent came right up to the lateral reflexion of the peritoneum. The flanks contained some free urine which was mopped out with sponges and the peritoneum was then cleansed with sponges dipped in normal saline solution The rent in the bladder was carefully sutured with fine silk; the interrupted stitches were inserted after Lembert's method and avoided the mucous membrane. Beyond the single row two or three extra stitches were put in where there seemed a weak spot. The abdominal incision was then closed except in its central part through which a gauze drain wrapped in green protective was passed down to the wound in the bladder. A soft catheter was placed in the bladder *viâ* the urethra. The child had some additional shock after the operation but speedily rallied when in bed. Her legs were kept tied together and no other fixation was used for the pelvis. On the 12th the drain was changed and there was a considerable amount of fluid in the dressings with a urinous odour. On the 15th the wound had been dressed daily and there was now no suspicion of any urine on the dressings. The drain was removed and a small gauze drain was put in the gap in the abdominal incision. The child's condition was first class and there was free passage of urine through the catheter which was still retained. On the 18th the drain was removed altogether and on the 19th the catheter was taken out. For some days there was some incontinence of urine which gradually passed off. On April 4th the child developed some broncho pneumonia which all cleared up at the end of a week. She remained in hospital until May 4th and was discharged walking quite well, without any difference in the length of the limbs and with perfect control of the bladder.

The history of the accident in this case and the early symptoms pointed plainly to the probable diagnosis which the passage of the catheter confirmed. Such tests as inflation with air or injecting fluid into the bladder were not utilised for, in the first place, they were unnecessary to establish the diagnosis and, in the second place, such procedures are likely to do much more harm than good by causing greater diffusion of the escaped bladder contents over the peritoneum. Such a procedure can only be of academic interest and, as Alexander says, having the idea that the bladder is *ruptured, at once operate and if on exposing the front of the* bladder no damage is found then open the peritoneum and search for the rent. There is nothing particular to comment on the operation. No special stitching of the mucous membrane was done; a single layer of fine silk Lembert interrupted sutures, fortified by a few more beyond, was used for the sero-muscular coat. There was no peritonitis but the case was fortunately operated on early. After cleansing the peritoneal surface I thought it safer to use a small gauze drain for a short time; it can do no harm and it may be of great service should the stitching unfortunately not hold.

The last point is one that has always been debateable—namely, the after-treatment of the sutured bladder. Excluding from the question putting a tube into the bladder suprapubically, it is a moot point whether there should be drainage per urethram or regular catherisation. Alexander has shown that of 39 cases there was an infinitesimal advantage gained by continued drainage; one thing is quite certain, both from the patient's and surgeon's standpoint, the drainage is much simpler.

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A CASE OF ACUTE SULPHONAL POISONING.

BY ALFRED E. HIND, F.R.C.S. ENG.

THE patient, a single woman, aged 27 years, had been under treatment suffering from melancholia. She had previously been five years in an asylum. She was now living with her parents while arrangements were being made for sending her to another asylum. I was called at 9 A.M. on Dec. 17th, 1903, by her father who stated that he was unable to wake his daughter and that he suspected that she had taken three bottles of sulphonal, each containing 25 tablets, five grains in each, with the exception of two tablets found in the bedroom. In all she had taken 365 grains. On arrival I found the patient comatose and unable to be roused. There was no cyanosis. She was slightly pale The pulse was 80 and feeble, the respirations were 15, and the temperature was 98° F. The corneal reflex, the knee-jerks, and the radial reflex were absent. The pupils had medium contraction and reacted sluggishly. She had spoken rationally a few words early that morning. The bowels had opened on the previous day. The patient had been in the habit of taking sulphonal for insomnia and had threatened suicide. The stomach was washed out with about a gallon of warm water which returned quite clear. A large enema of soap and water was given and retained. The urine was drawn off by catheter; it was clear and abundant. Half a pint of hot coffee was passed by a tube into the stomach and one-thirtieth of a grain of strychnine and one-fiftieth of a grain of digitalin were injected hypodermically. The patient was visited again in the evening; her condition was unchanged except that the corneal reflex had returned. The catheter drew off about three pints of clear urine. The bowels had not acted. On the 18th she was again visited. She had roused sufficiently in the night to swallow some coffee. Three pints of urine were drawn off by catheter and a pint of hot milk with two minims of croton oil was passed by a tube into the stomach. The bowels had not opened. The patient was surrounded by hot-water bottles. In the evening the bowels had not opened and her condition was unchanged. The pulse was 100, the respirations were 15, and the temperature was 98°. Hot milk and three minims of croton oil were given by a tube which was almost immediately followed by vomiting. Some of the gastric contents being inhaled necessitated energetic treatment to restore breathing and to relieve cyanosis, under which treatment the patient roused considerably but soon relapsed into lethargy. An enema of soap with five minims of croton oil resulted in a small evacuation, chiefly enema, but some fæcal matter was present. Again three pints of urine were drawn off and a hypodermic injection of digitalin and strychnine was given as before. The patient was visited at 9 P.M.; half a pint of urine was drawn off. Her condition was unchanged. On the 19th at 10 A.M. she was cyanosed. The respirations were 30, the pulse was 112, and the temperature was 103·5°. No physical signs of pneumonia were detected but her condition was probably affected by the inhalation of the gastric contents on the previous day. She was rather more collapsed and still unconscious. She had had a nutrient enema of egg and milk which she had retained. Hypodermic injection was given as before. At 1 P.M. the respirations were 40, the pulse was 130, and the temperature was 103°. One pint of urine was drawn off. One-thirtieth of a grain of strychnine was given hypodermically. At 6.30 P.M. the respirations were 44, the pulse was 130, and the temperature was 103·8°. Three quarters of a pint of urine were drawn off. One-thirtieth of a grain of strychnine and one-sixtieth of a grain of digitalin were again given. The patient showed a slight return of consciousness. She had retained the nutrient enema of milk and egg and had spoken a few inarticulate words during the day. After the hypodermic injection the respirations fell to 30, the pulse to 112, and the patient had a better appearance. On the 20th the respirations were 32, the pulse was 112, and the temperature was 103·8°. One pint of urine was drawn off. The cardiac action was much stronger. The radial reflex and the knee-jerks had returned. The patient now appeared to notice her surroundings. The bowels had opened slightly. The nutrient enemata were retained. A certain sweet chloroform-like odour had been noticed in the breaths since the first visit and lately also in the urine. The bladder remained in an atonic state and air entered after the urine was expelled by pressure on the abdomen. At 6.30 P.M. the pulse was 90, the respirations were 20, and the temperature was 100°. She was slightly restless and had been trying to get out of bed. She had passed urine under her and the bowels had opened slightly. She had spoken incoherently during the day at intervals. On the 21st she had a restless night and was more conscious. The pulse was 80, the respirations were 20, and the temperature was 99°. The catheter drew off one and a half pints of urine. The bowels had opened slightly. She retained the nutrient enemata and had taken fluids by the mouth. At 6 P.M. the pulse was 80, the respirations were 25, and the temperature was 99·4°. She was steadily regaining consciousness. Her speech was staccato and cerebration was slow. The catheter drew off three quarters of a pint of urine. On the 22nd the pulse was 80, the temperature was 98·4°, and the respirations were 15. She had been upon the stool but the bowels had not opened. She still took food by the mouth and had passed urine normally. She volunteered the information that she swallowed the above amount of sulphonal at 11 o'clock on the evening of the 16th with suicidal intent. On the 23rd the pulse was 80, the respirations were 15, and the temperature was 99·4°. The bowels had opened. The catheter drew off three-quarters of a pint of urine; she was menstruating. She was much quieter and taking food fairly by the mouth. Four drachms of sulphate of magnesium were given in the morning and repeated in the evening. On the 24th she was still improving. The bowels had opened twice. She passed urine on the stool; the catheter drew off four ounces only. She was taking food better. The pulse was 80 and the temperature was 98·4°. She slept well. Speech and cerebration were very little altered. On the 25th she had markedly improved. Her speech was clear and cerebration was most active. The bowels were well opened; urine was passed naturally. She was taking food much better and she slept well. From this day her convalescence was uninterrupted as regards the sulphonal poisoning and on Jan. 2nd she was sent to an asylum.

As regards the treatment of the case, with no definite data to go on, and a strong presumption of her having taken sulphonal, washing out the stomach seemed to be the right step, although, as it subsequently turned out, it was perhaps of little use as some 12 hours had already elapsed. Although the large enemata were retained they doubtless helped to eliminate a large amount of the poison by the kidney, and as for medicine, strychnine and digitalin seemed to be the only drugs indicated. The inhalation of the stomach contents was an unfortunate incident which, however, did not seem to affect the case very seriously, although septic pneumonia at one time threatened to complicate a most intractable case. Coma, absence of the reflexes mentioned above, including atony of the bladder and the bowel, were the most striking features in the case. The accidental inhalation was no doubt due to this condition also. The heart sounds were very feeble, more so than the pulse would suggest. Her condition at the first visit gave very little clue to the cause and it was only on the strong presumption of what had happened that sulphonal poisoning was diagnosed. Her recovery, however, was complete and happened more or less abruptly on the eighth day. No anorexia or constipation remained. Her mental condition also remained unaffected. Although when first seen her condition appeared to be critical, if not even hopeless, in the light of her subsequent recovery one is apt to regard the danger incurred with less fear. Other cases reported appear to have been followed by protracted evil effects and to have recovered very slowly. Examination of the urine showed a slight trace of albumin, no sugar, 4·5 per cent. of urea, and no blood. It was clear, light-coloured, and of specific gravity 1030; it had no smoky tint. The absence of a spectroscope precluded the test for hæmatoporphyrin. I should be glad to have suggestions as to any antidote for sulphonal if such exist.

Jersey.

A CASE OF ACUTE TRAUMATIC CHOLECYSTITIS.

BY FRED. J. SMITH, M.D. OXON., F.R.C.P. LOND.,
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AND
C. W. MANSELL MOULLIN, F.R.C.S. ENG.,
SENIOR SURGEON TO THE LONDON HOSPITAL.

A MAN, aged 59 years, was walking to business on Dec. 29th, 1903, when he slipped on some ice and fell. The history of how he fell is not quite clear, though he himself asserted that it was "all his length on his right side." He complained at the time of some pain but went to business and seemed no worse for the accident until Jan. 3rd, 1904, when he complained to his wife that his side hurt him, but he did not take much notice of it. On the 5th his bowels acted as usual in the morning and again at about 2 and 4 o'clock in the afternoon. (The sequel suggests that these actions were melænic.) Soon after the second action he was sick and in a little while was seized with a severe pain in the abdomen. He was shortly afterwards seen by Dr. Mowbray Henderson who administered morphia. The pain continued all that night sufficiently severely to keep him awake. He vomited on the morning of the 6th and again on the following morning but not subsequently. His bowels never acted after the loose motions on the 5th notwithstanding the administration of two enemata on the 6th and two on the 7th; the second enema on the latter date brought away a little fæcal matter. On the 8th the abdomen began to swell and Dr. Henderson asked me (F. J. S.) to see him at 1 P.M. as a case of intestinal obstruction. I found the patient lying in bed quite quiet and sensible; his face was very congested, almost blue, like the face of bad "bronchitis with emphysema." The pulse was somewhat full, 117 per minute, with rather *plus* tension if anything and not the thready pulse of either asphyxia or peritonitis. The abdomen was full, round, and somewhat distended, offering no good opportunity for discovering much by palpation, but there was very marked tenderness just below the liver in the area corresponding to the gall-bladder. Percussion here also caused much pain but revealed no dulness—in fact, to sum up, one had a picture of intestinal obstruction without much guide to its seat or causation. I accordingly arranged to see him again in the evening with Mr. C W. Mansell Moullin. I found the condition unchanged except that the pulse was now 120 and had lost its tension and fulness. His temperature had, by the way, since the 5th been hovering between 99° and 101° F.

Mr. Moullin decided to operate, though he could not frame a very definite diagnosis. We discussed the question of slight laceration of the liver or the gall-bladder, but rejected it from the absence of jaundice and from its general improbability. He opened the abdomen in the middle line and found—absolutely nothing, except one small omental hæmorrhage, so he then opened the cæcum by another small incision and fixed a catheter in the ileum. During the 36 hours that the patient survived a certain amount of black fæces—melæna—escaped from this tube, but he got weaker and died at about 8 A M. on the 10th.

The necropsy was performed at 3.30 P.M. on the same day. The lungs and the kidneys were quite sound and the heart too, except for marked degeneration of the aorta (the valves were quite sound and the muscle was good). The intestines, too, were sound and there was no peritonitis observable by the naked eye, though as the intestines were fuller than usual I suspect there was a loss of tone in the peritoneal coat. The liver was a trifle fatty but otherwise healthy, and the only pathological change was with the gall-bladder. This externally was seen to be intensely inflamed, of a brown colour, and with patches of lymph scattered over it It was moderately distended and the connective tissue round it was dark in colour and evidently not healthy. On cutting [illegible] due to what was very [illegible] ltered by decomposi- [illegible] or less necrotic and [illegible] the soaking. There were no gall-stones and no appearance whatever even faintly suggestive of a growth.

In my experience such a case is unique and I think it must be at any rate very rare. An interesting question arises as regards the precise cause of the paralytic obstruction of the bowel, whether it was due to a nerve influence through the bruising of the gall-bladder or whether [illegible] n the absence of [illegible] I should incline [illegible] dmitted that the examination was carried out very soon after death.

Another interesting point is how the gall-bladder came to be the only viscus that was bruised There was no external bruising of the skin over it, so that considering the nature of the accident—a simple fall on a level road—it is not likely that the injury was due to direct violence, and yet the fact seems very difficult to explain upon any other hypothesis, as the gall-bladder is such a yielding viscus.

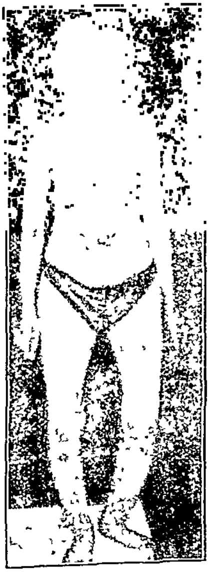
TWO CASES OF OSTEITIS DEFORMANS IN ONE FAMILY.

By WALTER J. KILNER, B.A., M.B. Cantab, M R C P. Lond.

THE rarity of this disease is a sufficient excuse for giving a short account of two cases lately seen by me. They are brother and sister who have both passed middle age.

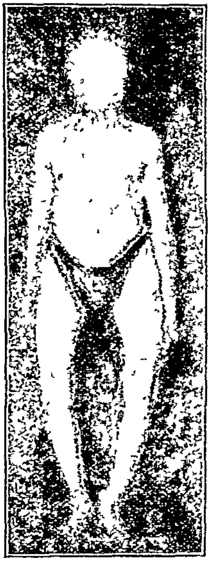
CASE 1.—The patient is a married woman, 69 years of age, who has had three sons, all of whom are alive and healthy, and two daughters, one being married with three children, and the other one having died during childhood. Until five years ago she enjoyed excellent health, her only illnesses being a severe miscarriage 30 years ago and an attack of sciatica seven or eight years ago. During her first pregnancy her left leg swelled and was dusky in colour, the condition being, as far as I can glean, due to varicose veins. At the present time the superficial veins of that leg are varicose. Previously to the last five years her figure was erect and she could not have measured less than 5 feet 7 inches—most likely an inch more. This is only approximate as she was considerably taller than a friend who is 5 feet 6½ inches. Now, however, her height is only 5 feet 1½ inches when she draws herself upright, which she is able to do only for a very short time Her present illness began insidiously with what were thought to be "rheumatic pains." As nearly as she can remember the parts affected were attacked in the following order. the left leg, the right leg, the knees, and the soles of the feet; some short time afterwards the spine, first in the lumbar region, then between the shoulders, and last of all the right arm, the shoulders, the hips, and the clavicles. The pain was more or less continuous with nocturnal exacerbations, when the hips and legs were the seats of the greatest pain. Frequently she had very severe attacks lasting some hours or even a day or two. She had lost flesh, being now very thin instead of weighing 12 stones When undressed she presents a remarkable figure (see Fig 1). There is marked kyphosis, the back of her head following the same curve as the spine while she is standing at rest. She is, however, able to raise her head, but it soon drops again. The shape of her head is peculiar and the cranial bones are enlarged, although she does not seem to have noticed this herself as the thickening has proceeded gradually. The lumbar curve of the spine is exaggerated but this is to a great extent masked by its being sunk between two ridges of flesh. There is no lateral curvature Her clavicles are thick and enlarged irregularly Her ribs seem to yield to pressure more than they ought if quite healthy; however, their shape remains unaltered Her right arm is not so straight as her left, nor can she extend it fully at the elbow-joint. Her pelvis seems to be unaffected. The most marked deformity is in her thighs and her legs, the former outwards and forwards, the latter having similar curves, only the forward one being more marked, especially in the left leg All the bones of the thighs and the legs are thickened irregularly but not all to the same extent Taking the left tibia as an example, on March 3rd the whole bone was enlarged with indurated patches on the upper and lower thirds. These swellings did not include the whole circumference but were on the anterior and outer surfaces They were diffuse with no

FIG. 1.



Female figure

FIG. 2.



Male figure.

perceptible line of demarcation and were intensely tender to the touch. Their appearance was coincident with the exacerbation of pain. Seemingly there was no increase of temperature. After a variable time they gradually disappeared, sometimes leaving no appreciable permanent enlargement. As a rule the skin over the inflamed patches remains unaltered. I have not noticed any of the swellings raised more than a quarter of an inch, while they may be two or more inches in length. Before they become visible the surface of the bone becomes abnormally tender, which I attribute to the periosteum becoming affected before the bone itself. The muscles of the thighs are wasted and flabby and the same may be said of the gluteal muscles, the left side hanging considerably below the level of the right. When lying down with her knees touching there is a space of more than two inches between the thighs. It is only with great difficulty that she can balance herself when she stands with her feet together. When seen sideways she looks as if she must fall forwards. Her gait is a waddle.

For the last two or three years she has been very subject to attacks of bronchitis and is now rarely without a cough. Her heart is healthy but there are signs of atheromatous arteries. Her urine has a specific gravity of 1021 with a trace of albumin; there is no sugar, albuminose, or excess of phosphates; it is slightly acid. Under the microscope only oxalate of calcium crystals and a few epithelial cells were to be seen.

On March 3rd I ordered a mixture of five minims of liquor arsenicalis with five grains of calcium lactophosphate to be taken three times a day, also an embrocation of methyl salicylate in linimentum opii. On the 18th the pain had been less intense except once when she was kept awake the whole night by its severity. On May 2nd she reported herself improved as her acute attacks of pain were not so frequent or so severe. However, she had had swelling and pain in the hand which had left the joints of the thumb and the forefinger of the left hand in a condition similar to the after-effects of an attack of chronic arthritis. On the 16th her right leg had become more painful than the left for the last few days. There was an inflamed spot on the centre of the tibia. I ordered ten grains each of salicin and phenacetin to be taken when the pain was excessive. On June 24th it was stated that the powders had given relief but she had only had to take them twice. Her medicine was altered to ten minims of tinctura belladonnæ, five minims of liquor arsenicalis, and 15 grains of potassii bromidum three times a day.

When I was examining the patient she informed me that her brother was getting bandy legged and could walk only with difficulty. As he was unable to come to town I went and saw him on May 1st.

Case 2.—The patient is aged 60 years. He is a broad-shouldered, cheerful-looking man, a typical, weather-beaten agricultural labourer, with a stoop and very curved legs, looking prematurely old for his years. Formerly he was 5 feet 9 inches in his stockings and quite straight, but at the present time he is six inches shorter. He says that "his deformity is stationary," but his niece wrote to her aunt (Case 1) in April that his legs were getting more bent and again in August that he was worse and that it was quite painful to see him walk. Formerly he was a sawyer and he attributes the bending of his legs to his occupation. His family, ten in number, are all strong and healthy. For 12 years he suffered greatly from pain in his abdomen and in 1898 entered St. Thomas's Hospital where he remained three months without benefit; then he went to St. Mary's Hospital where a few days after admission laparotomy was performed by Mr. H. S. Collier. The pylorus was found to be adherent to the lower surface of the liver. Since the operation he has been quite free from pain. About that time he began to suffer from what he calls "rheumatic pains" in his lower extremities. The pain was more severe in his hips and thighs and the left side was worse than the right. There is one spot just above the inner condyle of the left femur where the pain has been more severe and continuous than any other place. This part remains thickened and tender. The pain in the hips has been greater than in his legs. He gets very tired upon the least exertion and then his legs and ankles ache, especially at night time. Following in sequence his spine was next affected, first in the cervical and upper dorsal and then in the lumbar regions. Afterwards the shoulders and arms were attacked but the pain was never very acute here. At the present time his thighs and hips are the only places which are very painful. After his prolonged suffering from his abdominal trouble he makes light of his present ailment. Without his clothes his figure is peculiar (see Fig. 2), being emaciated but broadly built in the trunk, with proportionally long legs. His head protrudes forwards but it does not droop. The lumbar curvature of the spine is certainly increased. His pelvis is unaltered in shape and does not seem to be affected in any way. There is no lateral curvature of the spine. His thighs present an odd appearance, being wasted, flattened out laterally, and very narrow from front to back. The femurs are curved outwards and forwards, the former being in excess of the latter. The angle they make with the pelvis gives the idea that the weight of the trunk has pressed down the femurs in such a manner that their necks, instead of having a downward inclination to the shafts, have become almost horizontal. The broadest part of the trunk, instead of being at the intertrochanteric line, is quite one and a half inches lower down. The tibia and fibula are curved laterally and forwards, similar to the femurs but not to the same extent. All the bones feel irregular from local thickening, but the most manifest enlargement is just over the internal condyle of the left femur. The left limb is more distorted than the right. The bones of the head have not enlarged, as he can wear the same cap that he wore seven years ago. His clavicles are very prominent and enlarged more than his employment can properly account for. There is no change in his arms. His heart is enlarged, the apex being half an inch to the left of the mammary line and two and a half inches below. There are a prolonged first sound at the base and a loud rasping systolic murmur at the apex. Some of his arteries are atheromatous.

The first of these two cases is as typical a one as can be found, while the second lacks one important symptom of osteitis deformans, the enlargement of the cranial bones, but in other respects his, too, is quite typical. When taken in conjunction with the first there can be no doubt but that brother and sister are suffering from the same disease. These I believe to be the first cases on record where two persons in the same family have been attacked by this complaint. The disease in each of them began insidiously and almost simultaneously; although the sister is nine years the elder yet the brother is constitutionally older. The progress of the complaint is faster in the woman. There is not the slightest reason to suspect that either of them has suffered from syphilis. They have lived at a distance from each other for 40 years and the conditions of life in which they have been placed have been very different. The sister has been comfortably off in London and has suffered no real privations, and until lately has enjoyed excellent health. On the other hand, her brother has had his constitution undermined by ill-health and must have endured considerable hardships, being only a labourer in an agricultural village, either unable to work or at the most capable of undertaking very light jobs. We may conclude from this that neither climatic influences nor the mode of living has had any influence in the causation of this illness. As far as I can make out there is no history of injury, rheumatism, or nervous complaint to account for it. Certainly the woman suffered from sciatica but it was only for a short time and there was a considerable period of good health intervening before this disease showed itself. The first complaint either of the patients made of rheumatism was coincident with the commencement of their present condition and the pain seems to have been the very first symptom noticed and this was at first vague and afterwards became more localised.

There is one important point which has to be considered, Is osteitis deformans a general disease with the bone affection secondary, or are the bones affected primarily and alone? Case 1 alone would point to a general dyscrasia, as her health began to fail coincidently with the appearance of the rheumatic pains and she became liable to attacks of bronchitis and at the same time lost flesh rapidly. At first her walking powers were not diminished but they gradually lessened as the deformity of the legs increased. Strange, however, that she had no idea of the extent of her deformity until she accidentally saw herself in a looking glass when she was very horrified by her appearance. Her attacks of bronchitis seem to be entirely independent of any exacerbation of bone mischief. When her blood was examined under the microscope there was nothing abnormal to be found although it coagulated very quickly and it would not flow from a prick on the finger as easily as it would in a healthy person. With regard to the second case the disease began when the sufferer was prostrated from a purely mechanical malady. When relief was given by an operation his health improved and he has remained well, although he has never become strong and continues to be unable to work on account of his physical infirmity and the pain produced by it. If the first of these cases stood alone there could hardly be any doubt about the disease being a constitutional one. In the second, however, any fresh systemic disturbance could not be well marked owing to its being implanted upon a man already debilitated by prolonged ill-health. His regaining health up to a certain point could be no reason why the disease with him should not be constitutional. Moreover, the fact that two persons in the same family were affected by the same complaint would point to a systemic rather than a local origin.

The treatment in these cases is eminently unsatisfactory, as little or nothing can be done except to build up the general health and to alleviate pain.

Ladbroke grove, W.

A CASE OF TOTAL EXTIRPATION OF THE PROSTATE.

By G. P. NEWBOLT, F.R.C.S. Eng.,
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A MAN, aged 69½ years, was admitted to the Royal Southern Hospital on April 15th last, suffering from retention of urine. His urinary trouble first began five years previously when an attack of retention necessitated the use of an instrument and during the last four years he had led a catheter life. He had to get up at night in order to relieve himself and had had several bad attacks of retention. On April 13th he was unable to pass his soft catheter, and on the 15th he was admitted to hospital with a greatly distended bladder and a false passage from which he was bleeding freely. The bladder was aspirated above the pubes and four hours later a silver instrument was passed. After this the bladder was washed out twice daily, but the passage of the catheter caused him much pain and usually drew blood. On the 24th I saw him and passed a full sized silver prostatic catheter into his bladder; he had a large, soft, moveable prostate easily made out per rectum and bilaterally enlarged. The urine was acid, 1020, and contained blood and pus. On May 10th the patient's condition and the state of his urine having improved I determined to perform suprapubic prostatectomy. He was placed under chloroform and his bladder having been distended with ten ounces of boric lotion I opened the organ above the pubes and on introducing my left index finger at once felt a large prostatic tumour which resembled the uterus in shape with the cervix pointing upwards and backwards. Having scraped through the mucous membrane on the left side of the growth with my index finger nail I was able to enucleate speedily the gland on that side below and from behind the triangular ligament. After spending some five minutes in trying to clear it from the urethra I tore the latter across on the vesical side of the triangular ligament and proceeded to free the right portion. This was more difficult and it was necessary to use scissors in order to free the under and upper portions of the right lobe from the base of the bladder. The growth was then seized with forceps and delivered through the suprapubic wound. Whilst operating the prostate was pushed up from the rectum by the fingers of a colleague. There was some hæmorrhage which was controlled by boric lotion at a temperature of 110° F. A large rubber tube was put in the suprapubic wound and the rest of the incision was brought together with silkworm gut. There was some shock after the operation, from which the patient speedily rallied. The whole proceeding took 23 minutes from the first incision until the wound was sutured.

The after-history of the case is as follows: On the next morning the patient's pulse and temperature were normal. The tube was removed from above the pubes in 48 hours and the bladder was irrigated daily through a soft catheter in the urethra. On the 20th, ten days after operation, I passed a full-sized silver catheter into the bladder and he passed a little urine the right way when his bowels acted on the night before. On June 8th he went home, the wound had closed and he passed urine freely three or four times in the day and once at night. He had an attack of eczema due to the irritation of the urine about the wound, but this speedily cleared up. Two weeks after his return home he had an attack of bronchitis when the wound opened and remained so for a fortnight when it healed soundly. He is now in good health, passes urine freely, and is quite comfortable. The prostate, which was entire, weighed five and three quarter ounces. The ejaculatory ducts were torn across and show well in the specimen. A very thin partition was felt between the rectum and the bladder after removal, but the gap left rapidly contracted. Microscopically the growth was fibro-adenoma. The operation so ably advocated by Freyer seems to be a most valuable one in suitable cases.

Liverpool.

A CASE OF VERONAL POISONING.

By G. FERNANDEZ M. CLARKE, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. Lond.

THE following case may be of interest to the readers of THE LANCET.

At midday on Dec. 13th, 1903, I was telephoned for to see a woman who, from the message I received, was evidently suffering from narcotic poisoning. On arriving at the house I found my patient in what appeared to be a sound sleep. The breathing was deep and slightly stertorous; the pulse was slow but regular; the pupils reacted to light; and the temperature was normal. With some difficulty she could be aroused but relapsed immediately into her former state of semi-coma. The history which I obtained from her friends was that the patient's age was 19 years; she had been married only a few months and seemed to be very happy; she had had a "touch of the sun" when in Jersey, after which she had been subject to several hysterical attacks varying in intensity, and to the best of their knowledge she had not taken any drugs. With this information I decided not to resort to any drastic measures but to content myself with treating the symptoms. As time went on the symptoms gradually subsided and by midnight I was able to learn from her that she had taken something to make her sleep but of what character that something was she absolutely refused to tell me. It was not until the next morning that I became acquainted with the drug in question when I received from her husband a box of veronal cachets, each containing eight grains, which had been found in her room. I saw her again the same day, when she had apparently quite recovered, having slept soundly throughout the previous night. On the 16th an erythematous rash appeared all over the body. There was a great amount of irritation of the skin, especially of the face which presente
was little or no elevation
passed off in the course of
lotions. On the 21st I w
whom I found suffering
tenderness in the right mastoid region with enlargement of the glands around; a thick ceruminous discharge from the right ear; a temperature of 101° F.; the tongue strawberry coloured and pointed; and a pulse of 125. She appeared to be in a very drowsy condition but assured me that she had not taken any more veronal. Refusing absolutely to take any form of liquid medicine I ordered her sulphate of quinine tabloids, each containing two grains to be taken every three hours. This I did more as a "placebo" than anything else. The next day, the 22nd, the patient had periodical attacks of delirium alternating with periods of semi coma in which she lay on her back with her eyes half open. There was also a peculiar scarlatiniform rash over the face and arms; the bowels were obstinately confined. On the 23rd the patient was about the same. Fearing the symptoms might be due to some obscure brain lesion (due to the sun attack in Jersey) I called in further advice but could not obtain any decided opinion. On the 24th the patient was still about the same, the temperature ranging from normal to 101°. Constipation was obstinate even after two enemata and half an ounce of castor oil in capsule had been given. Having great suspicion that the patient was still taking veronal by means of trickery I again impressed the husband to redouble his efforts to find out whether this

was so. This he did by a very ingenious method of telling the nurse that my orders were for the patient to be moved into an adjoining room on account of the light and ventilation and whilst telling this he had full view of his wife by standing in front of a looking-glass and pretending to brush his hair. It was not long before he noticed the patient trying to get her hand beneath the mattress and on going immediately to the bedside he discovered that his wife had another bottle of veronal tablets concealed there. On each of the subsequent visits the patient implored me to give her some more of the drug, even going so far as to threaten if I did not comply with her wish. With the aid of a strong purgative and regular nourishment recovery was very speedy; all the symptoms disappeared except those of the skin which still remained in a rough condition. On the 29th she was able to leave London for the country. Before leaving she gave me the following information.

A few days before I first saw her, Dec. 13th, she had consulted a medical man on account of sleeplessness. He prescribed veronal in the form of the cachets, telling her to take one cachet containing eight grains just before retiring to bed. Instead of keeping to his directions on the evening of Dec. 10th she took two cachets (16 grains). Being dissatisfied with the result obtained she took 24 grains on each consecutive night. Immediately after this I saw her for the first time and found her suffering from the symptoms described in the beginning of this article. It was not until the 21st that she commenced taking the drug again, and during the time I was attending her until her secret was found out she took 128 grains. These were taken in the form of chocolates made up to contain eight grains of the drug in each sweet. I have inquired of several druggists who deal in this narcotic as to its composition but have failed to find one who can answer my question. Since attending this case I have met with three instances in which this drug has been employed. Two were of suicidal mania, whilst the third was a case of threatening delirium tremens. In all three cases the results were most satisfactory in every respect.

Westbourne-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

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FACIAL PALSY AS A FAMILY DISEASE.

By JOSEPH A. ARKWRIGHT, M.A., M.D. CANTAB.

INSTANCES of facial palsy occurring in two members of the same family are rarely recorded but are not unheard of. Several writers, moreover, have traced a general liability to nervous diseases amongst the near relatives of patients suffering from this paralysis. In 1887 E. Neumann[1] recorded the family histories of 37 cases of facial palsy and found in 24 at least of these cases the occurrence of pronounced nervous disease in near relatives. The commonest form in which the nervous taint appeared was insanity which occurred in ten of the families, convulsions or epilepsy appeared in seven, and chorea was present in seven; other nervous diseases occurring were general paralysis, ataxy, and paralysis agitans, besides in some of the families migraine, hysteria, and hemiplegia in addition to these. The frequency of chorea is interesting as a disease linking acute rheumatism and a nervous predisposition.

In five of the families facial palsy itself had occurred in other members and in one a case of convulsive facial tic. In one of these five families three sisters were attacked at 25, 25, and 19 years of age respectively, and in another (observed by Charcot) five cases of facial palsy occurred, three sisters, a child of one of them, and a grandchild; in the other three families a brother or a sister was affected besides the patient. As a further proof that predisposition takes a large share in causing facial palsy and that cold is not alone a sufficient cause, Neumann cites the occurrence of two or more attacks in the same individual and mentions six recorded cases in which facial palsy occurred more than once in the same patient, one patient having four attacks on alternate sides of the face and in four of the other patients both sides of the face being affected at intervals. Gowers[2] mentions eight cases of second attack. Nevertheless a hereditary predisposition to this particular neuritis sufficiently strong to cause four cases in the same generation of one family must be rare and seems worthy of record.

The first four of the patients whose cases are about to be described were members of a family of nailmakers in Worcestershire. The first one seen by me was a girl, 17 years of age, who noticed in the evening of August 17th, 1896, that her face was drawn to one side and that she could not close her right eye. I saw her on the same evening and found almost complete right facial palsy. She had pain in the right cheek and in the upper and lower jaws on the same side and in the right ear and there was some tenderness over the articulation of the lower jaw. The paralysis was very much less in two months and eventually disappeared altogether.

I was told by the above-mentioned patient that her elder sister when 16 years old had an attack of paralysis of the right side of the face from which she recovered in about six months.

A third sister came to me on Jan. 25th, 1899; she was 17 years old and she stated that on the previous day while she was at work making nails she felt a "snap" in the right side of her face and since then the right eye had watered. When I saw her the right side of the face was paralysed. She complained of not being able to distinguish the flavour of her food and of having a bad taste in her mouth. There was slight deafness of the right ear but she had never suffered from otorrhœa.

The fourth patient of this family was a man, aged 26 years, the brother of the three preceding patients and employed as driver of a steam-crane. On Feb. 10th, 1902, he noticed that his face was "drawn to the left." I saw him on Feb. 13th and found that he had right facial palsy which was not quite complete.

All these four patients lived together in the same house, and in the same road a few doors away there lived a first cousin of theirs whose wife and wife's mother were both under my care with facial palsy at different times. These two latter patients then though neighbours, were not blood relatives of the other four. The elder of the two, a married woman, 56 years old, was seen by me on August 22nd, 1902; she stated that on August 18th she had pains in her head and temples and on the 20th her face was noticed to have an unusual appearance. When I saw her there was right facial palsy; taste and hearing were not affected.

The other patient was a married daughter of the last-mentioned and was under my care some years ago on account of facial palsy from which she did not recover.

These cases confirm the conclusion of Neumann that although a cold draught may act as the exciting cause of facial palsy, still a very strong predisposition may be inborn. It is remarkable that two neighbouring families should have taken part in this series of cases but the distance of the cases in point of time makes it improbable that there was an infective agent which connected them.

Dover.

AN EARLY SYMPTOM OF ACHOLIA.

By HAROLD J. VAN PRAAGH, M.D. LOND.

A VERY early symptom of the interesting disease named by Dr. W. B. Cheadle acholia was observed in a case which I have had under observation for over 12 months. The patient, a female, two and a half years old, when I first saw her was very ill with symptoms of acholia—namely, loss of appetite, wasting, vomiting, and the typical porridge-like grey stool, composed chiefly of fatty matter. There was no jaundice or sign of other disease, such as tuberculosis. In spite of careful dieting and the use of mercury and arsenic she became steadily worse and seemed about to die from asthenia. However, she was sent away from her home in London to Margate, where she almost immediately made a rapid recovery, putting on flesh and eating her food quite well; at the same time the bile returned to the stools which resumed a normal appearance.

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[1] E. Neumann: Archive de Neurologie, vol. xiv.

[2] Sir William Gowers: Diseases of the Nervous System.

Several attempts were made in the ensuing year to keep her well at home but they invariably failed. It was about this time pointed out to me by the child's father that some days before the stools commenced to lose colour an earlier symptom manifested itself—namely, coldness and dryness of the extremities. The child was carefully watched and on return [illegible] 'om, being rapidly [illegible] between blankets [illegible] and legs should be well covered up during the day, with the pleasing result that the threatened attack passed off and the child is able for the first time since her illness to live in London. The practical importance of observing this early symptom is obvious from the point of view of treatment. Whether it throws any light on the pathology of this obscure disease it is difficult to say. However, it does suggest that changes in atmospheric conditions may act as exciting causes of acholia in children predisposed to temporary loss of hepatic function. What these atmospheric changes are and how they act are problems that await solution.

It is with the object of calling attention to the fact that treatment of this early symptom may ward off the full development of acholia that I venture to bring the case before the readers of THE LANCET.

Welbeck street, W.

TOTAL EXTIRPATION OF THE PROSTATE FOR RADICAL CURE OF ENLARGEMENT OF THAT ORGAN.

BY J. WOOD COOKE, M.R.C.S. ENG., L.S.A.,
SENIOR SURGEON TO THE NORTH DEVON INFIRMARY.

A MAN, aged 71 years, was admitted into the North Devon Infirmary on Oct. 23rd, 1903, suffering from "retention of urine and false passage." For four years he had passed a catheter for himself many times daily, but of late he had done this with more and more difficulty and frequently with some hæmorrhage. On Oct. 23rd he was unable to micturate and sent for a medical man who passed a silver instrument, drawing off urine which was very blood-stained. The patient was then sent to the above institution. He had been losing flesh for some time and was in great pain. His bladder was much distended and a No. 9 silver catheter was passed and a large quantity of blood-stained urine was drawn off. No soft instrument would pass.

On Oct 24th I performed suprapubic cystotomy and left a long rubber tube (No. 12) in the bladder which was drained into a vessel containing phenol. The patient was much relieved and the urine became free from blood after a few days, but would not pass through a rubber catheter introduced into the bladder, although the bladder could be washed out through it. On Nov. 7th I decided to perform prostatectomy. I therefore opened up the suprapubic wound, snipped the mucous membrane with scissors over the most prominent part near the urethra, and enucleated the middle and right lobes of the prostate, assisted by pressure upwards in the rectum. I removed this portion with volsellum forceps after some trouble owing to its size and then enucleated the left lobe which was smaller, leaving the prostatic urethra intact. What was removed weighed altogether four and a half ounces; the bleeding was copious. I irrigated freely with hot saline solution and then replaced the rubber drainage tube as before. The patient was under A.C.E. mixture for about one hour, the enucleation taking about 20 minutes. On Nov. 11th he passed about two ounces of blood-stained urine naturally. On the 13th he twice passed a little urine and then for several days did not pass any. The drainage was continued and a No. 8 soft catheter was passed easily but no urine came through it. On the 17th a herpetic eruption appeared on the right side of the scrotum, the penis, the perineum, and the right gluteal region. The urine was still blood-stained and foul; the bladder was washed out daily. On the 23rd the drainage was stopped as the man passed urine quite naturally and has continued to do so up to the present date (Dec. 1st). The urine is acid in reaction and normal in character. It is passed with freedom and ease, the patient being up and about and practically quite well.

Barnstaple.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

SUNDERLAND INFIRMARY.

AN UNUSUAL SEQUENCE OF HERNIAL TROUBLES IN AN INFANT; OPERATIONS; RECOVERY.

(Under the care of Dr. STANLEY RAW.)

THE patient is at present aged ten months and was five weeks old when his mother took him to the infirmary complaining that she "had no peace with him" as he was continually crying and had great difficulty in passing urine. She had also noticed that there was sometimes a lump in the right groin and that when this lump was present he was more fretful than usual. On examining the child Dr. Raw found that he had a very long and tight prepuce and that the right external abdominal ring was abnormally large and easily admitted the tip of the little finger, though there was no hernial protrusion, despite the fact that the child cried incessantly during the manipulation. The mother having consented to have him circumcised the operation was performed on the next day and the baby was treated as an out-patient.

At the end [illegible] the difficulty of [illegible] ıted that the chil[illegible] had been frequently present. Hernia was now recognised and a light web truss was applied. On Oct. 16th the mother again took him to the infirmary and said that his bowels had not acted for more than three days, during which time he had vomited all she gave him, that the lump had been there all the time, and that he had cried almost incessantly. On making an examination a strangulated inguinal hernia was found and the mother, in answer to questions, said that she had not had time to look after his truss—her husband was a day labourer and they had a family of four—and as he was passing urine without any difficulty she thought that he was all right and only fretful. She further said that when she had time she gave the infant the breast, but on other occasions he "just had what was going" and that since the first operation his diet had consisted of breast-milk, bread, rice, meat, potatoes, and such like, each given indiscriminately and to suit the family convenience or to quell his crying.

Dr. Raw operated upon the case one hour after admission and on opening the sac fully two ounces of dark blood stained fluid escaped and a knuckle of intestine presented in the wound. The hernia was of the congenital variety. When the strangulation was relieved the intestine was deeply congested—almost black on its posterior aspect—whilst the marks of the neck of the sac were deeply indented on the gut. It was, however, returned within the abdomen and the sac was then freed. This was a matter of some difficulty owing to the intimate way in which structures of the cord were spread out and attached to it, and it was not possible entirely to free the cord at the neck of the sac, but it was eventually sufficiently cleared, after which it was divided transversely and the lower portion was sewn up in order to complete the tunica vaginalis. A pair of sinus forceps was then passed from without inwards through the abdominal wall above the internal ring down the inguinal canal and the upper part of the sac was drawn through the wall of the abdomen, where it was fixed, and a radical cure was completed by sewing the conjoined tendon to Poupart's ligament. The skin wound was united by interrupted sutures and an ordinary dressing was applied. On recovery from the anæsthetic the child was very restless and cried continually and was given seven grains each of chloral hydrate and bromide of potassium per rectum which acted admirably and he slept well all night. The bowels moved well the next day and he was given milk and barley water and eventually milk and made an uninterrupted recovery, the wound being soundly healed and the stitches removed on the seventh day. The patient left the hospital three days later.

On Dec. 11th the child was again taken to the infirmary with a history of the same symptoms but this time with a lump on the left side which had first been noticed on the previous day. Since his discharge from hospital his diet had been modified in accordance with the instructions given to his mother and she said that he had been much better and had not been nearly so fretful. The bowels had been quite regular until the lump appeared on the left side, since when he had had absolute constipation and he had vomited twice. On examining the abdomen it was found that the scar on the right side was perfectly sound and that there was no attempt at recurrence but the child now had a strangulated inguinal hernia on the left side. Dr Raw again operated upon him and found a state of affairs similar to the previous one, with the exception that the condition was not so bad as the strangulation had only existed for one day. The operation was completed as on the other side but on this occasion the parts were separated with comparative ease and no great difficulties were met with. The after-treatment was also similar and uneventful and the child left the infirmary on Dec. 22nd with the wound soundly healed.

The above sequence of catastrophes in one of such tender age must be very rare.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Researches on the Morphology of an Organism [illegible] with Carcinoma Mammæ and the Etiological Signif[illegible] of the Association.—On the Preparation of N[illegible] Agar.—A New Pathogenic Anaerobe found in P[illegible] Beef Infusion.—A Method of examining Water for [illegible] Presence of Bacillus Enteritidis Sporogenes.—Bac[illegible]logy of a Case of Emphysematous Gangrene.

A MEETING of this society was held on Jan. 19th, Dr. [illegible] KLEIN, the Vice-President, being in the chair.

Mr. K. W. MONSARRAT (Liverpool) read a paper o[illegible] Etiology of Carcinoma and Researches on the Morph[illegible] an Organism associated with Carcinoma Mammæ a[illegible] Etiological Significance of the Association. He sa[illegible] in 1899 he had read a paper in which he descri[illegible] morphological characters of an organism isolated [illegible] carcinomata. During the last four years he had cont[illegible] these researches. From a considerable proportion, 5[illegible] cent., of a series of specimens of carcinoma mammæ a[illegible] organism had been isolated possessing certain well-marked characteristics. By the study of this organism in culture and in animals experimentally inoculated it was shown that it possessed a double life cycle, the one a vegetative cycle in which reproduction took place by budding on culture media, the other a sporulating cycle and specially associated with the existence of the organism in the animal body. When inoculated into animals in the form of what had been called Type A it was capable of penetrating and inhabiting epithelial and endothelial cells and of initiating in these a process of proliferation. This process of proliferation was active and irregular and the new tissue thus formed infiltrated surrounding structures. In some cases it was associated with new tissue formation in neighbouring glands with a structure which bore a distinct resemblance to that of primary nodules. In one at least of the cases recorded nodules in viscera appeared not to arise from any local cell element and bore a close resemblance to the primary nodules. The organism could be demonstrated as an intracellular parasite in the endothelial and epithelial cells of the experimentally produced nodules. The same staining method showed the presence in carcinomata mammæ of bodies which appeared identical in character with the parasites in the experimental nodules and they were here found, as in the latter, both within and without the parenchyma cells.—Dr. W. S. LAZARUS-BARLOW said that he thought that the appearances described by Mr. Monsarrat were capable of another explanation and suggested that the organism found was due to contamination. The experiments showed proliferation of tissue produced as the result of injection of an organism of a low order of virulence. In the lymphatics themselves they produced a condition very like an endothelioma. He thought that the nodules produced were in reality granulomata.—Mr. S. G. SHATTOCK said that he did not think that the organisms found were the result of contamination but probably belonged to the order blastomyces. He suggested that the organism might be the cause of chronic mastitis rather than the cause of carcinoma. He asked Mr. Monserrat if he had examined the mamma in cases of chronic mastitis. He did not consider that the changes experimentally produced in the breast of a dog were typical of new growth but might be due to mastitis. The condition produced in the liver of the dog in which there was proliferation of the cells was a condition which required careful observation and he hoped that Mr. Monsarrat would be willing to submit his specimen to a committee of the society for further investigation.—Mr. MONSARRAT replied.

Dr. J. W. H. EYRE read a short note on the Preparation of Nutrose Agar.

Dr. KLEIN described the Bacillus Carnis, a new pathogenic anaerobe found in putrid beef infusion. It grew only under anaerobic conditions, a short, slender bacillus motile, and possessed of numerous flagella. It readily formed terminal spores oval to rod shaped and stained by Gram's method. It grew readily on serum, on agar, in gelatine, and in milk. Its colonies were translucent discs, at first rounded, later with raised margins with numerous knob-like projections. In gelatine in the depth it grew with numerous branched filaments; in stab gelatine culture the growth looked like mossy bundles. Neither blood serum nor gelatine was liquefied by the growth. Milk retained its fluid character. In glucosed media more or less gas was produced by the growth. Small doses of the bacilli or their spores were highly virulent to guinea pigs and mice, causing after subcutaneous injection extensive gelatinous infiltration and death in from 20 to 36 hours. The infiltration contained abundance of a clear sero-sanguineous fluid crowded with the bacilli. In the blood and the spleen [illegible] also present but less numerously. The peritoneum, the stomach [illegible] and the intestines were inflamed and often showed hæmorrhages. Occasi[illegible]onally the spleen and the liver contained infarcts. No gas was present either in the subcutaneous infiltration or in the inter[illegible]nal organs, nor did the subcutaneous exudation or the culture possess any odour.

Dr. R. T. HEWLETT read a note on a M[illegible] for the Presence of the Bacill[illegible]nteritidis Sporogenes. The method ordinarily ad[illegible] was to concentrate the micro organisms present [illegible] water by filtration [illegible] a Chamberland filter [illegible] organisms deposited [illegible] filter being then [illegible] suspended in a few c[illegible]bic centimetres [illegible] to 80° [illegible] and one cubic centimetre of [illegible] the suspension [illegible] each of several milk tubes which were heated [illegible] incubated anaerobically. Dr. He[illegible]wlett pointed [illegible] were several possible fallacies in this method [illegible] that it should be given up if possible. For the bacillus coli the use of concentrated [illegible] substituted but the concentration of milk [illegible]. It was found, however, that milk might [illegible] twice its volume of water and still [illegible] changes characteristic [illegible]. The method suggested was [illegible] least [illegible] tubes, each containing 40 cubic centimetres of milk [illegible] should be added 60 cubic centimetres of the water. After heating the tubes were incubated anaerobically at 37° C. in a Bulloch's apparatus or in a stoppered museum jar without a neck containing alkaline pyrogallol. By the use of a dozen such tubes 700 cubic centimetres of water could be examined in this way without the need for filtration.

Mr. L. S. DUDGEON and Mr. P. W. G. SARGENT contributed a paper on the Bacteriology of a case of Emphysematous Gangrene. The patient was a male, aged 24 years, under the care of Mr. G. H. Makins. He was admitted to hospital with a compound comminuted fracture of both legs sustained through a fall from a moving train. The right leg was amputated for simple traumatic gangrene as soon as the shock had passed off. The wound in the left leg had been cleansed and sutured. On the fifth day gangrene appeared in the left leg; the temperature was 103 2° F. and the pulse was 132. The skin was tense and pale and showed mottling due to dilated cutaneous venules. Emphysema was present round the wound and extended just above the knee. On removing the stitches there was an escape of brownish fluid and gas bubbles having a peculiar mousy smell. Ampu[illegible] was performed through the middle of the thigh. [illegible] muscles were œdematous and the subcutaneous showed greenish necrotic areas in places. Recovery was slow but otherwise uneventful. The urine contained neither sugar nor albumin throughout. Aerobic and anaerobic cultures were made from the emphysematous tissues. The staphylococcus albus was obtained in pure culture from the tissues immediately beyond that area. A bacillus which did not stain by Gram's method was obtained in both aerobic and anaerobic broth tubes in pure culture. The organism was a facultative anaerobe. In a large variety of media it behaved like the standard type of the bacillus coli. It failed to grow in its own filtrate, whilst most other examples of the bacillus coli group grew to some extent. It was pathogenic in guinea-pigs but did not produce emphysema even when inoculated together with the staphylococcus albus. It gave a feeble agglutination reaction with the patient's own serum. The staphylococcus isolated from this case showed no reaction with the same serum. Numerous examinations of the patient's blood were made, the chief point of interest being that there was a gradual transition from the small lymphocyte up to, and including, the myelocyte. Mr. Dudgeon and Mr. Sargent considered that the organism was a member of the bacillus coli family.

OBSTETRICAL SOCIETY OF LONDON.

Fibro myoma of the Uterus.—Pyometra in a Subseptate Uterus.—Abscess in the Wall of the Uterus.—Exhibition of Specimens.

A MEETING of this society was held on Jan. 6th, Dr. EDWARD MALINS, the President, being in the chair.

Dr. H. R. SPENCER read a paper on Fibro myoma of the Intra-abdominal Portion of the Round Ligament of the Uterus. He recorded a case of fibro-myoma of the intra-abdominal portion of the round ligament weighing six pounds, removed by abdominal myomectomy from a virgin, 24 years of age, who remained well after five years. He also gave a short account of the 13 cases previously published. A consideration of the facts furnished by these 14 cases showed that fibroids in this situation occurred usually in women over 40 years, Dr. Spencer's case being the youngest (24 years) and Winckel's the oldest (76 years). The tumours were more frequent on the right side than on the left (nine to five); in one case they were found in both ligaments and in another two tumours existed on one ligament. They might occur in virgins; they did not tend to prevent pregnancy or to cause abortion. They did not influence menstruation; menorrhagia and dysmenorrhœa were present, being due to uterine fibroids which were associated in half the cases. The tumours were subject to lymphangiectasis and to myxomatous and calcareous degeneration and might cause trouble after the menopause. They varied in size (from that of a nut to 12 kilogrammes) and might be pedunculated or sessile, intraperitoneal or subperitoneal. The pedicle might be the ligament itself, which was hypertrophied, o [illegible] tumour to [illegible] Special sy [illegible] abdominal pain and stiffness, pain on walking, sacral pains, intestinal pains, and pressure on the bladder had been met with. In Dr. Spencer's case the superficial abdominal reflex was much increased on the side of the tumour. Ascites was absent. The tumours, which varied in consistence, closely simulated ovarian, uterine, and broad ligament growths. The tumours should be removed as soon as they caused symptoms or attained a considerable size. The pedicle should be carefully tied and, when possible, the ends of the ligament should be united. If a sac were left after enucleation it should be closed by suture or drained. Two patients had died (of 11 operated on)—i.e., 18·18 per cent.—but the fatal cases had occurred 20 years ago.—Mr. ALBAN H. G. DORAN was not surprised to find that more than half of the cases were associated with fibroids in the uterus. In one instance where he had operated he enucleated a fibro-myomatous growth of the size of a pigeon's egg from the uterine end of one round ligament and removed the fibroid uterus. It was significant that, as in the case of fibroid of the broad ligament, the same kind of tumour was found both in the intra- and extra peritoneal portion of the round ligament with relative frequency in young subjects, one patient being only four years old. Fibroid disease was also relatively common in the band representing arrested development of a uterine cornu and in that case the corresponding round ligament was usually very large. Josephson and Falk believed that the rapid development of that ligament in fœtal life was the cause of malformation of the uterus. Hence fibroid of the round ligament might, in one sense, represent a teratological condition. Quite recently Mr. Doran had removed a uterus bicornis for a large fibroid developed in the septum—another half-teratological condition, not very rare. He dwelt on the surgical aspect of operations involving division of the round ligament. He thought that Dr. Spencer was right in recommending the union of the divided ends by suture when practicable. The outer stump should not be allowed to recede towards the internal abdominal ring.—Dr. W. SAMPSON HANDLEY said that he would like to hear Dr. Spencer's views on the pathology of these fibro-myomata of the round ligament. Mr. Doran had brought forward reasons for thinking that they might originate from persistent embryonic structures. He would suggest that possibly fibro-myoma of the broad and of the round ligaments was genetically identical and that both varieties of growth might originate from accessory Fallopian tubes. Kossmann had shown how frequently these accessory tubes were present and it was now known that certain cysts of the broad ligament arose from them. He had himself proved the presence of plicæ in such cysts. Since fibro-myoma was known occasionally to arise from the muscle of the normal Fallopian tube it seemed probable that accessory tubes might give rise not only to cysts of the broad ligament but to fibro-myoma of the broad and round ligaments.—Dr. SPENCER, in reply, said that he had been particularly interested in the remarks of Mr. Doran who had done so much valuable work on fibroids of the uterus and broad ligaments. He thought that there was much to be said for the teratological origin of these tumours, especially as they sometimes contained adenomatous tissue as in Cullen and Bluhm's cases. The enlargement of the round ligament in unicornuate uteri, mentioned by Mr. Doran, he had not previously been aware of. With regard to Dr. Handley's suggestion, it had not been proved to his (Dr. Spencer's) satisfaction that accessory Fallopian tubes existed, and when it had been proved he could see no reason why they should be brought in to explain a simple fibro-myoma occurring in a fibro myomatous structure like the round ligament.

Dr. W. F. VICTOR BONNEY read a short communication on a case of Pyometra in one-half of a subseptate uterus. Apart from the rarity of such a condition the case presented a remarkable resemblance to a pregnancy occurring in a uterus the seat of extensive perimetric adhesions. The patient had a history of recurring attacks of acute peritonitis extending over a period of many months. She had had a child seven months previously to the onset of the symptoms. There had been amenorrhœa for the two months immediately preceding the operation and the uterus was enlarged to a corresponding size and appeared to be imbedded in an inflammatory mass. There was copious secretion in the breasts. Opportunity for impregnation had occurred at about the requisite period and had been shortly succeeded by a recrudescence of the inflammatory symptoms. On opening the abdomen the uterus was found to be the seat of universal adhesions and to be enlarged in accordance with the pre-operative diagnosis. The upper part of the uterus was cleared of adhesions with difficulty and the tubes were inspected and found to be unthickened and normal, though adherent. Dr. Bonney, believing that the patient was pregnant in a universally adherent uterus, determined to incise the fundus and to remove the gestation sac. Her condition, which was grave, was held to be the result of the increasing enlargement of the pregnant uterus dragging upon the extensive adhesions to the intestines. On incising the uterus a quantity of pus escaped from a cavity which, on further exploration, was held to be the left half of a subseptate uterus, the median septum having become adherent to the left uterine wall about the level of the internal os. The uterine sac was stitched to the abdominal wound and drained and the patient made a good recovery.

Dr. ARNOLD W. W. LEA related a case of Abscess in the Wall of the Uterus, in a patier [illegible] at the time of delivery, [illegible] puerperium and ruptured in [illegible] patient had suffered during the second week after delivery from severe recurrent pain in the hypogastrium but was able to walk about. Six weeks after delivery she was suddenly seized with intense abdominal pain, followed by symptoms of not at 70, as erroneously stated in the report. During a few weeks Dr. Baker curiously enough came upon four other cases of trypanosoma in the blood, thus showing that the typanosoma was not so rare as one might have expected. The patients with the trypanosoma in their blood came to the dispensary because they had an attack of fever and there was very little else the matter with them. They were under observation during the whole time at Entebbe. He himself saw all the men two months ago before he came away and they were all practically well. Every one of them had been punctured several times and there were no ill effects from it. They got up from the chloroform and after 20 minutes they went away. They had large numbers of trypanosomata in their blood, but later large quantities of blood had to be taken from them before the trypanosoma could be found. In no case did they show the trypanosoma in the cerebro-spinal fluid in the early months, but later (in July) two of them showed the trypanosoma present in the cerebro-spinal fluid. Consequently the theory suggested itself that the trypanosoma was possibly the cause of sleeping sickness and therefore they looked very carefully for any signs of sleeping sickness in those patients. Nothing, however, was found to be the matter with them or the others. They were again examined a month afterwards and no trypanosomata were found. He also examined at the same time the patient who had the trypanosoma in his cerebro-spinal fluid and found none present. He thought that possibly in these two cases the trypanosoma found in the cerebro-spinal fluid was due to an appreciable amount of blood having got into the fluid. That, he knew, was a general objection to their theory though it did not apply to a large number of cases. But those two cases were still under observation at Entebbe and he thought that they might still contract sleeping sickness. After Dr. Castellani left, the subject being a very suggestive one, they naturally devoted their attention practically exclusively to the trypanosoma. The commission carried out several post mortem examinations and looked for the streptococcus and found it in several cases but not in all. They found the diplococcus pneumoniæ in two cases. Then they performed a large number of lumbar punctures in cases of sleeping sickness and in practically every case—he could not say the exact number of cases—they found the trypanosoma in the fluid. Sometimes the trypanosomata were extremely scanty. In some cases they had to repeat the puncture two or three times before finding the trypanosoma but eventually it was always found. In some of the cases there was a large number of trypanosomata. He was perfectly sure the trypanosoma did not get into the lumbar fluid owing to leakage of blood. A few days before he left Africa he examined the cerebro-spinal fluid of a native and found it teeming with trypanosomata and there was not a single red corpuscle in 20 fields of the microscope. That question of the trypanosoma in the cerebro-spinal fluid in sleeping sickness applied not only to Uganda but Dr. C. A. Wiggins had examined a large number of sleeping sickness cases on the north east of Lake Victoria Nyanza and he found the trypanosoma in every case in the cerebro-spinal fluid. He (Dr. Nabarro) examined the cerebro-spinal fluid of a Persian suffering from sleeping sickness and he found it teeming with trypanosomata. In cases where a large amount of the fluid was present it was sometimes difficult to find the trypanosoma but on repetition of the puncture the trypanosoma was generally found. Sometimes in a lumbar puncture the fluid came out at the rate of one drop in half a minute and the flow had to be increased by aspiration and in that way a good deal of time was saved and it did not do any harm to the patient. The next question was that of lumbar puncture in cases of "controls," cases which did not show any obvious sign of sleeping sickness. It was rather difficult to get a native to come to take chloroform and to have a puncture performed upon him. He believed 15 of those cases were operated upon in the laboratory at Entebbe and all with a negative result. Dr. Wiggins had examined seven "control" cases, all with a negative result. And then there were those five patients whose cases he had mentioned, which it was very important to bear in mind because they had a considerable number of trypanosomata in their blood, and, moreover, on several occasions there was an appreciable deposit of blood in the cerebro-spinal fluid, but on examining them later the trypanosoma was not found in the cerebro-spinal fluid. Out of 16 cases of sleeping sickness the trypanosoma was found in the blood of 15. In the sixteenth case it could not be found. He classified those cases into different categories. The first was the examination of the blood of healthy people in non-infected areas in Uganda. There were parts of Uganda, especially the interior, where there was no sleeping sickness. People came from there into Entebbe to do a month's work as labourers and ten of them used to be sent every day to have their blood examined. From that non-infected area 66 people in all had their blood examined and all with a negative result. That was a very interesting and important fact which ought to be borne in mind. Similarly from a non-infected area in East Africa quite away from Uganda 50 natives were examined and in every case with a negative result; therefore in 116 observations in healthy individuals from non-infected areas the trypanosoma was absent from the blood. He believed he could say without error that all, perhaps excepting one, of those were examined by the centrifuge. That was to say, ten cubic centimetres were drawn off and the fluid was centrifuged and the serum was pipetted off, then the fluid was centrifuged again and the serum was pipetted off, and then it was centrifuged again and the serum was pipetted off; then the residue was examined. The fluid was re-centrifuged after an interval of ten minutes. The next category included natives from the infected areas—the shores of Victoria Nyanza and the islands especially. In the blood of 74 patients examined from those districts the trypanosoma was present in 17 cases, or 23 per cent. These numbers they would find slightly different from those given in the report of the Royal Society. They excluded other cases which did not come quite into this category. Lastly, there were the five cases of natives and one European who lived in Entebbe who developed the trypanosoma. From these data naturally they began to think that the trypanosoma had something to do with the disease and they accordingly turned their attention to the tsetse fly. They inquired in Entebbe whether they had the tsetse fly there and they were told "No." Afterwards at the end of March or the beginning of April they went out into the forest and found the fly. That showed then that they could not rely much on what they were told by the natives in Entebbe. But the fly was found and it was brought in by hundreds every day. He might perhaps say a few words about the distribution of the fly in Uganda. Very soon after finding the fly in Entebbe they thought it would be interesting to ascertain if possible whether the fly was found throughout Uganda and a circular letter was sent to all the missionaries and others to ask the natives to collect flies and to send them in. A large number of flies were sent in and a map was published by the Royal Society showing the distribution of the fly throughout Uganda. It was interesting to note that in one part of Uganda—on the right bank of the Nile—the fly went a long way inland along the course of the Nile. Why that was so they had not been able to make out. On the left bank of the Nile in the Uganda province the fly was practically never found in the interior. He asked for flies to be sent from the left bank of the Nile. This had been done, but hitherto not one tsetse fly was received. If they looked at the map showing the distribution of the tsetse fly and sleeping sickness they would find a very close similitude between them; that practically the distribution of the fly and of the disease was identical. He thought that was a very strong point in favour of the fly being the cause of the dissemination of the disease. He had travelled up the country and was struck by the fact that the fly was extremely localised to forest areas and to the water's edge and to dense undergrowth. He never found it on the papyrus swamps or the grassy plains. The islands were hotbeds of the disease and some islands were practically depopulated. He would like to say a few words as to the experiments they performed on animals. They used a large number of animals—monkeys, dogs, guinea pigs, sheep, goats, rats, donkeys, oxen, and a jackal, and yet unfortunately the animal experiments were not very satisfactory. Only monkeys, dogs, rats, and the jackal were found susceptible to the trypanosoma. The other animals injected failed to show the trypanosoma in their blood. In the case of the monkeys, very curiously a few weeks after inoculation trypanosomata appeared in the blood, and in some cases became quite numerous, but after a short time—perhaps a month—they began to disappear and when he left Africa practically all the monkeys failed to show trypanosomata in their blood and were nearly all in a perfect state of health. One of the monkeys died from tuberculosis and three others also died, but whether from sleeping sickness or not it was difficult to say. One point in this connexion that he would like to bring out was that they did parallel experiments. They injected animals in pairs, one with the blood trypanosoma and the other with the cerebro-spinal fluid trypanosoma. The injections gave rise to a similar appearance in the monkeys and also in the dogs and other animals, and if the trypanosoma did not appear in the one it did not appear in the other. That led them to think that they were dealing with one and the same trypanosoma. Other experiments they carried out seemed to favour that view. For instance, after the trypanosoma had disappeared from the blood in the injected monkeys he reinjected them with the same trypanosoma to see whether the trypanosoma would appear again in the blood, but it did not as the animal had apparently become to a certain extent immune. He then injected the other trypanosoma (from blood or cerebro-spinal fluid, as the case might be) and when he left the country the trypanosoma had not yet reappeared in the blood of monkeys thus reinjected. That, he thought, would serve to show that the two trypanosomata were identical. He came next to the feeding experiments which had given rise to a certain amount of criticism. The flies which they used were similar, with very few exceptions having all been [illegible] and they were always kept over [illegible] a good appetite. On the next [illegible] animal specially kept for the purpose which was called a "fresh fly" monkey or dog, as the case might be, with a clean bill of health. Then the flies were kept for 24 or 48 hours and finally put into the feeding box for the particular experiment to be carried out. The rearing of flies was very protracted, as each female had just one larva and it took six weeks to hatch and to become a fly. On the whole about 120 young flies were developed during the nine months in Entebbe. Dr. Sambon, in his paper, stated that fresh flies when put on a monkey took only two or three weeks to give rise to trypanosoma infection, whereas those first fed on sleeping sickness patients took six or eight weeks. That was quite true, but he thought he could give two or three reasons why that was the case. The fresh fly experiments were rapidly performed. In other words, having got perhaps 150 flies a day these were kept over night and then put on a monkey so as to get a positive result as soon as possible. Being always hungry the flies naturally fed very well and he thought that explained why the experiment succeeded Then as to the six or eight weeks which were taken by the flies fed on sleeping sickness patients to give rise to trypanosoma infection some of the patients did not like the flies and frequently they put their hands under the blankets and took off the cages containing the flies so that quite few flies were fed. It seemed, too, that the flies got rather tired of the same patient and if kept on one patient they did not feed nearly so well. But what Dr. Sambon had said about finding trypanosomata in other animals was a good sound suggestion, and they did find trypanosomata in other animals. He had not yet presented his report to the Royal Society but he did find trypanosomata in other animals, only they were different trypanosomata. As to the question of trypanosoma in the monkeys, he could say emphatically that he never found the trypanosoma in a healthy monkey straight from the fields, so that he was quite sure the trypanosoma was not a normal parasite in the monkeys in Entebbe. In his subsequent remarks Dr. Nabarro said he thought that the death of Sir Patrick Manson's patient gave support to the theory that sleeping sickness was caused by the trypanosoma.

Dr. F. W. MOTT said that his experience was pathological, not epidemiological. At present there were two theories for the epidemiology: (1) trypanosoma, (2) diplococcus; and Dr. Castellani had latterly adopted both the micro organisms being [illegible] the [illegible] had [illegible] was [illegible] Exa[illegible] Eur[illegible] correctness of his presumption that the chronic inflammation of the membranes and nervous substance of the whole brain and spinal cord existed as exhibited by an extraordinary accumulation of lymphocytes in the subarachnoid space and in all the rivers, rivulets, and streams of the cerebro-spinal fluid which surround the blood-vessels (the so-called perivascular lymphatics)—channels which carry the special nutrifying fluid of the brain and serve not only for the special metabolic processes of nutrition and the gaseous exchanges, but also to wash out the waste products. Such accumulation of lymphocytes would interfere mechanically with the circulation of the fluid, and biochemically by the lymphocytes taking up the oxygen which was normally intended for the nervous structures; hence a condition would arise not unlike that which he had seen in internal hydrocephalus, where ventricular accumulation of fluid produced lethargy and stupor, paresis, tremor, fits, &c. At first there was functional depression rather than destruction of the cells and fibres, later a true degeneration occurred. He might say that he had observed in several cases which he had examined, including the European case, a chemical change in the myelin sheaths without actual Wallerian degeneration, and he had observed the same appearance in certain chronic infectious processes. In the two cases which were in Charing Cross Hospital a striking feature was the universally enlarged lymphatic glands and he found on looking through Colonel Bruce's report that in every case, with one exception, the glands were enlarged—the exception being a case of cerebral tumour and not sleeping sickness. A missionary who attended the meeting of the Pathological Society four years ago stated that enlarged glands constituted a well-recognised symptom. They had then three definite pathological facts: (1) excess of lymphocytes in the blood contained in the vessels of the brain; (2) accumulation of lymphocytes in the perivascular lymphatics and the subarachnoid space; and (3) enlarged lymphatic glands. In two of the cases recorded by Colonel Bruce the glands were suppurating. Admitting that the glands of the groin and other superficial glands were very liable to enlargement in the negro, owing to sores, &c., and admitting that syphilis was very prevalent among negroes, still the fact remained that those causes would not account for practically nearly all cases having glandular enlargement or for [illegible] what constituted the [illegible] the nervous system. W[illegible] parasite being really a blood parasite—or was it due to an organism such as [illegible] which as far as [illegible] had discovered [illegible] is faith as the cau[illegible] he subsequently held (after his observation of the trypanosoma in the cerebro spinal fluid), act as an important subsidiary cause in a secondary infectious process? He stated in his report to the Royal Society that he had grown it with absolute certainty (and always pure) from eight out of ten post mortem examinations from the cerebro-spinal fluid and blood of the heart taken with aseptic precautions. *In vita* he (Dr. Castellani) had found it only once in the blood, but he had grown it in two cases out of three from the cerebro-spinal fluid removed by lumbar puncture. In the *Journal of Tropical Medicine* of June 1st, 1903, he had given further observations showing that that organism was present in the blood of the heart in 32 out of 39, and in 30 out of 39 in the cerebro-spinal fluid. In connexion with those observations Dr. Mott remarked that that infection would account for the lymphatic gland enlargement and for the appearances which the cerebro-spinal subarachnoid and canalicular systems manifested in every genuine case of sleeping sickness. He had only had the opportunity of examining the lymphatic glands in two cases; one was that of the European patient of Sir Patrick Manson and the other was an enlarged gland which he had not previously examined from one of his old cases. In both of them he found the diplococcus. In the case of the former every section of the gland showed numerous clumps of those organisms lying in the lymph channels of the gland, which were filled with cells and fibrin like the appearances presented by the alveoli in croupous pneumonia. It might be said that diplococcus or streptococcus infection was due to bed-sores and lung disease. He did not think so, for the following reason. Dr. Eyre and himself had withdrawn cerebro spinal fluid *post mortem* from 21 cases of insane patients who had died mostly with lung disease, and many with bed-sores; and after careful examination in not one did Dr. Eyre find diplococci, and in one only streptococci, and that was a case of suppurative parotitis. Staphylococcus aureus and albus were occasionally found and sometimes bacillus coli. He had been unable to find trypanosoma in the blood-vessels or subarachnoid spaces of sections of the central nervous system. [illegible] It might be [illegible] nly in smears, [illegible] himself had found that sections of the brain of a rabbit dying from Surra showed enormous numbers of the trypanosoma, enough to produce mechanically the profound changes observed in the nervous system. But against the fact that they could not be seen in the vessels it might be said that they took on a different form or were hidden in the tissues in sleeping sickness. He did not regard the experiments on animals as conclusive. The strong arguments in favour of the trypanosoma being the cause of that remarkable disease to his mind was the admirable research as regarded the distribution of the fly, the distribution of the disease and its correlation with the existence of the fly and the existence of the trypanosoma in the blood of the natives by Colonel Bruce and his assistants. The case under Sir Patrick Manson's care was of great importance in showing the chronic nature of the disease. That was of exceptional interest because they found that the patient for a long time exhibited the trypanosoma in the blood and then died with the diplococcal infection which in this instance might therefore be assumed to be related to the onset of the symptoms.

Dr. C. F. **HARFORD** said that he had no right to say anything on the subject of sleeping sickness because he had not had an opportunity of making recent observations with regard to the disease. He had, however, a case of sleeping sickness under observation about 14 years ago and his attention was drawn to it by the natives who seemed to have a close acquaintance with the disease, although in their part of Africa (the Upper Niger) the disease presented itself in a sporadic form. One point which seemed to impress itself upon the intelligent natives was the occurrence of enlarged lymphatic glands and they had the idea that if the lymphatic glands were removed the disease would be cured. They told him that they had performed operations of that nature. He thought that they probably regarded all cases of enlarged lymphatic glands as cases of sleeping sickness and removed enlarged glands in cases where sleeping sickness had not developed and thus thought that they had cured the disease. He made inquiries of educated natives who knew a good deal about the subject and one fact they drew attention to was that no negroes in other parts of the world, as in the West Indies, and no American negroes seemed to develop the disease. Dr. Harford proceeded to say that he was specially interested in the subject from a practical point of view. There had been in his college, the Livingstone College, student missionaries who had had a good deal to do with the disease, who had been in the worst districts of the Congo and had seen much sleeping sickness there. He was also connected with the Church Missionary Society, and being physician to that society he had much to do with missionaries who had come from districts where the disease existed. Dr. A. R. Cook and Dr. J. H. Cook, he was sure, had contributed something to the elucidation of the problem of the cause of the disease. He did not know abler men than those two brothers, although they had not had much opportunity for scientific research, being arduous medical missionaries. He thought they were greatly indebted to Dr. Sambon for having brought before them such a carefully prepared paper containing a large amount of evidence with regard to the important disease which they were considering and he hoped they might express the desire that some practical step should be taken to deal with the disease. It seemed to him that whatever might be the final conclusion on the subject there could not be the least question that the tsetse fly was a terrible scourge, not only to man but to animals, and that every effort should be made to see what might be done to deal with the fly. He might mention that one practical step had been taken in Uganda by the authorities of the Uganda Industrial Mission who, fully realising the danger of having their establishment in a district where the tsetse fly was prevalent, had actually taken steps to abandon most desirable premises in order to get away from that district. He thought that certainly they as a society ought to make practical use of the very important discovery in connexion with the cause of sleeping sickness.

Mr. **JAMES CANTLIE** asked if the disease was limited to the areas represented on the map. They were all afraid that it would spread on the Nile. He wished to know whether it was stationary or steady in its progress.

Dr. H. T. **BULSTRODE** remarked that so far as he understood the disease its medium of conveyence was the glossina palpalis and if this view was wholly true the danger of contracting the disease must be limited to the areas already inhabited by the fly or areas to which it may be carried. They had heard about the distribution of the fly in Uganda but not in Senegambia or Angola. He would like to know whether the areas of the disease and of the fly corresponded there. In his paper Dr. Sambon drew a terrible picture of the possible spread of the disease up the Nile across the Suez Canal and along the coast to India. He (Dr. Bulstrode) failed to see how that could happen. So far as he could gather, the disease was not directly communicable from person to person but only through glossina palpalis and therefore in the area of distribution of that fly. Dr. Nabarro had spoken of the depopulation of an island by sleeping sickness. This fact suggested that the distribution of the fly had extended or that the trypanosoma might have other agencies of spread than glossina palpalis. Otherwise it was difficult to understand how the island in question became peopled in the first instance. Dr. Bulstrode thought that if the distribution of glossina palpalis was not altering there should be little danger to the residents of fly-free areas in the importation of infected human beings, as the disease was not directly communicable. Probably, however, they were only in possession of part of the whole story.

Dr. **NABARRO** remarked, in reply to Mr. Cantlie, that the disease was spreading along both shores of the lake and in each case it was approaching German territory. The Germans were becoming rather anxious about it and sent one of their colonial surgeons over to Entebbe to study the disease there along with themselves. They showed him the fly and told him different facts concerning it and he returned ready to deal with the disease if it should reach his territory. With regard to how the disease was spread, that, he must own, was a difficult question, because the trypanosoma was very scanty in the blood of patients, but possibly more numerous in the earlier than in the later stages of the disease. Then, too, the latent period might last for several years, so that the patients might have had the infection imparted to them years before the disease showed itself. He took it that the fly had been in the country for a long time, but that the trypanosoma had only recently been introduced into the country. He knew for a fact that around the Albert Nyanza, to the north-west of the Victoria Nyanza, the fly was found all along the shore and yet there was no sleeping sickness there. That had been discovered shortly before he came away. One feared that if infected patients got there they might spread the disease because the fly was there. On the other hand, when infected patients got into the interior of Uganda the disease died out with them because the fly was not found there, just as malaria would where there were no mosquitoes. It was quite possible that certain animals might harbour some trypanosomata but these seemed to be different from the trypanosomata found in cases of sleeping sickness. No fewer than 50,000 people died last year from sleeping sickness on the shores of the lake and in Usoga, so that the disease was a serious thing from an economic point of view.

Sir **PATRICK MANSON** said there was no doubt about the existence of sporadic cases as mentioned by Dr. Harford. Occasionally, cases had occurred on the West Coast of Africa, as, for instances, in Senegambia, Sierra Leone, and the Upper Niger, and there the disease did not appear in an epidemic form. It would be interesting to know the relation that these cases bore to the presence of the trypanosoma in the general population of those particular places. A good many years ago he was asked to see a patient who had come from German East Africa and who presented a combination of symptoms that he confessed he could not understand—a peculiar tachycardia, a peculiar irregular temperature, an enlarged spleen, great prostration, and half a dozen other symptoms which now he knew must have belonged to trypanosomiasis, possibly to sleeping sickness. If there was one case of that disease in German East Africa why should there not be many cases? It was quite possible that the disease might prevail in many places but had not been recognised. This was borne out by something that had been ascertained during the last few weeks as regarded another disease which belonged to the same category as trypanosomiasis. He alluded to a disease known in India as kala-azar, which was probably due to a parasite inhabiting the spleen and the liver. Formerly it was thought that this disease was limited to certain areas in India and had travelled in epidemic form and depopulated the places over which it passed. But now it appeared that a similar disease existed in China and only lately a German had recorded a case of that disease in an individual who came from Peking. In some places the disease was epidemic and in others it was sporadic. It would be exceedingly interesting to find out what were the exact conditions which determined endemicity and sporadicity. It had been suggested that the entrance of the trypanosoma into the cerebro-spinal fluid was the determining cause of the symptoms of sleeping sickness. He thought that view was a little far-fetched. He thought that the trypanosoma was the cause of sleeping sickness but to particularise as to the precise way in which it caused sleeping sickness—by its entrance into the cerebro spinal fluid for example—was going a little beyond the facts. When a patient was afflicted with encephalitis or inflammation of the cerebro-spinal system naturally the parts were all congested and the vessels were so distended that there was an escape of blood undoubtedly at times into the cerebro-spinal fluid and they [illegible] like the trypanosoma [illegible] against phagocytes a [illegible] present in the fluid for a considerable time. An analogous condition was seen sometimes as the result of filaria of the blood giving rise to stasis regurgitation in the lymphatic vessels; if the tunica vaginalis was involved in such a case there were sometimes rupture and the effusion of lymph into the cavity of the tunica vaginalis. If this lymph were *examined there would be found in it millions of living* filariæ, these being much more abundant than in the ordinary lymph. The reason of this phenomenal abundance of filariæ was that the filariæ escaped into the cavity of the tunica vaginalis but could not find their way out of the serous sac and so accumulated there. The same thing happened in the case of the escape of trypanosomata into the cerebro-spinal fluid, and therefore he thought that they should not attach too much importance to the notion about the appearance of the trypanosoma in that fluid in connexion with the pathology of the disease. He would like to say one word in conclusion. He thought that the profession had been a little unjust. He did not want to speak about *questions of priority, but he thought that the profession* had been a little unjust in the way in which it ignored the work of the early investigators into the Uganda disease. When Dr. Low, Dr. Castellani, and Dr. Christy were sent out by the Royal Society they had specific directions to investigate on certain lines. More especially they [illegible] was the cause [illegible] if the areas of [illegible] or not. That piece of work they carried out thoroughly and they got little credit for it. A second thing they were to do was to endeavour to find out any micro-organism that might possibly be the cause of the disease. That they certainly did. In the first place, *they determined the presence of the diplococcus* which Dr. F. W. Mott said he had also found in some of the cases that he had investigated and they further demonstrated the presence in a large proportion of cases of the trypanosoma in the blood. He thought that those early commissioners sent out by the Royal Society had done their work thoroughly and ought to receive due credit.

Dr. MOTT said that he had only found diplococcus in every section of the glands and other organs in Sir Patrick Manson's case. He was referring to Dr. Castellani's work when he said 80 per cent.

Colonel T. C. MCCULLOCH, R.A.M.C., said he believed that Colonel Bruce had examined a number of flies and actually found the trypanosoma in their proboscides. He would also like to point out an inaccuracy perhaps in Dr. Sambon's paper. When Dr. Sambon spoke of the conveying of malaria by malarial-infected blood he could scarcely mean malarial-infected blood.

The PRESIDENT said that the cordial thanks of the society were due to Dr. Sambon for his paper which had led to a most instructive and valuable discussion.

Dr. SAMBON, before replying to the various criticisms, said that he must in the first place thank those present very much for the kind way in which they had listened to him. He was very pleased to hear Dr. Nabarro's remarks. Dr. Nabarro had explained the short period elapsing between the first bite and the appearance of the trypanosoma in "fresh-fly" monkeys by the fact that those experiments were pushed and that many flies were used. But from the "Further Report" he gathered that in the other sets of experiments equal numbers of flies were used. He thought it was to be regretted that Dr. Nabarro and his collaborators did not try experiments with stomoxys which by some observers was said to convey nagana. It was also to be regretted—knowing that the fly was to be found on one bank of the Nile and not on the other—that they did not thoroughly investigate this all-important point. Dr. Nabarro had further remarked that the rearing of flies for experiments would involve years. Well, perhaps the results would have been obtained later, but they would have been of a more definite and valuable kind. Dr. Bulstrode had asked if the areas of the disease and of the fly corresponded in Senegambia and Angola. As to Senegambia and Angola we had no information, but on the Congo Dr. Brumpt, from very careful investigations, had shown that there was a very close connexion between the fly and sleeping sickness. There were cases in which Dr. Brumpt noticed that the disease was more prevalent amongst women and in other places amongst men. He was able to show that where the women got water from certain places they contracted the disease but not so with the men who remained inland for agricultural work. In other cases where the men went to fish they contracted the disease but the women who [illegible] in their villages did not do so. Dr. Sambon agreed [illegible] it could be conveyed by means of needle infection with malarial blood. For instance, at the St. Spirito Hospital in Rome *Dr. Panichi* was examining a *slide of malarial blood* and broke the slide and cut his finger and after a short time of incubation he suffered from a severe attack of malarial fever. In the discussion that followed my paper at the last meeting Professor Lankester said I should correct the statement in my paper with reference to the importance given by Dr. Castellani to his own discovery. I am sorry that I cannot oblige Professor Lankester. I am well aware that Professor Lankester contends that Dr. Castellani did not understand that the trypanosomes which he had found in the cerebro-spinal fluid of sleeping sickness cases could have anything to do with the disease until Colonel Bruce pointed it out to him. I know also that numerous articles have appeared in medical and non-medical papers expanding greatly on Dr. Castellani's discovery of a streptococcus in sleeping sickness and even going the length of reproducing a factitious illustration of the bacterium. But all this is very unjust. I used the very words employed by Colonel Bruce in his progress report:—

> Dr. Castellani informed us of the work he had done, one especially interesting observation being th [illegible] the cerebro spinal *fluid* in five o [illegible] Castellani remained in Entebbe [illegible]

In his further report Colonel Bruce says:—

> At the time of the arrival of the commission Castellani did not consider that this trypanosoma had any causal relationship to the disease but thought that it was an accidental concomitant like filaria perstans.

Now let us place ourselves for a moment in Dr. Castellani's place when he found a trypanosoma in the cerebro-spinal fluid of a patient suffering from sleeping sickness. Should we have jumped at once to the conclusion that the trypanosoma was the cause? Later, when Dr. Castellani found the trypanosoma in five out of 15 cases, would it have been reasonable to incriminate the trypanosoma when it was known that trypanosoma fever was present in Uganda? But when the trypanosoma was found in 70 per cent. of sleeping sickness cases and not in the cerebro-spinal fluid of trypanosoma fever cases and never in healthy persons, was it necessary for anyone to point out that there might be a connexion between the trypanosoma and sleeping sickness? Professor Lankester disparages my remarks concerning the transmission of sleeping sickness. He says that there is nothing in them. The suggestion that *glossina palpalis* was the carrier would occur to anybody. The real interest in the matter is that Colonel Bruce found the glossina palpalis where it was not previously known. I have fully explained in my paper the reasons which led me to incriminate a West African tsetse, and more especially the widely distributed glossina palpalis. I know full well that the suggestion of a tsetse fly occurred to many; it *occurred to Professor* Blanchard, to Professor Laveran, to Dr. Mesnil, to Dr. Castellani, to Dr. Brumpt, to Colonel Bruce, to Professor Lankester, and to *many* others, but, as Dr. Brumpt stated in the discussion, there is some difference between a mere suggestion based on analogy and the deduction from carefully observed facts. As to the discovery of the tsetse in Uganda, which had been removed on account of a tumour which he believed to be a secondary deposit resulting from carcinoma of the mamma. The tumour of the mamma had been removed four years ago. It recurred and on account of this double oöphorectomy was performed and treatment by the x rays was afterwards used. Secondary tumour in the eyeball was an extremely rare condition and the specimen had not yet been examined microscopically, so that its nature was still uncertain.—Mr. Henry Rutherfurd showed a specimen of Unilateral Hydronephrosis due to kinking of the ureter by the renal vessels. He also showed a Humerus the seat of rapidly developing sarcoma having a relation to an injury. Three weeks after a fall the patient was examined but no evidence of fracture was found. Three days later fracture resulted from another fall and a tumour then formed very soon. The arm was amputated seven weeks after the first injury; the patient, who was a boy about six years old, died from shock.

ROYAL MEDICAL SOCIETY OF EDINBURGH.—A meeting of this society was held on Jan. 8th, Dr. H. D Shepherd being in the chair.—Mr. J. W. Dowden gave an address on the Treatment of Shock. After discussing the varieties and etiology of shock he referred to an interesting series of experiments made in America on the effect produced on vaso-motor pressure by laceration of various parts of the body in animals. In almost all regions the effect of injury was increase in blood pressure, the abdomen and the scrotum being exceptions. In preventing shock as the result of anæsthesia Mr. Dowden believed that there were great possibilities in the use of local anæsthetics. Such major operations as the removal of an arm with the corresponding part of the shoulder girdle had been performed under cocaine, the patient being quite ignorant of what was going on. In the use of general anæsthetics the preparation of the patient as ordinarily done by a process of starvation and purging should not be too rigorously carried out Even within an hour or two of the operation readily absorbed food might be given by the mouth and the patient might have a nutrient enema. In the actual treatment of shock warmth and friction were important factors. Of drugs strychnine and digitalin were the most valuable. Any good effect of alcohol was probably temporary and due to its action as an irritant, such an irritant as capsicum being even more effective. Injection intravenously of normal saline solution, except in cases of hæmorrhage, was more dangerous than useful.—A paper on Pubiotomy by Dr. F. D Simpson was read in his absence by Mr. A. MacRae.—Dr. T. B. Hamilton read a paper on Pleural Effusion. He said that the microscopical examination of the fluid was very important, for in this way it could be determined whether the condition was of tuberculous or inflammatory origin or whether it was merely dropsical.

BRISTOL MEDICO-CHIRURGICAL SOCIETY. — A meeting of this society was held on Jan. 13th, Mr. J. Paul Bush being in the chair.—Dr. H. Elwin Harris showed a case of Congenital Absence of the Left Auricle and External Auditory Canal with Facial Paralysis.—Mr. H. F. Mole showed (1) patients on whom the Radical Mastoid Operation or Ossiculectomy had been performed for the cure of chronic suppuration in the middle ear; (2) a patient on whom Choledochotomy had been performed; (3) a specimen of a Tumour growing from the cartilaginous septum of the nose; and (4) a Skiagram of an Unusual Dislocation of the Ankle.—Dr. J M. Fortescue-Brickdale showed a specimen of a Cyst below the liver, apparently an accessory gall-bladder, and the Brain of a child showing simple meningitis and considerable dilatation of the ventricles.—Mr. James Taylor showed a skiagram from a case of Scurvy Rickets.—Dr. E. W. Hey Groves read notes and showed the specimen of a case of Tubal Gestation producing severe internal hæmorrhage without rupture.—Mr. W. Roger Williams discussed the case.—Dr. W. K. Wills read a paper on the Present Position of Radiography in Therapeutics.—Mr. Bush, Dr. Harrison, Dr. P. Watson Williams, and Mr. Taylor discussed the paper.—Dr. Theodore Fisher read a short paper on Hæmatemesis associated with small white kidneys.—Dr. Watson Williams, Dr. E H. E. Stack, and Dr. J. A. Nixon made remarks on the cases.

SOUTH-WEST LONDON MEDICAL SOCIETY.—The monthly meeting of this society was held on Jan. 13th, Mr. E. F. White, the President, being in the chair.—Mr. J. H. Targett read a paper on Some Difficult Cases of Uterine Hæmorrhage and exhibited specimens illustrating the lesions described. The cases were grouped under the following headings: (1) Hæmorrhages occurring in very early pregnancy; (2) post-climacteric hæmorrhage; and (3) hæmorrhages due to general disorders, such as chronic alcoholism, Bright's disease, and the like.—After the reading of the paper a discussion took place to which several members of the society contributed.—At the close of the meeting the general business of the society was transacted.

Reviews and Notices of Books.

The Lymphatics. In two Parts: 1. The General Anatomy of the Lymphatics, by G. DELAMARE. 2. The Special Study of the Lymphatics in Different Parts of the Body, by P. POIRIER, Professor of Anatomy, and B. CUNÉO, Professor (*agrégé*) to the Faculty of Medicine of Paris. Translated and edited by CECIL H. LEAF, M.A., M.D. Cantab., F.R.C.S. Eng, Assistant Surgeon to the Cancer Hospital. With 117 Illustrations and Diagrams. Westminster: Archibald Constable and Co., Limited. 1903. 8vo, pp. 301. Price 18*s*. net.

DURING the last 12 years a monumental work on anatomy has been slowly but steadily progressing in France under the able direction of Professor Paul Poirier of Paris, with the collaboration of Professor A. Charpy of Toulouse, Professor A. Nicolas and Professor A. Prenant of Nancy, and Professor T. Jonnesco, prosector to the Faculty of Paris. Four large volumes, averaging 1000 pages each, have appeared and only the part devoted to the senses remains to complete this splendid treatise. The section on the lymphatics belongs properly to the second volume long since published but its appearance has for some reason been delayed and Professor Poirier, finding that he was unable to write the description of the general anatomy and histology of the lymphatic system, intrusted it to Dr. Gabriel Delamare, reserving for himself and Professor Cunéo the special study of the lymphatics of the different parts of the body. The whole section, which appeared in 1902, has now been translated into English by Mr. Leaf, and after comparing many pages of the translation with the original we congratulate him on having rendered the French into English with great accuracy and on presenting to his countrymen an excellent account of the present state of knowledge of the lymphatics as it is taught and understood in France.

The general anatomy of the lymphatics, written by Dr. Delamare (unaccountably written Delamere in the title page of Mr. Leaf's translation and in the editor's preface, and again at the heading of the article), commences with a description of the leucocytes of the blood, their movements and reproduction, and the action of staining agents upon them The microcytes and macrocytes, and finally the cells of Ehrlich, are considered in succession. The microcytes, which are of about the size of red blood corpuscles, have received many names. They are the free nuclei of Robin, the lymphocytes of Einhorn and Ehrlich, and the leucoblasts of Denys; they are not phagocytes and have only a limited power of movement. They are found normally in the blood and lymph, the lymphatic glands, the spleen, and the red marrow of bones. By the concurrent estimates of several good observers they constitute about 25 per cent. of the white corpuscles of the blood. Dr. Delamare himself found in the fluid taken from the thoracic duct of the dog (he does not specify whether after food or in the fasting state) that out of 133 elements 128 were microcytes The macrocytes or macrophages of Metchnikoff are of much larger size; they are amœbic and extremely phagocytic. They digest the bacillus of Hansen, red corpuscles, leucocytes, and even particles of sulphate of arsenic. In the enumeration given by different observers their number varies from 1 to 13 per cent. of the leucocytes. They are found in the blood and lymph, the lymphatic glands, the spleen, and the bone marrow. The third form of white corpuscle or cell with neutrophile granules is the polynuclear leucocyte or leucocyte with a polymorphous nucleus of Metchnikoff. It constitutes about 70 per cent. of the leucocytes of the blood. These corpuscles are very amœbic and very phagocytic. Other forms of cells described by Dr. Delamare are the cells with acidophile granules, the alexocytes of Kanthack and the eosinophiles of Denys. The phagocytic power and amœbic movements of these leucocytes are feeble. Lastly, there are the basophile granules—metachromatic cells or cells of Ehrlich. All these are fully described by Dr. Delamare with abundant references to the opinions of the numerous observers who have spent so much time in the elucidation of these objects and who have still left so many points obscure

The second part of the book, by Professor Poirier and Professor Cunéo, is much longer than the first and gives an account of the distribution of the lymphatics of the different organs of the body. This is illustrated by many beautifully executed woodcuts and we have not seen any account of the lymphatics of the pelvis approaching in precision that here given. It will prove of special interest to obstetricians, since the lymphatics of the uterus, the vagina, and the adjoining parts are given in great detail. The chyle vessels are not described on account of their structure being relegated to another volume of the "Anatomy" of Professor Poirier and Professor Charpy. We are rather surprised that amongst the numerous names given in the text and in the very large bibliography that of Dr. Ludwig Teichmann should be missing, since his figures were not only very accurate but are the source of many of those that adorn our text-books. Professor Poirier and Professor Cunéo give the proceedings that have been adopted by many anatomists and histologists to inject the lymphatics, together with an account of the fluids employed, which have been very various, including among others mercury, wax, oil, a saturated aqueous solution of Prussian blue, gelatin, and turpentine. A due meed of praise is given to Gerota's method, in which absolute black, extractum alkannæ, and cinnabar in addition to Prussian blue are used. Enough has been said to show that this work on the lymphatics will prove useful to the anatomist, the physiologist, and the practitioner.

A Guide to the Housing Acts, with Appendices containing the Statutes affecting Housing 1882–1903, together with the Forms and Circulars of the Local Government Board. By ARTHUR P. POLEY of the Inner Temple and Midland Circuit, Barrister-at Law. London: Eyre and Spottiswoode. 1903. Pp. 409. Price 3*s* 6*d*.

LOCAL authorities in exercising the important and useful powers given to them by the Housing Acts find that the principal Act which they are charged to administer (the Housing of the Working Classes Act, 1890) has in the 13 years of its existence been supplemented by no less than six minor Acts, passed with a view to make clearer or to amend its provisions. Members of county and borough councils may, therefore, well require a handy volume containing not only the Acts in question but full explanations of their working. Mr. Poley's volume fulfils these conditions; it is of a size adapted to the pocket and it contains all that is necessary for those desiring to understand as far as possible the business details of the Acts as well as the general scope of their provisions. They are not statutes easy to master or to carry out and it is to be hoped that some day means may be found to render the procedure for the object in question more simple and more uniform. Mr. Poley calls attention to the fact that three schemes of compensation are provided under Parts I., II., and III. of the principal Act necessitating references to a special scheme for compensation under the schedule to the Act with reference to Part I., and references to other Acts of Parliament under Parts II. and III., with the additional complication of procedure that may be entailed by utilising Part III. in conjunction with Part I. or with Part II. There are differences also, to quote another instance of complication, between the schemes known as improvement schemes and those termed reconstruction schemes. The same authority carries out both in cities, including that of London, in boroughs and in urban districts, but not in the county of London, where the County Council undertakes the former and the borough councils are responsible for the latter. All these and many others are matters of which individual members of councils should have knowledge if they would take an active part in the improvement of the conditions of life among the poor and the working classes which Housing Acts are intended to promote. Apart from such interest as medical men may take in their local public affairs they are directly concerned in the Housing Acts where they are medical officers of health, and in London they may be specially appointed medical officers of health by the County Council for the purposes of the Housing Acts. In addition to this, when 12 or more ratepayers are dissatisfied with the attitude of a medical officer of health with reference to an area which they believe to be unhealthy, a medical practitioner may be called upon to inspect the area complained of and to report as to its condition in his opinion. In all circumstances in which medical men are required to act under an Act of Parliament it is useful, if not necessary, that they should fully inform themselves as to the powers thus vested in them, and with regard to the Housing Acts Mr. Poley's book seems to afford the requisite information within a convenient compass, together with such as may be required by surveyors, solicitors, and others.

Diseases of the Eye: a Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. DE SCHWEINITZ, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania. With 280 Illustrations and six Chromo-lithographic Plates. Fourth edition. London and Philadelphia: W. B. Saunders and Co. Large 8vo, pp. 773 Price 21*s*. net.

WE had occasion when reviewing the first edition of this work in 1892 to speak of it in favourable terms. The author holds responsible positions and has had large experience to guide him in his descriptions of disease and of the various modes of treatment tried by himself or suggested by others. That experience he has utilised in the successive editions of his treatise which have appeared and in its present state it may be regarded as containing in moderate compass all that the practitioner needs to know in this department of medicine. Like the majority of American works on ophthalmology the optical principles concerned in vision, the conditions of normal and abnormal refraction, and the disturbances of motility, as well as the operations on the eye and its appendages are treated with great fulness of detail, and the illustrations are not only very numerous but amongst the clearest and best that have been published. Many important additions have been made in the present edition, such as a description of Dr. W. Thomson's lantern test for colour blindness which should be employed by all those who have charge of the vision of railway servants, sailors, signalmen, and others; the ophthalmoscopic signs of general arterio-sclerosis; the significance of optic neuritis; the educative treatment of strabismus; and many others to which attention has been drawn of late years.

In discussing the propriety or wisdom of removing the lens in degrees of myopia amounting to 15 D. or more Professor de Schweinitz states that although his experience has been very limited it has been [illegible] the [illegible] the operation. The list of dangers which he appends is sufficiently formidable to prevent most men from undertaking the operation without much consideration and without strong motives such as the advance of the disease or great deterioration of vision, for it includes intraocular hæmorrhage, detachment of the retina, iritis, and infection of the corneal wound. The latter complication if due precaution is taken ought to be excluded; the others, however, are not only extremely dangerous but are only to a limited extent under the control of the operator. The rule here laid down for the ordering of glasses in myopia is that young people under 20 years of age with good vision and a moderate degree of myopia—that is to say, under 5 D.—should wear the *full* correction *constantly*, providing that the accommodation is ample and that no signs of fatigue are evident. A short chapter might with advantage have been added to this otherwise very excellent work on the medico-legal relations of the diseases and injuries of the eyes.

Studies in Comparative Odontology. By A. S. UNDERWOOD, M.R C S. Eng., L.D.S. London: Baillière, Tindall, and Cox. 1903. Pp. 153. Illustrated. Price 5*s.*

THIS is an excellent little work and is full of interest from beginning to end. Mr. Underwood has the happy knack of being able to fix the attention of his readers and the evident enthusiasm of his style cannot fail to show students, who often regard odontology as useful only for examination purposes, that it may in reality be fascinating in a high degree. His main object has been to impart sound ideas as to the broad, underlying principles of the subject, leaving the student to fill in details from more comprehensive treatises, and he trusts, to use his own expression, that a new way of putting things and a new way of looking at them may lead to a better appreciation of those standard works. In clear, concise terms he has enunciated the general terms used in odontology, the methods by which teeth of complex type have been evolved from those of more simple pattern, and the different modes by which teeth are attached. In successive chapters the odontology of the different classes of the vertebrata is described. General characteristics are narrated, a description of each order is given, and typical examples are taken. Many problems perplexing to students are solved by the introduction of suitable diagrams, instances of which will be found in the description of the gymnodonts and the development and the mode of erection of the poison fang of viperine snakes. The concluding chapters of the book on the Effects of Environment upon Animals and the Chain of Life are clearly and simply written.

JOURNALS AND MAGAZINES.

Journal of Anatomy and Physiology. Conducted by Sir WILLIAM TURNER, K.C.B., F.R.S., D. J. CUNNINGHAM M.D., F.R.S, G. S HUNTINGTON, M.D., A. MACALISTER, M.D., F.R S., and J. G. M'KENDRICK, M.D., F.R.S. Vol. XXXVIII. Part 2, January, 1904. With Plates and Figures in the text. London: Charles Griffin. Price 6*s.*—The contents of this part are: 1. A Comparative Study of the Grey and White Matter, of the Motor cell Groups, and of the Spinal Accessory Nerve in the Spinal Cord of the Porpoise (*phocæna communis*), by David Hepburn, M.D. Edin., professor of anatomy, University College, Cardiff, and David Waterston, M D. Edin., senior demonstrator and lecturer on regional anatomy, University of Edinburgh, with four plates. The authors of the article state that the maximum superficial area of a section of the cord of a porpoise was at the level of the seventh cervical vertebra; the next largest area was about the seventh lumbar enlargement. The areas of the columns of grey and white matter vary in their relative proportions in different regions and just as the posterior columns do not increase uniformly in size from below upwards so neither do the anterior and lateral columns diminish uniformly from above downwards. Many of the fibres in all the columns act as longitudinal commissural bands between different segments of the cord. The grey matter is arranged in two comma-shaped masses, united by a commissure. The illustrations show the form of, and the area occupied by, the grey matter at different levels The article is a valuable contribution to our limited knowledge of Cetacean neurology. 2. Skulls from the Round Barrows of East Yorkshire, by William Wright, F.R.C S. Eng., with a plate. The author gives a description and the measurements of 16 skulls. 3. The Varieties of the Os Calcis, by P. P. Laidlaw, B.A., Scholar of St. John's College, Cambridge, with five plates. 4. Further Observations on the Functions of the Spleen and other Hæmolymph Glands, by Thomas Lewis, with a plate. 5. A Note on an Exceptional Human Brain presenting a Pithecoid Abnormality of the Sylvian Region, by G. Elliot Smith, M.D. Sydney, professor of anatomy, Cairo. 6. A Note on the Communication between the Musculo-Spiral and Ulnar Nerves, by G. Elliot Smith, M.D. Sydney. 7. A Note on the Fossa Parieto-Occipitalis, by G. Elliot Smith, M.D.Sydney. 8. The Insertion of the Pyriformis and Obturator Internus and Formation of the Posterior Circular Capsular Fibres and Upper Retinaculum of Weitbrecht, by J. Ernest Frazer, F.R.C.S. Eng., with figures in the text 9. An Abstract of Lectures on the Early Stages in the Development of Mammalian Ova and on the Formation of the Placenta in Different Groups of Mammals, by Arthur Robinson, M.D. Edin., with two plates. 10. The Germ Cells: Part I., continued, by John Beard, D.Sc. 11. The Proceedings of the Anatomical Society of Great Britain and Ireland.

Looking Back.

FROM

THE LANCET, *SATURDAY*, JAN. 21, 1826.

MEETING OF THE STUDENTS
AT
ST. BARTHOLOMEW'S HOSPITAL.[1]

A Meeting of the Students of this Hospital took place in the Anatomical Theatre, on Wednesday se'nnight, for the purpose of taking into consideration the propriety of requesting the surgeons to allow the name, age, disease, and principal treatment of every patient under their care, to be affixed to a convenient part of the bed. It is scarcely necessary to observe, the most intense interest was excited in consequence. Immediately after the afternoon lecture, Mr. Skey was called to the chair, when the following resolutions, addressed to the surgeons, (which had been previously drawn up by one of the students, Mr. Turley), were proposed and carried unanimously.

1st. That for the benefit of the students and the economy of your time, the name, age, disease, and treatment of each patient be posted on some conspicuous part of his bed.

2d. That all accidents admitted, be registered every day in a book kept for the purpose in each accident ward.

3d. That a notice of all operations to be performed should be pasted on the board in the Anatomical Theatre.

Here some desultory conversation arose previous to putting the fourth and last resolution, and which, indeed, was not embodied with the foregoing; it was as to the mode of conducting post-mortem examinations, and the shameful extortion of sixpence from every pupil entering the dead house.

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[1] Only a portion of the account of the meeting has been transcribed.

THE LANCET.

LONDON: SATURDAY, JANUARY 23, 1904.

The Relations of the General Practitioner to the Consultant.

Consultants have their uses whether they practise as general physicians, as operating surgeons, or as specialists. The general consulting physician or surgeon almost invariably holds a post which entails upon him huge and varied experience. To the specialist it is given by special study of one branch, or segment of a branch, of medical science to gain more knowledge of that department of practice than is vouchsafed to the average medical practitioner. Those members of the profession who are in general practice have to treat patients suffering from ailments belonging to medicine, surgery, and gynæcology, and the very fact that their knowledge has to be so wide prevents its reaching so great a depth in particular directions as is attainable by those who see disease marshalled before them in the wards of great hospitals, or who study one small portion of the vast field of medical knowledge under exceptionally favourable circumstances. As a means of advancing the science of medicine and of affording assistance in diagnosis and treatment in cases of special difficulty the consultant is of inestimable value. But the general practitioner is the backbone of the profession as we have always maintained. To vary the metaphor, the consultants may be looked upon as the vanguard of the advancing hosts of medicine, whilst the general practitioners compose the main body on whom devolves the greatest share of the fighting. By itself the vanguard could not hold its own; unsupported by the vast army of those in general practice it could not stand. This support of the consultant by the general practitioner has always been recognised by the leaders of the profession. In the first number of The Lancet, published now more than 80 years ago, we reported Sir Astley Cooper's acknowledgment that it was to the general practitioners with whom he was acquainted that he owed his position more than to any merit of his own. Without attaching too much importance to Sir Astley Cooper's disclaimer of merit we may accept the general statement of his indebtedness to those in general practice, adding that the real heads of the medical profession at the present day in most instances hold their position on the same ground. The consultant is, on his side, of value to the general practitioner. In a difficult case—difficult either in diagnosis or in treatment—what can be more helpful than the opinion of one who has devoted special attention to the subject or who is known to enjoy great opportunities of experience? Even if the verdict be that nothing can be done—that the resources of science are exhausted—there is a consolation both to the friends of the patient and to his medical attendant that they have had the opinion of one well qualified to judge.

Disputes, or rather causes of friction, frequently arise between consultants and general practitioners, and when they do the reason is either that the report given to the general practitioner by the patient as to the opinion of the consultant is incorrect, or that the general practitioner thinks that the consultant has tried to oust him from medical attendance. With the best will in the world to describe what has taken place and what has been said, the patient may misrepresent what has occurred. Therefore it is well for the consultant never to send verbal messages by the patient if it can be avoided. If any message must be sent by the patient it should be couched in the simplest words and phrases. All important communications should be in writing and then there can be no possible ground for misunderstanding. The practitioner is entitled to a full account of the consultant's opinion. The consultant should be especially careful in what he says to the patient of the treatment pursued by the medical man who has already been in attendance. To find fault with what has been done is in the highest degree reprehensible, for the general practitioner is in consultation with the specialist, even though he may not be present in person. It is not only undesirable for the patient's sake to shake his faith in his medical attendant, but it is unfair, and even dangerous, to do so without hearing what the medical attendant may have to say. The harm that may be done in this way is incalculable. The other great cause of friction between the consultant and the general practitioner is the belief that more than occasionally the former takes possession of the patient of the latter. We trust that this is rare in reality, but we fancy that there is a widespread belief among general practitioners that some consultants habitually act thus, although attempts to obtain public support in such a base manner must ultimately defeat themselves with ignominy. We have been led to make these observations by the letter and inclosure which will be found on p. 254). This communication may be summarised as follows. A general practitioner living a few miles from London had a patient suffering from a prostatic calculus. There were no urgent symptoms and therefore an attempt was made to lessen the size of the stone by internal medication, so that it might come away per urethram. (This was perfectly legitimate treatment, though, of course, not to be persisted in after a reasonable time.) The attempt to diminish the size of the stone did not appear to be successful and the advice of a consultant was sought, the general practitioner making the appointment and supplying the consultant with a full history of the case. The patient went to London, interviewed the consultant, and the diagnosis was confirmed. But according to the patient's statement the consultant pointed out the great danger of delay, saying that the general practitioner had acted wrongly in treating it medically, and urging immediate operation. The patient arranged to enter a public hospital to which the consultant was attached on the following day. Now comes the most surprising portion of the allegation. The patient was made to promise to send a fee of 20 guineas for the operation to the consultant that same night, although he was to be an inmate of a public hospital, and of this monetary transaction no one was to be told. No letter was written to the general practitioner and the only message was that the consultant was too busy to write but that a large stone was present "which should not have been left so long." The patient went home; on his way he called on his medical man and faithfully delivered the consultant's message. The same night he sent off the 20 guineas. So far, of course, we have only an *ex parte* statement and one made by a man who takes no pains to conceal that he considers himself aggrieved. But something depends on the accuracy of the patient's memory who may have misunderstood the consultant. Two facts, however, seem to be clear: one is that the patient was told that there was a large stone present which should have been removed before. This was utterly unfair to the general practitioner; such extreme urgency is not present in a case of prostatic calculus unless it is definitely causing retention of urine and no such symptom was present. The other fact, a highly disagreeable one, is the demanding of the 20 guineas to be sent by post the same night. It does not seem possible that there can be any mistake in this matter, for the money was sent. We do not quite understand how the consultant could demand a fee for an operation to be performed in a public hospital, but possibly it may be permitted in the hospital to which he is attached. If it is permitted the sooner the rule is altered the better for the institution. Here we have the two causes which we have mentioned as originating frequent disputes between consultants and general practitioners. The consultant is alleged to have criticised adversely the general practitioner's treatment to the patient, and appears to have attempted to annex the case.

Now comes the poetic justice. In the early morning following the journey to London the patient was seized with retention of urine, his own medical man was sent for, and before he arrived the stone was passed. Possibly the consultant's examination had slightly displaced it; perhaps the double railway journey had assisted to this fortunate issue. The eroded surface of the stone showed the solvent action of the treatment already employed, and thus the internal medication must be credited with assisting in the happy issue of the case; but whatever may have been the cause the fact remains that the *fons et origo mali* has been expelled. And just about the time of the delivery of the calculus the London consultant is receiving the cheque. The mind of the patient thinks with natural regret of the money sent in vain. Not a syllable of the pecuniary transaction has he yet breathed to anyone but his heart misgives him and he confesses to his medical man what he has done. Fortunately, the cheque is returned on application but the careful consultant sends with it the advice that should any hæmaturia or difficulty of micturition at any time occur the patient should return to town at once. The general practitioner who had applied to the consultant for advice has to content himself with the meagre but eloquent message brought to him by the patient, amounting to an accusation that he had misjudged the case. Not a single written line does he ever receive from the consultant. Even after allowing for some errors in the patient's statement sufficient evidence remains to show that the general practitioner has been gravely wronged. In no point, in our opinion, did the consultant act correctly towards the medical man who had applied to him for an opinion. It may reasonably be asked, What should a consultant do when he finds that the general practitioner has made a mistake in diagnosis or treatment? The decision is clear. The consultant is asked to suggest the treatment to be pursued; he has to deal not with the past but with the future, and he is not justified in making unfavourable comments to the patient on the conduct of the general practitioner who has called him in consultation. He may say what he likes to the general practitioner, but there should be no antagonism between general practitioners and consultants, for they are necessary to each other The family adviser has facilities for observing a patient which are denied to the consultant; he "knows his patient's constitution," as the phrase goes, and there is an important truth in this; he knows which organs are specially prone to be affected; he knows his patient's idiosyncrasies as to diet and drugs, and as years go by we are learning to appraise this knowledge more highly than formerly. That general practitioner is wisest who recognises when he needs a further opinion; that consultant is wisest, even as worldly matters go, who recognises that the patients sent to him are not his patients unless they are specially given over unto his care and who deals with those who send him patients as he would wish to be dealt with were the positions reversed. Such mutual trust will not merely be best both for the consultant and the general practitioner but will also be for the best interests of the patient who commits his health and life to their care.

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Sight Testing by Opticians.

WE have had occasion at various times during the last tw or three years to refer to the endeavours of a certain sectio of the spectacle trade to set up a new form of quackery i relation to the prescribing of glasses, and to assume t themselves a position which nothing short of a complet medical and surgical education could by any possibilit justify. We have not hesitated to condemn these endeavour in the plainest terms; and our views concerning them have been confirmed by the authority of the Presiden of the Royal College of Surgeons of England in th address which he lately delivered as President of th Ophthalmological Society. We have therefore the mor pleasure in calling attention to a letter which has bee sent to the leading journals of the optical trade b Mr. W. A. DIXEY, a well-known spectacle-maker an optician. In this letter, from the point of view of th interests of the trade itself, he strongly enforces th arguments which, in the interests of the public, we hav found it necessary to employ. The letter has bee called forth by a proposal to add the subject of "sigh testing" to the examinations for opticians held by th Spectacle Makers Company, and by the circumstance th the court of the Company has appointed a committee t inquire into, and to advise upon, the question. Mr. DIX is strongly opposed to the suggested course and he rest his opposition upon three principal grounds. The first i that medical knowledge and training are necessary for prope sight testing and that outside the medical schools no facil ties exist for their acquirement. The second is that th "convention" of the consulting room is better suited to sigh testing than is that of the shop and that the addition of a sight-testing qualification to the certificate of the Company would therefore be undesirable. The third is that such an examination would be against the best interests of the trade, and would tend to divert the energy of optical students from the practical side of their work and to endanger the usefulness of the present examinations. These reasons, so far as the medical profession is concerned, remind us of those which were once produced to the Lord Chamberlain by a deputation from the mayor and corporation of a country town who desired to anticipate a possible charge of disloyalty for not having caused the parish bells to be rung upon the King's birthday. The deputation assured his lordship that they had twelve sound and sufficient reasons for the course which had been pursued and the first of them was that there were no bells in the parish. The second—but here the Lord Chamberlain interrupted them, declaring that the first alone would abundantly satisfy His Majesty and that he would not trouble them to proceed further with their discourse. We have every desire for the prosperity of the spectacle trade so long as the proceedings of its members are confined within proper limits, and we are convinced that Mr. Dixey is an excellent judge of the means by which that prosperity may most effectually be promoted. We are therefore quite prepared to agree with the whole substance of his contention; but his first argument is that upon which we rely. We have no doubt that his experience has brought under his notice a good many cases in which serious harm has followed from the use of spectacles prescribed by persons who had not received "medical knowledge and training" and we heartily congratulate him upon the courage and wisdom which his letter has displayed. It is so much more easy for any man in an assured position to go with the stream than to oppose himself to ignorant agitation, that a conspicuous instance of the latter course ought not to pass unnoticed by those who are competent to estimate it rightly. We sincerely hope that the court of the Company will be convinced by Mr. Dixey's arguments, and that a very mischievous proposal may be rejected by a sufficient majority to prevent its early reappearance. If the Company will use its influence to restore and to improve the manufacture of spectacles in the United Kingdom, it will be likely to accomplish far more for the encouragement of the trade than can ever be done by encroachments upon the province of the medical practitioner.

Sleeping Sickness.

In an annotation in The Lancet of Sept. 12th, 1903, p. 769, we referred to the Progress Report issued by the commission which was despatched to Uganda by the Royal Society to investigate the cause and modes of conveyance of sleeping sickness. Most valuable work has been accomplished by the members of that commission and their predecessors, and in our issue of Dec. 19th, p. 1730, we printed a *résumé* of a "Further Report on Sleeping Sickness in Uganda" which has recently been published. Unfortunately, some correspondence has appeared in the *Times* with regard to priority in the discovery of the cause of sleeping sickness. Doubtless honour should be given to whom honour is due and in the present instance praise should be accorded to all those who, heedless of danger, have given assistance in arriving at the results which have already been attained. In 1902 Dr. A. Castellani discovered a bacterial parasite—a streptococcus—in cases of sleeping sickness and after painstaking investigations stated as his opinion that this organism was the cause of sleeping sickness. He subsequently found a trypanosome in a case of sleeping sickness but did not then attribute any causal relationship between that organism and the disease. On the arrival of Colonel D. Bruce, R.A.M.C., F.R.S., in March of last year, Dr. Castellani still maintained his streptococcus theory, but after mentioning to Colonel Bruce that he had found trypanosomes in five cases of the disease the former urged him to make further investigations, with the result that he found the organisms in 70 per cent. of the cases examined. This naturally led to a reconsideration of his streptococcus theory and he then suggested that sleeping sickness is due to a species of trypanosomes and that at least in the last stages there is a concomitant streptococcus infection which plays a certain part in the course of the disease. To Dr. Castellani must be given the credit of being the first to demonstrate the presence of the trypanosomes in cases of sleeping sickness and also of introducing the method of centrifuging the cerebro-spinal fluid in his search for the streptococcus. Colonel Bruce, on the other hand, originated the theory that the trypanosomes might cause the disease. We trust therefore that there will not be any further controversy as to priority and that to all concerned in this most important inquiry will be accorded the thanks which they deserve.

The discovery of trypanosomes in the blood of human beings had been previously made by Dr. J. E. Dutton in 1901, and in a recent issue[1] we published a brief review of the "First Report of the Trypanosomiasis Expedition to Senegambia (1902) of the Liverpool School of Tropical Medicine and Medical Parasitology." This has been compiled by Dr. Dutton and Dr. J. L. Todd, who were sent to Senegambia to make certain investigations. They only found six cases of trypanosomiasis in the natives but state their reasons for considering that the percentage of infection given by these figures is smaller than is actually the case. From the clinical description given of the cases lethargy is not a prominent symptom. The observations of Colonel Bruce and his colleagues prove definitely, however, that trypanosomes are always present in the cerebro-spinal fluid of patients suffering from sleeping sickness and that there is also strong ground for believing that there is a close connexion between the so-called "trypanosoma fever" and sleeping sickness. They also show that the disease can apparently be transferred from human beings to monkeys by means of inoculation. It was further shown that the distribution of sleeping sickness coincides with the distribution of a *biting insect—a tsetse fly, the glossina palpalis*. This most important fact at once suggested that the disease was communicated by means of this fly and corroborative evidence was adduced by means of allowing flies confined in a cage to feed on patients suffering from sleeping sickness and at varying intervals to place the same cage of flies on monkeys. Positive results were obtained. Tsetse flies were then freshly caught and placed at once on healthy monkeys; the results were again positive.

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[1] The Lancet, Dec. 19th, 1903, p. 1727.

From the above facts there is strong reason to suppose that sleeping sickness is a disease transferred from man to man by means of the tsetse fly, but according to remarks made at recent meetings of the Epidemiological Society on Dec. 11th and Jan. 15th[2] it is evident that absolute scientific proof is still wanting. The general tone adopted by the speakers was certainly in favour of the correctness of the theory just enunciated. Dr. L. W. SAMBON drew attention to the significant fact that the flies freshly caught conveyed the disease to monkeys in two or three weeks, whilst in the case of those which had previously fed on patients the symptoms did not appear for about eight weeks, thus suggesting that the flies were more active in directly conveying the disease than in transferring it from man to man. Dr. D. NABARRO, in a most interesting speech, explained this difficulty by detailing the manner in which the experiments were carried out. The fresh flies were brought into the camp during the day, kept over night, and then put on a monkey. Being hungry all the flies fed well and thus the animal was placed in a favourable condition for infection and the organisms speedily appeared in the blood. In the other series of cases in which flies were first fed on patients suffering from sleeping sickness and then on monkeys, the animals were not so strongly exposed to infection, since the flies did not feed so well or so numerously as the patients frequently removed the flies before a full meal had been taken. Sir PATRICK MANSON, whilst believing that the cause of sleeping sickness had been discovered, nevertheless maintained that the scientific chain of evidence would not be complete until pure cultures of the organisms had been obtained and further tests had been made with those cultures. In support of this suggestion he stated that the experiments of injecting blood or cerebro-spinal fluid of patients infected with sleeping sickness and subsequently inducing the disease in the monkey were not conclusive in establishing an etiological relationship between the trypanosomes and sleeping sickness, since some other organism might have been simultaneously injected. Dr. F. W. MOTT, from his own experiments, laid more stress on the streptococcus infection which Dr. CASTELLANI was the first to demonstrate. During the discussion a case was frequently mentioned which Sir PATRICK MANSON had observed in this country (the patient having previously been in infected districts) and which had proved fatal. Dr. MOTT had isolated a diplococcus from the enlarged glands and in his opinion the diplococcus infection had precipitated the onset of the symptoms. To sum up the results of this discussion we may repeat that although the general tone indicated a belief that the trypanosomes were the cause of sleeping sickness yet there was a strong feeling that further scientific investigation was required before the etiology could be considered as entirely settled. In this view we concur.

In conclusion we desire to draw attention to the discrepancy between the terminology which appears in the printed version of the report presented to the Royal Society by its commissioners and that adopted at the discussion at the Epidemiological Society. In the former we find the parasite called "trypanosome," with the plural term "trypanosomes," whilst the speakers at the latter society adopted the terms "trypanosoma" and "trypanosomata." It would be well, we think, if some decision were come to whereby uniformity might be preserved.

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The Medical Profession and the Dispensing of Medicines.

WHATEVER opinion may be formed upon the broad lines of the Draft Medical Act Amendment Bill which has been prepared by the medico-political committee of the British Medical Association, we believe that the new clauses, which are to be considered at a general meeting of the Metropolitan Counties Branch, will scarcely be received with enthusiasm by many country practitioners. The Bill, the general scope of which is familiar to many of our readers, proposes a reconstitution of the General Medical Council, with a very great reduction in the numbers of members nominated by the different examining bodies and with a great increase in the numbers of Direct Representatives to be elected by the registered medical practitioners resident in various parts of the United Kingdom. It is proposed that the Direct Representatives and the nominated members of the Council should be numerically equal and that in addition there should be five Crown nominees, three for England, one for Scotland, and one for Ireland. To this composite body are to be intrusted the registration of students and of practitioners and penal powers analogous to those at present possessed by the General Medical Council. But the new General Medical Council is, according to the Bill, also to have the power to appoint assistant examiners for the various intermediate examinations, inspectors to visit medical schools or hospitals who are to report upon their suitability for affording adequate instruction, and the privilege of itself appointing boards of examiners in medicine, surgery, and midwifery to conduct a State examination qualifying for registration in these subjects. This examination, it is proposed, should be held simultaneously in London, Edinburgh, Dublin, and at such centres of medical education as the Council may from time to time determine and is apparently intended to be the sole qualification for registration. The fee for initial registration is to be only £1, but a further annual payment of £1 will be required for the privilege of being entered on the Register each ensuing year. It will thus be seen that the Bill proposes large measures of medical reform. The existing poverty of the General Medical Council is to be removed by the creation of an annual income, while its position as the central authority in medical education is to be confirmed; and the much wanted one-portal system is to be introduced.

Much could and will be written on this Bill, but at the present moment we propose only to notice certain new clauses which are to be discussed at the meeting of the Metropolitan Counties Branch of the British Medical Association. Both clauses deal with questions that concern the medical profession as a whole, while to one of them our attention is drawn pointedly by a correspondent. The first clause appears to be dictated by the desire to show that practitioners will obtain something for their money besides the insertion of a line in the Register. It is as follows:—

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[2] For reports of these meetings see THE LANCET, Dec. 19th, 1903, p. 1721, and p. 228 of our present issue.

> "Any person registered under this Act shall, by right alone of such registration, be eligible to all appointments in the United Kingdom, which may be held by a legally qualified medical practitioner."

But this really promises nothing, since those who elect will surely cling to the tradition of appointing the man who appears to be best qualified. The clause is redundant, since no one is a legally qualified medical practitioner unless registered, and no one, if this Bill passes, can in the future be registered without passing this State examination in medicine, surgery, and midwifery. A second clause is more impracticable, though on a first reading its intention to raise the tone and tatus of the medical profession may disarm criticism. It is:—

> "No person registered under this Act, excepting only as hereinafter indicated, shall dispense or supply drugs or other medicaments to anyone."

Before considering the exceptions we would plead for a little greater precision of the terms employed. If such an enactment had been in force when KOCH'S tuberculin was first introduced into this country would a practitioner have been breaking the law when daily employing the "drug or other medicament"? If in the future some similar treatment is suggested for disease where there is no question of emergency would penalties be incurred under this clause? It may be assumed that in the desire to check the practice of dispensing by medical men these contingencies have not occurred to the author of this clause. The list of medical men to whom the operations of the clause are not to apply, and who will therefore escape the risk of a suggested penalty of £100, is sufficiently curious:—

> "1. Medical officers of H M.'s navy or army not engaged in private practice. 2 Registered practitioners while in attendance on cases of emergency requiring in the opinion of the practitioner the immediate use of a drug or ther medicament. 3 Registered persons practising their profession in country districts in which the inhabitants are so few that they cannot support at the same time both a medical practitioner and a pharmaceutical chemist."

How is the medical man to ascertain the supporting power of his district except by bitter experience? It almost suggests a melancholy picture of the survival of the fittest, and yet the author goes on relentlessly:—

> "It shall nevertheless be incumbent upon any medical practitioner so practising in such a country district to satisfy the General Medical Council, when called upon by that body so to do, that the people of the country district in which the practitioner is engaged in medical practice and in the dispensing of drugs or of other medicaments are, in fact, too few in numbers to support both a medical practitioner and a pharmaceutical chemist."

This would surely entail an amount of vexation sufficient to deter many from venturing into country practice and it would involve lengthy sittings of the General Medical Council in search of information as to the population and wealth of rural districts. We cannot conceive the General Medical Council turning itself into a kind of tariff commission. The last two exceptions are:—

> "4. Medical practitioners employed on board of vessels other than H.M.'s ships. 5. Any other person registered under this Act, the peculiar circumstances of whose professional work require in the opinion of the General Council, before which the facts must be brought, special consideration with a view to the exemption of such person from the action of this clause."

In other words, with authoritative permission, and after due inquiry, this clause may be set aside with all its terrors of a fine of "not less than One Hundred Pounds" and the threat of removal from the Medical Register.

That such proposals should be gravely put forward for discussion appears to argue great lack of appreciation of the conditions of practice not only in country districts but also in the poorer quarters of our large towns. While the clause appears to be directed solely towards the extinction of the dispensing medical man, it would operate by fostering the growth of the prescribing druggist. The proposals of the Draft Medical Act Amendment Bill are sufficiently striking and revolutionary without these two suggested clauses. Should the clauses be carried by the Metropolitan Counties Branch there can be no doubt that they will rouse a critical interest in the Bill which may check the further action of those who desire the one-portal system and increased direct representation.

Annotations.

"Ne quid nimis."

THE PUBLIC SCHOOLS SCIENCE MASTERS' ASSOCIATION.

THE annual meeting of this association was held on Jan. 16th at Westminster School, where accommodation had been provided by Dr. Gow. Professor W. A. Tilden, F R.S, president of the association, was in the chair and after referring to the influence which the association had exercised during the past year he went on to say how necessary it was to cultivate the power of seeing. The best instrument for opening the eyes of children was some form or other of natural science. There were other aspects of the question and he was reminded of what was at the present time going on in the University of London. In the medical faculty of that University there was a great struggle going on in regard to the position of chemistry as a subject which was necessary to the education of the medical student. Without going into details an attempt was being made to stifle a large part of the chemistry and to thrust it out of the curriculum. A discussion then arose following a paper read by Mr. R. E. Thwaites (Malvern) upon the possibility of fusing the mathematical and science teaching of public schools. Mr. O. H. Latter (Charterhouse) read a paper upon Nature Study and finally made the following motion:—

> [illegible] to [illegible] of [illegible] ry schools.

This was seconded by Mr. D. Rintoul and carried unanimously. It does not appear from the report with which we have been furnished that any discussion took place as to the chairman's remarks upon what he described as the great struggle with regard to chemistry in the faculty of medicine of the University of London. The majority of his hearers being teachers of pure science would probably have sympathised with his protest against the stifling of a great part of the chemistry of the medical curriculum. But those responsible for the recent changes to which apparently the President of the Public Schools Science Masters' Association objects have insisted that the new regulations do not materially lessen the amount of chemistry learnt by a medical student but provide that it shall be studied more closely in association with the subjects of physiology and pathology. There is a great deal to be said in favour of utilising the study of pure science as a means of preventing the faculty of observation inherent in all children from being crushed out in our preparatory and public schools. Should the efforts of Professor Tilden's association be crowned with success and science be satisfactorily taught to schoolboys intending students of medicine will be amongst those who will profit most from the reform. In the medical curriculum, however, pure science must take a subsidiary position and must be taught in direct relation to strictly professional subjects. Medical students can certainly do with less pure chemistry than has in the past been required from candidates for the medical degrees of the University of London.

THE CERTIFICATION OF LUNATICS.

MEDICAL men are, if we may judge from letters which reach us, often at a loss as to the proper method of dealing with cases of lunacy which occur in their practice. Text-books on insanity do not assist them to any great extent since questions of procedure are usually dealt with by quoting the words of the Lunacy Act, 1890, and the practitioner's difficulty lies not so much in ignorance of the statute as in a quite excusable failure to understand it. The condition which perhaps most frequently gives rise to trouble is that in which on account of mental defect a person becomes unable to pursue his occupation and so to maintain himself and those dependent upon him. Such a person may be a working man who is being attended by his own medical adviser and who has had up to the time of his mental breakdown no relations with the Poor-law except as a contributor to the rates. He is not, therefore, a pauper within the definition of the Lunacy Act as formally given in Section 341, although as a consequence of his incapacity he must become so. In a case of this kind there are several ways of gaining the desired end, that of removal to an asylum, which fall into two groups according as the medical man acts on his own responsibility or communicates with the relieving officer of the district. If the former course is taken the medical man, who is, we are assuming, not a medical officer to a board of guardians, may call the attention of the Commissioners in Lunacy to the case and leave them to act under Section 23. Instead of this he may give information on oath to a "judicial authority" under the Act who will then proceed under Section 13 (2). There is a third method which we mention simply because it has been employed, though its impropriety in the majority of cases is sufficiently obvious. It consists in thrusting the insane person out into the street in order that he may be apprehended by a constable or relieving officer as a lunatic wandering at large under Section 15. If the matter is brought to the notice of the relieving officer that officer may proceed under Section 13 (1), 14 (2), or 20. A consideration here of the proper section to adopt would involve a discussion of sundry subtle points which would expand this note to unwieldy dimensions. We are concerned at the moment merely with the position of the patient's own medical man out of whose hands the management of the case henceforth passes. Whether one medical certificate or two be required he cannot compel the relieving officer to accept one from him. The selection of the certifying medical practitioner is entirely at the discretion of the justice and unless it can be brought to his notice that someone else is especially qualified he will, as a rule, employ the medical officer of the Poor-law institution to which the patient is to be removed. It is often stated by relieving officers that the workhouse medical officer has a "contract" with the guardians to certify pauper lunatics. Guardians, however, have no power to enter into such a contract for the simple reason that the carrying of it out rests with a justice over whom they have no control. On the other hand, it must be noticed that the medical officer of the workhouse is morally entitled to the fee for certifying, since in taking office he has been led to suppose that the justice will not make any departure from the customary procedure without good reason. Any medical man whose patient becomes insane when such patient cannot be dealt with on petition had better reconcile himself to the prospect of getting no further fees from that source.

CENTENARY OF THE ROYAL LONDON OPHTHALMIC HOSPITAL.

"THE light of the body is the eye" is a truth as profound in its physiological significance as in its spiritual interpretation, and whether looked upon as an organ of bodily or intellectual needs or as an index of disease the importance of the eye cannot be overestimated. In the investigations with which ophthalmology is concerned few institutions can take a prior place to that of the Royal Ophthalmic Hospital of London which was founded just 100 years ago and it is impossible to estimate the amount of good which mankind has received from its ministrations. The story of its foundation is an interesting one, for it owes its origin to the sympathies which were aroused in some gentlemen by the terrible sufferings of the men in the navy and army during the early part of the last century who belonged to the force in the Egyptian campaign under Sir Ralph Abercromby. Many of the earliest patients of this hospital were soldiers and sailors invalided home. In this campaign ophthalmia produced great ravages, for out of a regiment of 700 men there were 636 cases of whom 40 became permanently blind in one eye and 50 blind in both. In contrast to this state of affairs we may mention that in the Egyptian campaign of 1882, in consequence of the precautions then taken, though there were 1800 severe cases of ophthalmia after the battle of Tel-el-Kebir not one man lost his sight. Some idea of the amount of suffering relieved by this hospital may be gathered from the statistics for the past year. The number of in-patients relieved was 2122, while the number of new out-patients amounted to 37,987. The total attendances of out-patients were no less than 119,873. Our readers will remember that the original ophthalmic hospital was removed from Charterhouse-square to Moorfields in 1821. This building having been found quite inadequate and unsuitable from sanitary reasons for the work of the institution a new hospital was built in the City-road, London, E.C., the foundation-stone of which was laid by the then Prince of Wales in 1897, the year of the Diamond Jubilee of the late Queen, when he was accompanied by her present Majesty and their daughter Princess Victoria. The ground rent of this new site is £1210 a year and the rates amount to nearly £1000 a year. The latter item has been an incubus upon the management of the hospital since it was opened in 1899. The rates paid for the Moorfields buildings to the City of London were about £55 a year and it is not to the credit of the borough of Finsbury that it insists upon taking from a charity the pecuniary needs of which are great and which renders an incalculable benefit to the many workers in that borough the monstrous sum of £1000 a year. Is it surprising that the hospital should be in debt? One item alone, the liability *to tradesmen*, amounts to over £3000. To meet these heavy demands, and, indeed, to carry on the work of the hospital, the committee was compelled to negotiate a loan of £5000 from the Charity Commissioners by hypothecating a portion of the only endowment of the hospital (a sum of £20,000 then invested in Consols), thus losing the annual interest on that portion of the investment

But even with this assistance and the most careful economy on the part of the committee the past year began with a deficit of £5463, which it is feared will show a considerable increase when the accounts are closed. As we have already said it is impossible to estimate the amount of good this hospital does for mankind. It is not only the poor who come from all parts of the United Kingdom and even from the colonies (sometimes as many as 550 are relieved in one morning) who benefit, but the institution forms a school of ophthalmic science and surgery to which medical practitioners from all parts of the empire come to study. And there is probably not one ophthalmic surgeon of eminence in the United Kingdom or the colonies who has not studied there. The whole empire therefore is indebted to this institution and in common justice the whole empire should contribute towards its support. The King's Hospital Fund for London in its annual report for 1903, referring to the Royal London Ophthalmic Hospital, justly said, "this hospital should receive more support from the public," and this is abundantly clear to anyone who takes the trouble to read the annual reports of the hospital. The annual subscriptions and donations must be increased to £6000 a year if the institution is still to carry on its good work, and in addition to this the sum of £50,000 is required for the rent fund investment the interest of which will pay the rent of the hospital, and £4500 for repayment of the balance of the loan from the Charity Commissioners. Subscriptions should be sent to the secretary, Royal London Ophthalmic Hospital, City-road, E C.

"THE REVELATIONS OF RADIUM."

A VERY interesting lecture under the above title was given by Dr. George B. Batten at a meeting of the Roentgen Society held on Jan. 7th. Dr. Batten commenced by giving a short sketch of the theories of matter that had been held since Newton postulated his projectile theory of light in 1668. Then came Franklin's imponderable fluid theory of electricity in 1748 and next Dalton's atomic theory of matter in 1803. Throughout the nineteenth century the undulatory theory of light and heat associated with the atomic theory of matter was almost universally held. Passing over Clerk Maxwell's view that electricity, light, and heat were identical, Hertz's remarkable experiments in support of this view were mentioned. Hertz demonstrated in 1888 that radiant electricity consisted of large waves in the ether. Next came the announcement of Professor Bose that he had been able to detect electrical waves as small as three millimetres in size. This was followed by Professor Langley announcing the existence of heat rays as large as 70 micro-millimetres, leaving only a gap of about seven octaves in the scale of radiant energy. This gap is now partially filled, it would seem, by M. Blondlot's and Professor Charpentier's "n" rays. In this scale the ordinary red heat rays and all the light rays are in the forty-ninth octave and up to the fifty-first octave chemical or actinic and ultra-violet rays are known to occur. In 1895 Roentgen discovered the x rays which by some are thought to have still smaller wave lengths. Then Sir William Crookes announced the existence of a fourth state of matter and showed that in the vacuum tube the current is carried by material particles of matter in a much smaller state of subdivision than ordinary atoms—"corpuscles, in fact," which form the cathode stream. In still higher vacua the electric current ceases to pass at all, an observation which suggested a difficulty as to accepting the ordinary undulatory ether theory of electricity and light. Possibly the phenomena of radio-activity may help us towards a solution. Becquerel, in 1896, found that the metal uranium has the faculty of spontaneously emitting rays closely analogous to cathode and to Roentgen rays, and Schmidt in 1898 showed that thorium would do the same thing. In the same year M. and Madame Curie succeeded in isolating one decigramme of pure radium from a ton of pitchblende and found that all the radio-active properties of uranium and thorium were intensified in radium at least 500,000 times. On March 16th, 1903, M. Curie announced that pure radium chloride is self-heating. The theory in regard to radio activity is now commonly held to be atomic disintegration and scientific men now speak of elemental decomposition, the pulverisation of atoms into electrons and the reduction of matter into its fourth state. What is undeniable, said Dr. Batten, is that the Daltonian atom has in the century of its acceptance as a fundamental reality suffered destruction. Each of those supposed "ultimates," he added, is now known to be the scene of indescribable activities, a complex piece of mechanism composed of thousands of parts, a star-cluster in miniature subject to all kinds of dynamical vicissitudes, to perturbations, accelerations, internal friction, total or partial disruption. To sum up, the revelations of radium seem to support the corpuscular electron theories of matter and electricity. They open up quite a vista into a new and immense storehouse of energy in the universe, the intra-atomic storehouse beside which the ordinarily available inter-atomic and inter-molecular forces pale into insignificance, if only we can learn to tap that wonderful new source, and this, Dr. Batten confessed, "is the most exciting thing about radium and its congeners."

DESQUAMATION OF THE SKIN IN TYPHOID FEVER.

THOUGH desquamation of the skin in typhoid fever was long ago described by the great French clinician Louis it is either unnoticed or little more than mentioned by most writers. Dreschfeld in Allbutt's "System" says that desquamation of fine branny scales is often observed towards the end of the fever or during convalescence. Osler in the last edition of his book states that branny desquamation is not rare in children and that occasionally the skin peels off in large flakes. The *American Journal of the Medical Sciences* for January contains an important paper by Dr. David Riesman, in which he relates two cases and reviews the literature of the subject. The following is one of his cases. A man was admitted to hospital on Jan. 23rd, 1902, with the eruption of typhoid fever. The attack was severe. The rash became widespread, spots appearing on the face, arms, thighs, and legs. The temperature became normal on Feb. 12th, probably at the end of the fourth week. On March 3rd there was a severe chill, the temperature rose to 106° F., and there was pain in the right side. Pleural effusion followed and aspiration was performed. Early in April the patient left hospital in fair health. Desquamation began during convalescence (date not given). It was widespread and some of the scales were fully a quarter of an inch long. On the chest and abdomen it was most noticeable but it was little less marked on the limbs. It was distinct on the face and neck. On the arms and legs it was in the form of circular bands from one-eighth to one-quarter of an inch thick with intervals of apparently normal skin of the same width. The scalp, shoulders, palms, and soles were not affected. Dr. Riesman concludes that three forms of desquamation in typhoid fever may be distinguished. 1. That confined to the roseolar spots. Sometimes each spot has a tiny vesicle on its summit which forms a thin scale. 2. That appearing as a sequel to sudamina. This form is confined to the area of the sudaminal eruption, though Louis states that the intervening skin may be readily peeled off. The desquamation is usually furfuraceous but is sometimes scaly. It occurs upon the trunk and proximal part of the limbs, never upon the distal are now all back at work and with Dr. Grant we can say that the past is buried.

THE REBUILDING OF ST. BARTHOLOMEW'S HOSPITAL.

THE treasurer of St. Bartholomew's Hospital, Sir Trevor Lawrence, has sent to the press a circular letter reminding readers of the needs of the hospital. He reiterates what we have already said in THE LANCET of Dec. 5th, 1903, p. 1587, and adds that the last occasion on which the hospital appealed for help from the public was 150 years ago. To-day a sum of £500,000 is needed. It is a large sum, but, as we have said many times previously, if the governors at the forthcoming meeting to be held at the Mansion House on Jan. 26th approach the citizens of London and the subjects of this great empire with a practical, thorough, and well-thought-out scheme we are convinced that the money will be forthcoming.

THE medical officer of health of the Cape Colony states that for the week ending Dec. 26th, 1903, only one case of plague was discovered in the colony—namely, a native male at East London on Dec. 23rd. Plague-infected rats were found at Port Elizabeth and at Lady Grey Bridge, but of 415 rats which were examined during the week in the Cape Town and Harbour Board area none was affected with plague. As regards the Mauritius a telegram from the Acting Governor received at the Colonial Office on Jan. 15th states that for the week ending Jan. 14th there were 44 cases of plague and 25 deaths from the disease.

AN appeal emanating from the National Hospital for the Paralysed and Epileptic in Queen-square, London, W.C., has been issued for funds to support an organised system of research into the origin of nervous diseases. The supporters of the appeal have been careful to point out that a separate account of the research department of the hospital will be kept.

MEDICINE AND THE LAW.

The Sale of Food and Drugs Act, 1875.

AT Stratford police-court on Jan. 18th Messrs. Picken Brothers (Limited) were convicted under Section 6 of the Sale of Food and Drugs Act, 1875, and fined £10 with £7 costs for selling cream of tartar found upon analysis to contain lead in the proportion of not less than four grains to the pound. The court was informed that this proportion might have serious results owing to the accumulative effects of lead as a poison and owing to cream of tartar being used by the consumer principally for the making of cooling drinks or in connexion with the making of bread. It was not alleged that the lead had been deliberately added or that the vendors or those who had supplied them were aware of its presence, and it was suggested on behalf of the defendants that it had found its way into the cream of tartar through leaden vessels having been used for the reception of the wine-lees from which the cream of tartar was prepared. A number of technical points were raised by the defence, one of which is of some importance to those whose duty it is to make the analysis and to give the certificate necessary on such occasions. In the case of Messrs. Picken Brothers it was argued that the certificate was defective in not stating the constituent parts of the sample analysed and their proportions but merely that it contained lead in the proportion mentioned above, and that this would be injurious. In the group of cases decided a few years ago with regard to arsenic in beer two certificates were held to be bad. One of these stated that the sample "contained arsenic" and the other that it "contained a serious quantity of arsenic." These cases are reported under Goulder *v.* Rook, 1901, 2 K. B. 290, and in that case an instance was afforded of a certificate of analysis which was held to be sufficient. This one was as follows:—

> I am of opinion that the said sample contained the parts as under of foreign ingredients—viz., arsenious acid to the extent of not less than one eighth of a grain per gallon.

In an earlier case (Fortune *v.* Hanson, 1896, 1 Q. B. 202) a certificate of analysis of milk was held to be bad which stated that the sample "contained the percentage of foreign ingredients as under: 5 per cent. of added water." The distinction to be drawn between an analysis relating to the presence of arsenic in beer and another which determines the presence of added water in milk lies in the fact that arsenic, in however small proportions, is a foreign ingredient in beer but that water is one of the natural constituent parts of milk, and that the point at which it becomes a foreign ingredient is by no means a matter of certainty. In his judgment in Fortune *v.* Hanson Mr. Justice Kennedy put the matter thus, after referring to the form of certificate of analysis to be found in the schedule to the Act: "If something which could not exist as a constituent in water, such as pepper or sand, were found then it would be sufficient to state in the certificate that the sample analysed contained so much per cent. of foreign ingredient; but where the thing said to be added is one of the constituents of the article analysed then, in my opinion, the analyst must in his certificate state the facts on which he has come to his conclusion sufficiently to enable the magistrates to come to a conclusion themselves." The matter is one for the consideration of public analysts, as no one wishes to prosecute unnecessarily inquiries into irrelevant details with regard to the composition of the sample submitted for analysis and possibly to make some slight error in a calculation not material to the case for which his certificate is to be used but likely to be seized on by the defence for the purpose of discrediting the whole of the analysis and certificate. The form of certificate as given in the schedule to the Act is as follows: "I am of opinion that the said sample contained the parts as under, or the percentages of foreign ingredients as under." This is clearly intended to supply alternative forms of certificate for two different classes of case. In the certificate held to be sufficient in Goulder *v.* Rook an attempt appears to have been made to combine the two forms in one.

Illegal Operation by a Herbalist.

A herbalist, named Lardent, and a woman of the name of Ada Booth were convicted before Mr. Justice Ridley at the recent session at the Old Bailey for using an instrument upon a woman named Mitchell with intent to procure a miscarriage. Evidence was given that Mitchell was introduced to the prisoners by a friend and that an attempt was first made to obtain the desired object by the use of drugs. The jury recommended the prisoners to mercy in convicting them, adding an expression of their hope that the woman might be dealt with leniently on account of her state of health. Mr. Justice Ridley, however, did not in the light of the facts proved consider himself justified in making a distinction between them and passed a sentence upon each of five years' penal servitude.

An Object Lesson in the Housing Question.

At an inquest held recently before Mr. Wynne Baxter at Stepney it was proved that the deceased, the wife of a Hebrew teacher, had taken her own life by swallowing poison in despair at the poverty of her circumstances, aggravated by an announcement on the part of the landlord that he was about to raise the rent paid by her and her husband. Apparently the deceased let part of the premises occupied to lodgers when able to do so but had had a difficulty in finding tenants. In commenting upon the rent demanded—25*s.* a week, to be raised to 28*s.*—the coroner observed to a witness, Moss Cohen, the landlord's son, that it was outrageous. He added that it was a case of "cat eat cat" and that such a rent must realise from 40 to 50 per cent. upon the landlord's outlay. The evidence of a policeman was to the effect that the family of the deceased were in distressed circumstances, that her rooms were in a filthy condition, and that her bed was a piece of sacking.

The Hardwicke Society and Antivivisection.

Last week the members of this well known legal debating society discussed the subject of so-called "vivisection." Personal abuse was absent, though neither side lacked conviction or eloquence. Among the speakers were two po- medical qualifications who, avoiding all technicalities, on the advances in medical science which had been about by means of legitimate experiment for the benefit of the human race. *Those holding antivivisection theories made* a strong attack on the demonstration of experiments for the benefit of medical students.

THE UNIVERSITY OF LONDON: THE INSTITUTE OF MEDICAL SCIENCES.

THE following letter has been addressed to the Earl of Rosebery, Chancellor of the University of London:—

MY LORD,—We have observed with satisfaction that the Senate of the University of London have lately issued an appeal for funds to build and endow an Institute of Medical Sciences under the control of the University.

The positions which we severally hold in connexion with the general hospitals of London and their medical schools have *compelled us, especially of late, to give the proposal* that the University should undertake the teaching of the preliminary scientific subjects of the medical curriculum the most serious consideration.

We are convinced that the adoption of the recommendation of the Royal Commission in favour of the concentration of the teaching of these subjects in one or more centres has become a matter of urgent necessity in the interests alike of medical education, of the hospitals, and the medical schools.

We are, My Lord, yours faithfully,
SANDHURST,
Chairman of the Weekly Board, Middlesex Hospital.
TREVOR LAWRENCE,
Treasurer, St. Bartholomew's Hospital.
H. COSMO BONSOR,
Treasurer, Guy's Hospital
SYDNEY HOLLAND,
Chairman, London Hospital.
J. G. WAINWRIGHT,
Treasurer, St. Thomas's Hospital.
TIMOTHY HOLMES,
Treasurer, St. George's Hospital.
H. A. HARBEN,
Chairman, St. Mary's Hospital.
THOS. PERCY BORRETT,
Chairman Charing Cross Hospital.
J. WOLFE-BARRY,
Chairman, Westminster Hospital.

A large sum is required to carry out the scheme. The honorary treasurers of the appeal fund are Dr. J K. Fowler, member of the Senate, and Mr. H. T. Butlin, Dean of the Faculty of Medicine, 35, Clarges-street, W. The following donations in addition to those already announced have been promised to the Institute of Medical Sciences Fund:—

Mr. Alfred Beit	£5000	Sir Henry Roscoe, F.R.S. ...	£100
Messrs. Rothschild and Sons	500	Sir E. Cooper Perry, M.D. Cantab	100
Dr. J. K. Fowler	250	Dr. E Lauriston Shaw... ...	100
Mr. H. J. Chinnery	100	Mr. C. B Lockwood	50
Sir Charles Metcalfe, K C.M.G.	25	Sir R. Douglas Powell, Bart.	50

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on Jan. 14th, Mr. JOHN TWEEDY, the President, being in the chair.

Diplomas of Fellowship were issued to two candidates who have now attained the age of 25 years.

A report from the museum committee was submitted. The report mentioned *inter alia* the addition to the museum of a number of interesting specimens illustrating the agreement of external sexual characters in sheep and fowls, the results of experiments performed by Mr. S G. Shattock and Dr. C. G. Seligmann.

The best thanks of the Council were given to Dr. G. V. Poore for presenting from the library of the late Mr. Marcus Beck notes of Mr. John Marshall's lectures on surgery at University College [illegible]

In[illegible] *renewing the exist*[illegible] th[illegible] Asylums Board for [illegible] was postponed for further consideration.

The Council considered some further information supplied to it by the Director-General of the Army Medical Service on the subject of the physical disability of recruits and it was decided to reply to the Physical Deterioration Committee that it saw no ground to modify the opinion which it had previously expressed on the matter.

Sir HENRY G. HOWSE, as chairman of the committee on the physical disability of recruits for the army, reported that a letter had been received from the Physical Deterioration *Committee asking the College to recommend the names* of two surgeons who would give evidence representing the views of the profession in general on the condition of the eyes and the prevalence of syphilis respectively among the poorer classes of the population, and that the names of Mr. Tweedy, the President, and Sir Alfred Cooper, Vice-President, had been submitted to the committee. The nomination of these two gentlemen was approved.

The SECRETARY reported the receipt of essays for the Jacksonian and Triennial prizes.

Mr. Tweedy, the President, was appointed Hunterian Orator *for 1905*

The President presented to the College an enamelled gold presidential badge representing the College seal. A unanimous vote of thanks was given to him for his gift.

The SECRETARY reported that the portrait of Sir Spencer Wells had been returned from Nottingham and that a letter had been received from the director of the Nottingham Museum and Art Gallery conveying the thanks of the Art Museum committee of the city corporation for the loan of the portrait.

On the recommendation of the examiners of Part I. of the examination *in* public health the *Council* adopted the following resolutions:—

(*a*) That in the interest of factory and workshop workers the amount of carbonic acid in the air of such places should not exceed nine volumes in 10,000. (*b*) That carbonic acid produced by the combustion of gas or oil used for lighting purposes should be made to pass directly to the outside air and should not be allowed to contaminate the air of the factory or workshop.

It was resolved that copies of these resolutions should be forwarded to the Secretary of State for the Home Department and to the Incorporated Society of Medical Officers of Health.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8668 births and 5557 *deaths* were registered during the week ending Jan. 16th. The annual rate of mortality in these towns, which had been 15·4, 20 6, and 20·3 per 1000 in the three preceding weeks, further *declined* last week to 19·0 per 1000. In London the death rate was 18 8 per 1000, while it averaged 19·1 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 8 5 in Coventry, 9 6 in Hornsey, 10·3 in [illegible] 10 8 in Leyton, 11·1 in Devonport, 12·2 in [illegible] rton, and 12·6 in Derby; while [illegible] Gateshead, 25 6 in Rochdale, [illegible] Warrington, 29 0 in Preston, 30·1 in West Hartlepool, 33 0 in Merthyr Tydfil, and 38 2 in Wigan. The 5557 deaths in these towns last week included 450 which were referred to the principal infectious diseases, against 389, 495, and 462 in the three preceding weeks; of these 450 deaths 136 resulted from measles, 131 from whooping-cough, 62 from diarrhœa, 51 from diphtheria, 44 from scarlet fever, 24 from "fever" (principally enteric), and two from small-pox. No death from any of these principal infectious diseases was registered last week in Hornsey, Hastings, Brighton, Devonport, Burton-on-Trent, Coventry, Derby, Bootle, Barrow-in Furness, or Huddersfield; among the other towns the highest death-rates from these diseases were recorded in Walthamstow, [illegible] Salford, Preston, and Handsworth [illegible] ity from measles Gateshead. [illegible] m, Warrington, occurred in [illegible] Salford, Preston Rotherham, and Sunderland; from scarlet fever in Merthyr Tydfil; from whooping-cough in Portsmouth, Handsworth, Birkenhead, Wigan, West Hartlepool, Gateshead, and Newport (Mon.); and from diarrhœa in Walthamstow. One fatal case of *small-pox* was registered last week in Nottingham and one in Sunderland, but not one in any other of the 76 large towns. The number of small-pox patients in the Metropolitan Asylums hospitals, which had been 26 on each of the two preceding Saturdays, was again 26 on Saturday last, Jan. 16th; four new cases were admitted during the week, against seven, four, and six in the three preceding weeks. The number of scarlet fever patients remaining under treatment in these hospitals and in the London Fever Hospital was 1660 at the end of last week, against 1617, 1632, and 1659 at the end of the three preceding weeks; 195 new cases were admitted during the week, against 142, 194, and 201 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 271, 404, and 433 in the three preceding weeks, declined again last week to 406, but were 96 in excess of the number in the corresponding period of last year. The causes of 71, or 1·3 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bradford, Newcastle-on-Tyne, and in 46 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, St. Helens, Warrington, Blackburn, Sheffield, Sunderland, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 20·8, 21·7, and 23·2 per 1000 in the three preceding weeks, declined again to 20·2 per 1000 during the week ending Jan. 16th, but was 1·2 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 16 8 in Edinburgh and 18·1 in Leith, to 24·3 in Dundee and 27·7 in Perth. The 668 deaths in these towns included 23 which were referred to measles, 15 to whooping-cough, 13 to diarrhœa, five to small-pox, three to diphtheria, three to "fever," and one to scarlet fever. In all 63 deaths resulted from these principal infectious diseases last week, against 73, 71, and 53 in the three preceding weeks. These 63 deaths were equal to an annual rate of 1·9 per 1000, which was 0·4 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been 25, 26, and 13 in the three preceding weeks, rose again last week to 23, of which 19 occurred in Glasgow and two in Paisley. The deaths from whooping-cough, which had been 16, 14, and 15 in the three preceding weeks, were again 15 last week, and included six in Aberdeen, two in Glasgow, two in Edinburgh, two in Dundee, and two in Leith. The fatal cases of diarrhœa, which had been 16, 21, and 15 in the three preceding weeks, further declined last week to 13, of which six were registered in Edinburgh, four in Glasgow, and two in Dundee. The deaths from small-pox, which had been four, five, and three in the three preceding weeks, rose again to five last week, and included four in Glasgow and one in Leith. Of the three fatal cases of diphtheria two were recorded in Paisley. The three deaths from "fever" included two in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 180, 177, and 213 in the three preceding weeks, declined again last week to 198, but were 24 in excess of the number in the corresponding period of last year. The causes of 21, or more than 3 per cent, of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 19 9, 31·8, and 27·8 per 1000 in the three preceding weeks, rose again to 28·8 per 1000 during the week ending Jan. 16th. During the past four weeks the death-rate has averaged 27 1 per 1000, the rates during the same period being 18 2 in London and 18 4 in Edinburgh. The 209 deaths belonging to Dublin, registered during the week under notice, were seven in excess of the number in the preceding week, and included ten which were referred to the principal infectious diseases, against seven, 16, and 23 in the three preceding weeks; of these, five resulted from whooping-cough, three from diarrhœa, and two from "fever," but not one from any other of the principal infectious diseases. These ten deaths were equal to an annual rate of 1·4 per 1000, the death-rates last week from the principal infectious diseases being 1·5 in London and 1·4 in Edinburgh. The fatal cases of whooping cough, which had been three, 12, and nine in the three preceding weeks, further declined last week to five. The deaths referred to different forms of "fever," which had been two, two, and five in the three preceding weeks, declined again to two last week. The three fatal cases of diarrhœa corresponded with the number in the preceding week. The 209 deaths in Dublin last week included 31 of children under one year of age and 61 of persons aged 60 years and upwards; the deaths of infants showed a slight decline, while those of elderly persons were in excess of the number in the preceding week. Four inquest cases and four deaths from violence were registered, and 82, or nearly two-fifths, of the deaths occurred in public institutions. The causes of nine, or more than 4 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Civil Practitioner J. D. Wynne to be Surgeon and Agent at Clonmel (dated Jan. 18th, 1904).

ROYAL ARMY MEDICAL CORPS.

Lieutenant Colonel J. Hickman retires on retired pay (dated Jan. 20th, 1904); Captain J. M. Buist, from the Seconded List, to be Captain (dated Dec. 1st, 1903).

Captain J. M. Buist is instructed to proceed to Woolwich, for duty. Major A. L. Borradaile is to join the Western District for duty. Captain E. S. Clark, lately at the Royal Army Medical College, is to join the Home District for duty Captain A. C. Lupton and Captain J. C. B. Statham are selected to attend a course of study at the Royal Army Medical College in London. Lieutenant-Colonel W. G. Macpherson, C.M.G., is appointed Principal Medical Officer, North China.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion the East Lancashire Regiment: Richard Langford Fitz-Gerald to be Surgeon-Lieutenant (dated Jan. 16th, 1904). 2nd Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment): Surgeon-Lieutenant-Colonel J. Knox resigns his commission with permission to retain his rank and to wear the prescribed uniform (dated Jan. 16th, 1904). 2nd Volunteer Battalion the Manchester Regiment: Surgeon-Major G. H. Darwin resigns his commission (dated Jan. 16th, 1904).

THE TRAINING OF BOYS FOR SEA SERVICE.

On Jan. 14th, at the Royal United Service Institution, Admiral Sir J. C. Dalrymple Hay, in a lecture on the above subject, said that the Royal Navy at present employed about 83,000 seamen who had entered as boys in the training ships. To meet losses by the discharge of seamen at the age limit and by death 4700 boys were annually entered for the naval training ships and about 1000 in His Majesty's ship *Northampton* and her tenders. There were now 9900 boys borne for training. The number of 83,000 seamen was sufficient for the peace force now in commission but if war should break out the Naval Reserve was the only trained force on which we could rely. The Naval Reserve was a very trustworthy force and its strength up to the end of last year was 26,031. It must be remembered that these men being taken from the merchant service in time of war would deprive it of its best men at the very time that our mercantile marine would be fully employed in provisioning this country and in distributing its commerce. A further Naval Reserve was being created which was to number 15 000 men and which would apparently require an additional number of entries of boys. The sea service required, like every other trade and profession, a long apprenticeship and it was proved that after the age of 17 years lads were not attracted by its adventurous character. An entry of 4700 boys annually was sufficient to keep up the number of seamen for the Royal Navy. It was obvious, therefore, that a further entry of 9500 boys would supply the 175 000 men required for the mercantile marine. He thought that the State should step in and do for the merchant navy what it had already done for the Royal Navy. Was it too much to hope that the Admiralty and the Board of Trade could arrange for such an increase of training and make the men of the merchant navy all subjects of the King and a real reserve for the navy in case of war?

The War Office is asking for certified returns from all officers of the Royal Army Medical Corps whose war services are not correctly recorded in the quarterly "Army List."

Correspondence.

"Audi alteram partem."

THE PROPOSAL TO PROHIBIT MEDICAL PRACTITIONERS FROM DISPENSING.

To the Editors of The Lancet.

Sirs,—I observe that on Jan. 27th the members of a branch of the British Medical Association are to be asked to pass a motion to the effect that "no person registered under the Medical Act (with a few exceptions) shall dispense or supply drugs or other medicaments to anyone." The suggested penalty for a first offence against the aforesaid is to be a fine of not less than £100 and for the second offence erasure peremptorily from the Medical Register. The General Medical Council has judiciary power, of course, over the medical practitioner but it exercises no jurisdiction and is never likely to have any legal authority over the druggist. Those who, like myself, are engaged in consulting practice know well the unlimited extent to which one's prescriptions may be bandied about and that the druggist may without let or hindrance dispense any given prescription as frequently as its repetition is requested. It is now suggested that practically all practitioners—not only without option but under heavy penalty—should be compelled to adopt this method of treating and of interchange with their patients, but I fear the possible undesirable effects of such an enactment have not been duly considered by those who are responsible for the promulgation of this proposed scheme' Take the practitioners in populous but not over-wealthy districts and we are bound to infer that: if this project be adopted many of their patients will be not only unwilling but unable to pay both for the prescription and for the medicaments which may be written thereon, for the patient's ailment will in such circumstances be required to contribute towards the maintenance of two expensive establishments, that of the medical man and that of the druggist, instead of one as at present. The ever-increasing demand upon the out patient departments of our hospitals is already a vexed question and one difficult to cope with, but it will be apparent to everyone that if the scheme which I now refer to should eventually become law our out patient departments will become still more unwieldy and more reprehensible, for the new procedure will prove too expensive to many and will drive to our hospitals those who, but for this new requirement and unnecessary extra expense, would never have entertained the idea of seeking advice at any of our charitable institutions. I feel assured, therefore, that this departure is one which cannot commend itself to the medical profession generally and should be strenuously opposed whilst the project is still in its embryonic state.

I am, Sirs, yours faithfully,

Gordon square, W.C., Jan. 19th, 1904. James Oliver.

MALIGNANT GROWTHS AND NORMAL REPRODUCTIVE TISSUES.

To the Editors of The Lancet.

Sirs,—In your issue of Dec. 26th, 1903, p. 1830, there is an abstract of some observations by Professor J. B. Farmer, Mr. J. E. S. Moore, and Mr. C. E. Walker. They have been investigating karyokinetic processes in malignant tumours, a field of investigation in which I, too, worked extensively some years ago. Since my observations do not seem to be familiar to these authors, who are, I believe, botanists by profession, I should be glad if you would give me space in your journal for the following remarks. These authors have found that in the
tumours the mitotic figures
. reductive
of sexual
thors state
ic, in fact,
ir chromo-
are also changed in shape. These observations coincide more or less with those described some time ago in various publications—e.g., Virchow's Archiv, vol. cxix., 1890, p. 299; *Archiv fur Mikroskopische Anatomie*, vol. xliii.; the *Festschrift fur Virchow*, in 1891; and in the *Verhandlungen der Anatomischen Gesellschaft*, in 1891, p. 255, and elsewhere. I have given a connected account of these processes in my monograph, entitled "Die Studien über die Spezifizität, den Altruismus und die Anaplasie der Zellen" (Berlin, 1893), and reverted to the subject in my book on "Die Mikroskopische Diagnose der Bösartigen Geschwülste" (second edition, Berlin, 1902) on pp. 91 *et seq.*

According to my investigations it is not a question of a reduction to exactly one-half the normal number of chromosomes nor does the reductive division occur in the manner seen in the maturation of ova and spermatozoa. According to my observations the reduction is effected in a two-fold manner—either by asymmetrical nuclear division or by a destruction of individual chromosomes without destruction of all the nuclear substance. The first result by either of these two processes is cells with a smaller number of chromosomes than normal. I have called these cells *hypochromatic.* In the further stages of development these chromosomes may be doubled, quadrupled, sextupled, and so on, so that from hypochromatic hyperchromatic cells may arise but always with a smaller than the normal number of chromosomes of human cells. I have sought to correlate with these observations the peculiar characters which the cells of malignant growths possess, especially their greater power of independent existence and their loss of differentiation as compared with the normal tissue cells. The combination of these two properties I have termed *anaplasia,* an expression now very generally employed in the scientific world even by those investigators who do not altogether agree with the details of my observations on the cell processes. I have also given a detailed account of the change of form of the chromosomes and have shown how extraordinarily manifold their form may be in malignant tumours which in nearly all cases differ not only from normal tissues but also amongst each other, so that not only in different cancers but in one and the same the most varied forms of chromosomes may be found.

Since these investigations are, perhaps, but little known in England I am naturally anxious in reference to the investigations of Professor Farmer, Mr. Moore, and Mr. Walker to guard my priority of observations in this field.

I am, Sirs, yours faithfully,

Berlin, Jan. 16th, 1904 Professor D. v. Hansemann.

To the Editors of The Lancet.

Sirs,—The letter of Professor v. Hansemann, a proof of which you have allowed us to see, contains a number of misleading statements some of which call for comment. Incidentally we may remark that only one of us is a botanist, although two of us have been frequently associated in work on vegetable, as well as on animal, cytology.

We are at a loss to understand why Professor v. Hansemann should assume that we are unaware of his investigations. As a matter of fact we are perfectly familiar with them, and as a consequence with the circumstance that our own conclusions respecting the meaning of the cytological phenomena in question are in all essential features at variance with those arrived at by him. It is perfectly clear both from his letter and still more so from a study of his work of 1902, cited by him, that he has either entirely misapprehended the facts connected with the "reducing" divisions characteristic of sexually reproductive tissue or that he has not succeeded in tracing the similarity that exists between the processes in them and in malignant growths respectively

Professor v. Hansemann's statement that the occurrence of an odd number of chromosomes in any cell of any animal is necessarily due to either an asymmetrical division or to degeneration (or elimination) is not in accordance with known facts. There is no *a priori* reason why a cell that has undergone reduction should not possess an odd number of chromosomes, and, indeed, some animals *do* exhibit such numbers. It is only the *somatic* cells that normally must contain an even number and this is due to the fact that ovum and sperm each possess identical (even or odd) numbers before their union in fertilisation.

No one who has examined the dividing nuclei of malignant tissue has doubted the occurrence of abnormalities, but no one, so far as we are aware, and certainly not Professor v. Hansemann, had previously suggested those resemblances between reproductive and malignant tissues that are involved in the recognition, in each, of the existence of the heterotype mitosis. Indeed, we have so far failed to identify those special points in our own communication for the discovery of which Professor v. Hansemann is so anxious to guard his priority. For whilst, in common with others who have worked at this subject, we have naturally recognised the frequent occurrences of irregular nuclear divisions, the conclusions we have reached, as well as the interpretation we have put on the facts, are, as Professor v. Hansemann admits in his letter, widely divergent from those to which he has himself been led.

We are, Sirs, yours faithfully,
J. BRETLAND FARMER.
J. E S. MOORE.
CHARLES WALKER.

⁂ In the circumstances we decided to give Professor Farmer, Mr. Moore, and Mr. Walker an opportunity of replying to Professor v. Hansemann in the same issue of THE LANCET in which Professor v. Hansemann's letter appears.—ED. L.

THE METROPOLITAN ASYLUMS BOARD AND ITS ASSISTANT MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—To the reasons assigned by you in the annotation on the above subject in THE LANCET of Jan. 16th, p. 177, for a more reasonable notice than one month being given prior to the dismissal of the seven assistant medical officers on the ground that there is no work for them to do, may I add a further consideration—to wit, the probability that the services of these gentlemen will be required should the Local Government Board authorise the managers of the Asylums Board to provide accommodation for the isolation and treatment of persons suffering from consumption? In this connexion I would point out that the Poor-law infirmaries are rapidly filling up, pauperism already standing at a high level, and being likely still further to increase should the winter prove severe. In which event it would be of great advantage to the metropolis should the Local Government Board's decision enable the managers to relieve those establishments by the transfer to Gore Farm hospitals of a sufficient number of consumptives—say 850—to fill the lower hospital which was designed for the reception of that number of small-pox patients.

I am, Sirs, yours faithfully,
Kensington, Jan. 16th, 1904. T. ORME DUDFIELD.

⁂ We publish Dr. Dadfield's sensible suggestion with pleasure and wonder whether it is too late for the Metropolitan Asylums Board to reconsider its injudicious action. The medical profession would like to hear the reasons for the dismissal of the seven assistant medical officers fully explained. Is it true that the places of the salaried men are to be taken by unpaid young men seeking to acquire the instruction necessary to obtain the diploma of public health? We have heard that this dangerous innovation may be going to take place.—ED. L.

THE UNRESTRICTED SALE OF DANGEROUS DRUGS.

To the Editors of THE LANCET.

SIRS,—I desire to call attention to a grave defect in the law controlling the sale of dangerous drugs. There is apparently nothing to prevent any person who obtains possession of a prescription from procuring by its aid enough poison to kill a community.

An undated copy of a prescription has just come into my possession from a firm of pharmaceutical chemists by means of which a patient in a short period of time had obtained no less than 17½ ounces of a 20 per cent. solution of cocaine hydrochlorate. This quantity of solution contains 1680 grains of the highly poisonous alkaloid, of which, according to the British Pharmacopœia, the maximum dose is half a grain. This large amount of poison had been procured by taking this copy of a prescription to one firm of druggists after another (the names of many different firms are stamped upon it) and obtaining an ounce at a time from each, save on one occasion when half an ounce only was supplied. Half an ounce only was ordered on the prescription. With the exception of the making up of a double dose everything seems to have been done to meet the requirements of the law. The original prescription had been apparently given to the patient by a high authority. But anything more serious to the welfare of the public cannot well be imagined than a system under which drug habits go unchecked and deadly poisons can be procured wholesale. Druggists cannot well hesitate to make up the prescriptions of well-known medical men, especially when a prescription bears upon its face the stamped names of some of the best firms in the trade certifying that it has already been dispensed by them.

The remedy which suggests itself to me and which probably might be adopted not only in connexion with the prescribing of lethal doses of dangerous drugs but also with regard to many prescriptions for disorders requiring but a short course of treatment, is one which I am assured by a highly respectable firm of pharmaceutical chemists they would gladly welcome. It is, that in all cases where medical men prescribe such drugs as morphia, opium, cocaine, &c., which are known to induce a habit, the words "*Not to be repeated*" should be written across the prescription, which should be signed by the prescriber in full and not merely initialled. By this means the prescriber would be able to control the quantity of the drug taken or used and prescriptions would not be handed about from one person to another *ad libitum*, especially if the words "*not transferable*" were added. We know but too well how many valuable lives are lost and reputations ruined under the working of the present system which loudly calls for amendment. I may add that I fortunately obtained possession of the poison and the prescription from the patient and was thus enabled to save a valuable life.

I am, Sirs, yours faithfully,
Margaret-street, W., Jan. 19th, 1904. T. OUTTERSON WOOD.

SOME FORMS OF CHRONIC ABDOMINAL SURGICAL DISEASE.

To the Editors of THE LANCET.

SIRS,—Mr. E. Stanmore Bishop in his address under this title[1] gives currency to two theories concerning the action of the colon which I believe to be ill-founded. The first of these is Dr. R. W. Leftwich's theory (to quote Mr. Bishop's words) "that the contents of the large intestine are carried forwards mainly by syphonage, although peristaltic action is also present to a subsidiary extent." The objections to this theory are: 1. It assumes that the walls of the colon have a sufficient rigidity to allow syphonage to occur; not only is the wall of the *living* colon eminently collapsable but it is subject to the intra-abdominal tension kept up constantly by the elasticity and contraction of the abdominal walls. 2. It assumes that the contents of the descending colon are in a sufficiently fluid condition, which is not normally the case. 3. Dr. W. B. Cannon's[2] observations on the passage of the contents of the colon made on the cat by means of bismuth laden food and x rays, revealed the fact that there is normally an antiperistalsis in the proximal part of the colon; in this movement the parts corresponding to the human ascending and transverse colon were involved. In the arrangements of its muscular coat the colon of the cat does not differ from that of man; we may safely infer that the peristaltic movements are the same. The characteristic arrangement of the muscular coats of the colon is adaptational to the peculiar peristaltic movements which occur in the colon. 4. The muscular coats of a foot of colon weigh more than those of two feet of small intestine. One may infer that they are sufficient for their work in the case of the great intestine as in the case of the small without the aid of syphonage. 5. Except in the possession of an extremely short mesentery for the ascending colon, the arrangement of the great intestine of man does not differ from that seen in many mammals, in which, because of their posture, syphonage is impossible. Yet the muscular coats of the human colon are better developed than is generally the case in mammals. 6. It is impossible to obtain a syphon action in the human colon by experiment on the cadaver.

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[1] THE LANCET, Jan. 16th, 1904, p. 139.
[2] American Journal of Physiology, vol. vi., p. 251.

The second theory, to which I think strong objection should be made, is that of the nature of the great intestine, which Mr. Stanmore Bishop regards as "the slopstone and drain" to carry off the refuse of the stomach and small intestine. It is not nature's habit to use seven or eight feet of an elaborate tube furnished with a carpet of glands and lymphoid tissue, supplied most richly with arteries, veins, and lymphatics, with a delicate and easily disorganised nervous mechanism, to play the part of an excretory duct or cloaca. Yet Metchnikoff[3] and Dr. E. Barclay-Smith[4] have each concluded that the great intestine, as far as man is concerned, is a useless and dangerous structure and that its presence in man is a blunder on the part of nature which, however, can be obviated by the aid of the surgeon. The Metchnikoffian theory of the great intestine rests on two facts: (1) we do not know the function of the great intestine; and (2) the health of the body is improved by the removal of a *diseased* great intestine. There is no evidence that the excision of a healthy or normal great intestine leads to an improvement of the well being of the individual.

My reason for protesting against the "syphon drain-pipe" theory of the great intestine is that, were it accepted by a younger generation, it would retard a much-needed inquiry into the functions of the colon and the normal stimuli whereby its nervous and muscular mechanisms are set in operation

From the point of view of the comparative anatomist it seems a more logical inference to suppose that it would be easier, did we know the functions of the several segments of the alimentary canal, to adapt the human diet to the canal than by surgical interference to modify the canal to suit the artificial diet of civilisation.

I am, Sirs, yours faithfully,
A. KEITH, M.D. Aberd.
London Hospital Medical School, Jan. 18th, 1904.

THE BORDERLANDS OF INFECTIOUS DISEASES AND THEIR MANAGEMENT.

To the Editors of THE LANCET.

SIRS,—We seem to be on the verge of obtaining the clear white light of truth on the second part of this subject, thanks to the manly courage of Dr. H. E. J. Biss in revealing some of the facts. The question of the borderlands of infectious diseases is eclipsed for the moment by the facts disclosed as to the critical state of the Metropolitan Asylums Board's hospitals and, as a matter of fact, by many medical officers of health as to isolation hospitals generally, as well as notably by Mr. E. D Marriott of Nottingham.

The facts divulged from time to time for some years past have caused some misgiving to many, but no one outside an isolation hospital could credit that they were as serious as stated by Dr. Biss in his last letter. If during five years in the Metropolitan Asylums Board's hospitals 2562 patients who had been [illegible] ted with diphtheria [illegible] if about the same [illegible] tal suffering from [illegible] fever then I think the strongest case is made out for an immediate inquiry so that the medical staffs of these hospitals may have an [illegible] at least, some of these miscalled isolation hospitals.

If the results made known are only obtainable after isolation hospitals are constructed *secundum artem*, and under efficient management, then there is only one course open—the doors must be closed. But I am still loth to believe that they cannot be rendered serviceable for their purpose, notwithstanding Dr. Biss's alarming figures. I therefore join in calling upon those who are answerable for the construction and management of these hospitals to institute a public inquiry by a competent and disinterested commission without delay. Should those in authority burke an inquiry it will become a question of "urgent public importance" in the House of Commons. Meanwhile I would go further and say, ought not the construction of new isolation hospitals to be prohibited pending an inquiry?

I am, Sirs, yours faithfully,
Rugby, Jan. 16th, 1904. CLEMENT DUKES.

CHLORETONE IN SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS,—As it was through the correspondence columns of your valued journal that I was first made acquainted with the efficacy of chloretone in sea-sickness, and as I have just recently realised the value of that information, I deem it my duty to contribute through the same medium my grateful testimony in confirmation of your correspondents' reports. My daughter (aged about 20 years) is so fond of the sea that she always prefers boat to train, notwithstanding the fact that she has (until this last trip) invariably had to undergo the ordeal of at least 24 hours' sea-sickness. She sailed from London Docks on Dec. 30th per s.s. *Avon* to Grangemouth and returned by same steamer last Friday morning. On this occasion she took with her a supply of chloretone capsules, five grains each, and for the first time in her life made the sea trip not only without sickness but with improved appetite and spirits. In fact, she partook with relish of fats and vegetables, things that she could not tolerate at home. She attributes (I believe rightly) her immunity to the chloretone capsules, two of which she took before setting out and returning. She was directed to take one every two hours if threatened with sickness, but fortunately occasion did not arise, although the trip both ways was very rough, the vessel shipping numerous heavy seas and rolling very much. I may also add that I have found the same preparation useful in some cases of insomnia, reflex headache and vomiting, and would very much like if some of your numerous readers could favour *THE LANCET* with their experience of its effects in these directions and such explanation of its action as may assist in indicating suitable cases and mode of administration.

Apologising for the unintended length of this communication, I am, Sirs, yours faithfully,
JOHN DUNLOP, L.R.C.P. Edin., &c.
Seven Kings, Ilford, Jan. 14th, 1904.

THE LUNG REFLEX OF ABRAMS.

To the Editors of THE LANCET.

SIRS,—I am again obliged to correct Dr. Campbell's statement to the effect that I acknowledge the action of the respiratory muscles "in explaining reflex pulmonary expansion." Yes; after the expansion has passed a certain point, already frequently pointed out, and safeguarded in my last letter by the words "after passive recoil of the chest has done its part." I am afraid I must admit my inability to follow Dr. Campbell in his comparison of the action of an entire organ, like the heart, with that of a group of muscles only forming part of a complicated system of machinery, nor shall I venture to entertain the somewhat mystical conception that muscles when relaxing may be at the same time contracting, more especially as this is based on observations which Dr. Campbell has made upon himself.

Now in respect of lung contraction in a limited area Dr. Campbell *dismisses* physiological experiments as valueless, believing, curiously enough, that in such the lungs are necessarily subjected to a positive pressure. By no means. I intended to refer more particularly to portions of lung inclosed in the plethysmograph from which the air had been exhausted. If, as Dr. Campbell fancies, the effect of bronchiolar constriction is to drive the contained air backwards into the alveoli, how is it that the manometer records an increase of pressure? The vagus acts chiefly on the smallest bronchioles and what may be termed the air wave in lung contraction travels from within outwards. If, on the other hand, the air were driven inwards, not only would there be no rise of pressure but the total lung volume would remain constant for the time being. As the reverse of both these conditions occurs the hypothesis of an alveolar inflation is insusceptible of serious consideration. Even clinical observation proves that sudden obstruction of a bronchus causes collapse of the pertaining lung territory. Finally, the question is put, Could a vagus stimulation produce a pulmonary contraction sufficient to cause a darkening (i.e., diminished brightness) in the fluoroscopic field and a dulling of the percussion note?

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[3] The Nature of Man. English translation, by P. C. Mitchell. London, 1903.

[4] Proceedings of the Cambridge Philosophical Society, vol. xii., Part I., 1903.

I answer, certainly. In the latter case it is only necessary to recall the fact that in the normal lung the percussion note at the end of expiration is less resonant than that yielded at the end of inspiration.

I am, Sirs, yours faithfully,

Henrietta-street, W., Jan. 15th, 1904. A. G. Auld.

*** In closing this correspondence last week we offered Dr. Auld an opportunity of reply of which by an oversight he did not avail himself. This correspondence must now cease.—Ed. L.

PROFESSIONAL ETHICS.

To the Editors of The Lancet.

Sirs,—I inclose the facts of a recent incident that occurred in my practice in the hope that you will publish them, with comments, if you think it desirable. I can vouch for the truth of every word of the statement and can only add that in my judgment many offences "infamous in a professional sense" are paltry compared with this exhibition of greed and lack of professional honour.

I am, Sirs, yours faithfully,

Jan. 10th, 1904. F.R C.S.

PS.—I inclose my card.

[Inclosure.]

A patient, living about 20 miles from London, was recently found by his medical adviser to be suffering from prostatic calculus a uric acid stone having become impacted in the prostatic urethra. Efforts were first made, as the stone was not supposed to be large, to dissolve it sufficiently to pass per urethram. These efforts failing it was decided to consult a London specialist, and accordingly the practitioner wrote a careful history of the case to the selected man and arranged an appointment. The specialist confirmed the diagnosis, alleging great danger in delay, telling him that his doctor had acted wrongly in his treatment and urging him immediately to submit himself to operation.

It was ultimately settled that he should go into a public hospital, to which the specialist was attached, on the following day in order that it might be done. In consideration of this the patient—with a considerable family, and living in a house of about £35 per annum rental value—was induced to promise to send that same night to the specialist a fee of 20 guineas *over and above the two-guinea* consulting fee. But he was carefully enjoined not to tell his doctor or anyone else of this transaction. He returned home that afternoon, calling upon his medical adviser on the way with a message from the "consultant" that he was too busy to write anything about the case, and stating that there was a "great big stone" which ought never to have been left so long.

Early the following morning he sent an urgent message to his doctor to the effect that he could not pass his water and on the doctor's arrival the stone had been happily passed; it was of the shape of a small sparrow's egg and measured five-eighths of an inch in length and one inch in girth at its middle—that is to say, its largest transverse diameter was about one-twenty-fourth of an inch more than that of a No. 12 catheter; it weighed 14 grains nearly when dry and showed ample appearance of superficial disintegration as a result of the efforts to dissolve it. The necessity for the operation having passed the patient began to feel anxious about his 20 guineas which he had duly sent off the previous night and only on that account did he divulge the fact of the payment.

It is well to be able to record that he got it back, but the medical practitioner did not receive a single word of advice or any report of the case from the consultant whom he had approached for help and guidance. The patient, however, received a letter returning his cheque and containing instructions to the effect that should any bleeding or dysuria occur he had better go up to the specialist at once!

LONDON HOSPITALS AND CENTRAL CONTROL.

To the Editors of The Lancet.

Sirs,—In the letter which you have already done me the favour to publish upon this subject I did not get beyond the position that some central control of hospitals would almost certainly be advantageous; and I will now, with your permission, approach the manner in which such control might be obtained. The letter of Dr. Lauriston E. Shaw in your issue of Jan. 16th, p. 186, and letters which have appeared in the *Times* from the original writer upon the question, from the Hon. Sydney Holland, and from Mr. Loch, are all of them valuable contributions to the formation of a sound judgment upon a very important but very difficult and complicated problem, and proceed from writers whose opinions are entitled to consideration and respect.

Among these writers there seems to be a general agreement that a useful board of control might be formed by some process of election or nomination from the committees of the great collecting funds and from the governing authorities of the hospitals themselves. Dissent from such a view, resting upon such authority, can only be expressed with diffidence, but the medical profession ha now had experience for nearly 50 years of a body constitute in an analogous manner, and the experience cannot b described as encouraging. The General Medical Council i partly composed of members appointed by corporations th proceedings of which it was collectively intended to control and partly of members nominated by the Crown or electe by the profession. The corporation members have certainl been expected, in addition to their duties on the Council, t take care of the interests of the bodies appointing them and in this respect they have occupied positions fairl analogous to those which the representatives of hospital would occupy on the suggested board. The Crown and th elected members have been looked upon somewhat in th light of watchdogs over their colleagues, and have occupie positions fairly analogous to those which the member appointed by the collecting funds would occupy on th suggested board. The efforts of hospital representative would be primarily directed towards the attainment of th maximum of independence for their several institution and towards combination when this independence ap peared to them to be in danger; while the efforts of th representatives of the funds would be mainly directed t wards the attainment of the largest possible measure of co trol. The inevitable result would be a deadlock. The Gener Medical Council, in the 48 years of its existence, has not y been able to secure the proper preliminary education o medical students; and has lately been so evenly divided upo a crucial question that an appeal to the casting vote of th President was only avoided by the departure of one of th members from the meeting room. The members of th Council are not to blame. There are too many of them, the powers are inadequate to the proper performance of the supposed duties, and some of them are compelled to conside the apparent interests of the corporations which they a collectively intended to control. The proposed hospita board would, in my humble judgment, break down in precisely similar manner, even apart from the consideratio that the election of members by the funds would afford n security that the gentlemen (or ladies) elected had any rea knowledge of hospital management or any competence t decide the questions which would be submitted to them The board would, in my opinion, possess too much of a amateur character, it would of necessity be far too numero it would have no continuity of policy, and it would break i pieces under the stress of internal dissension.

It has been suggested, I think by Mr. Sydney Hollan that the Government might with propriety subsidise th hospitals by an augmentation of their revenue from publ funds equal in amount to the total of the voluntary co tributions; and it has often been suggested that hospita fulfilling certain conditions of usefulness and efficien might with propriety be exempted from the payment of loc rates. It seems to me that the adoption of one or both these suggestions is eminently desirable in the interests the public and that only by adopting one or both of the could control in the public interest be secured without th sacrifice of independence. It is a national scandal that th hospitals receive no subvention, and that the persons able contribute to their support, but who wholly fail to do s nevertheless share equally with contributors in the benef which they confer upon the entire community. Antisep surgery is as much at the command of a miser who nev gave a shilling to a hospital in his life as it is at that of M Herring himself. I should rejoice to see the miser reached b the tax collector or by the rate-collector, but any notion direct or complete hospital control by the Government or t a municipality is unthinkable. No one could endure to s St. Bartholomew's reduced to the condition of the War Offi or to see the municipality of Marylebone turn away i attention from electric lighting to the management of th Middlesex Hospital.

The distribution of a Government subvention or the gra of immunity from local rates would require, of course, to b supervised by some competent authority, and would perm the Government of the country to appoint one. It should, think, be a commission of three persons, comparable to th Charity Commission, and should be a paid body with n other official duties or responsibilities. Its business sho be to make itself thoroughly conversant with the manag ment of all hospitals which through their secretaries committees expressed a desire to participate in the su vention or the immunity which it was the function of th commission to administer, and to lay down the conditio under which such participation might be obtained. It should have no power of interference where its assistance was not sought, but absolute power of assent or refusal when an application for assistance was made, and in this way I conceive that its influence upon administration would soon become paramount. The commission would be able to use the funds or the immunities at its disposal as levers for the production of necessary reforms; and it would do this without wounding susceptibilities or alienating friends. It might say to a hospital deriving the bulk of its patients from a distance that it should be financially assisted on condition of going to a locality where it was more wanted, and such a decision would be at once a stimulus towards removal and a justification for an appeal for the necessary means. It might say to three or four special hospitals for the same infirmity that their separateness entailed unjustifiable waste of money, and might thus practically force them to combine; and it would be able to offer sufficient inducements for the accomplishment of desirable changes of many other kinds. It might powerfully check recourse to hospitals by persons able to pay for treatment. Its chief distinguishing feature would be that it was composed not of amateurs but of officials whose daily work and duty it would be to probe all questions of hospital administration and government to the bottom and to bring them to the test of well-established principles. There would be no interference with internal management or with individual committees, in a word no objectless or vexatious meddling, but a steady influence making for administration in the best interests of the public and of science, and exerted by men whose *quasi* judicial positions would be a guarantee of their aloofness from personal squabbles or disputes. A hospital which refused to comply with the conditions laid down by such commissioners would at once be placed upon its defence before the public, and would be called upon to satisfy individual supporters, or the distributing committees of the funds, with regard to the justification which might be pleaded for the position it had assumed. Government subvention or assistance may be a long way off, but I think it is certain to come at last and that it ought to be both sought and welcomed. The hospitals constitute a great national interest, to the maintenance of which every citizen ought in some measure to contribute, on which the community is entirely dependent for the advancement of medical and surgical science, for the provision of skilful medical aid either for individuals or for the public services, and even for the counsel which Governments are sometimes driven to seek from the profession, but for which it is their highly moral custom strictly to abstain from payment. Subsidies, scanty indeed, are given to universities, but they are sufficient to establish the principle, and they have shown that such subsidies need in no way interfere with independent management or with natural development. I look forward to a time when hospitals will be similarly assisted; and until that time arrives I do not believe that any useful central control of them will be attained.

I am, Sirs, yours faithfully,
Jan. 19th, 1904. HOSPITAL SURGEON.

THE CHOLERA EPIDEMIC IN SYRIA AND MESOPOTAMIA.

(FROM THE BRITISH DELEGATE TO THE OTTOMAN BOARD OF HEALTH.)

SINCE the date of my last letter to THE LANCET[1] there has been a serious diffusion of cholera from Syria down the valley of the Euphrates to Mesopotamia and to one at least of the holy burying places of the Shiah sect of the Moslem religion. At the time I last wrote (August 20th) the outbreak was almost confined to the vilayets of Syria and Aleppo, and the news had been just received of the appearance of the disease at Biredjik on the Euphrates. Absence from Constantinople during the past few months has prevented me hitherto from continuing the story of the epidemic, and I propose to do so now, taking it up from the date of the letter referred to. In the vilayet of Syria cholera remained active throughout the months of August and September, was somewhat less so in October, and by the end of November had almost though not quite disappeared. The following table shows the course of the disease in Damascus, as compiled from the official returns. It is a continuation of the table on p. 1040 of the last volume of THE LANCET.

CHOLERA IN DAMASCUS.

Date.	Cases.	Deaths.
From August 9th to August 15th	63	54
" " 16th " " 22nd	104	78
" " 23rd " " 29th	76	53
" " 30th " Sept. 5th	156	89
" Sept. 6th " " 12th	76	64
" " 13th " " 19th	92	54
" " 20th " " 26th	138	112
" " 27th " Oct. 3rd	131	110
" Oct. 4th " " 10th	143	101
" " 11th " " 17th	67	53
" " 18th " " 24th	22	20
" " 25th " " 31st	7	3
" Nov. 1st " Nov. 7th	2	2

The last case of cholera was believed to have occurred in Damascus on Nov. 5th. The remarkably fluctuating character of the numbers of cases in the above table can scarcely escape notice. The numbers of deaths are more trustworthy and they indicate that the outbreak reached its highest point in the latter half of September and first week of October.

Although cholera was active in many parts of the Aleppo vilayet as early as the second half of July it was not until Sept. 5th that the disease was recognised in Aleppo itself. On that day a youth employed in a pork butcher's shop was found to be suffering from cholera in its severest form. The course of the disease in Aleppo is shown in the following table:—

CHOLERA IN ALEPPO.

Date.	Cases.	Deaths.
From Sept. 4th to Sept. 6th	2	0
" " 7th " " 13th	9	7
" " 13th " " 19th	37	46
" " 20th " " 27th	53	50
" " 28th " Oct. 4th	35	31
" Oct. 5th " " 11th	44	39
" " 12th " " 18th	82	62
" " 19th " " 25th	59	64
" " 26th " Nov. 1st	46	50
" Nov. 2nd " " 8th	16	15
" " 9th " " 15th	0	0
" 21st	1	0
From " 22nd " " 29th	32	22
" " 30th " Dec. 3rd	13	12
" 7th	0	2

The remarkable lull in the epidemic at Aleppo after the first week of November, and its equally remarkable revival in the third week of that month, have not as yet been satisfactorily explained. The lull is not to be ascribed to the absence of definite news. From Nov. 7th to 21st daily bulletins were received stating positively that there were no cases in that city. But on the 21st one case was reported; on the 24th there were four cases; on the 25th, five cases; on the 26th, seven cases; and on the 27th and 28th respectively, four cases and eight cases. Then the outbreak again subsided. From Dec. 7th to Jan. 5th Aleppo was believed to be free from cholera but on the latter date a single case was observed there.

In the meantime the disease was continuing more or less active in many other places of both the vilayets of Syria and Aleppo It is scarcely possible, and would perhaps serve no very useful purpose, to trace in detail the course of the epidemic in all the innumerable towns and villages where it has made its appearance. Its course has been irregular and uncertain. It has in many instances disappeared—or has seemed to disappear—from a place only to reappear after a longer or shorter interval. An example of this has just been seen in Aleppo and even more striking instances of the kind might be quoted from the experience of other places. It is worth noting, however, that cholera has now been more or less continuously present in Syria since the end of September, 1902. It has fluctuated from time to time and in February, 1903, it was hoped that it had really disappeared, as for a whole month no cases were officially reported from any town or village in this portion of the Turkish Empire. But the hope was not realised; the disease broke out again as badly as ever and as no fresh importation of infection was ever proved, or even seriously suspected, it is practically certain that the cholera virus has never been absent from these regions for the past 15 months.

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[1] THE LANCET, Oct. 10th, 1903, p. 1040.

Apart from the great and populous centres, such as Damascus and Aleppo, already briefly dealt with, the greatest interest attaches—from the point of view of the defence of Europe against an invasion of the disease—to the behaviour of cholera in the ports of the Syrian littoral. Before turning to this aspect of the question, however, it will be useful to give a summary of the total cases and deaths which have been officially reported from all places in the affected regions since the revival of the epidemic in March last.

STATISTICS OF CHOLERA IN THE TURKISH EMPIRE FROM MARCH, 1903, TO THE END OF THE YEAR.

Date of bulletin.		Cases.	Deaths.
March	24th	28	28
,,	31st	19	21
April	7th	8	13
,,	14th	10	12
,,	21st	6	7
,,	28th	2	4
May	5th	—	—
,,	12th	4	5
,,	19th	3	2
,,	26th	9	7
June	3rd	13	12
,,	10th	27	17
,,	16th	22	15
,,	23rd	121	75
,,	29th	67	62
July	6th	62	69
,,	13th	107	216
,,	20th	234	121
,,	27th	150	113
August	3rd	333	288
,,	10th	1391	1116
,,	17th	472	428
,,	23rd	534	443
,,	31st	279	285
Sept.	7th	237	200
,,	14th	136	117
,,	21st	256	224
,,	28th	351	303
Oct.	5th	392	332
,,	12th	319	236
,,	19th	307	235
,,	26th	163	155
Nov.	2nd	198	176
,,	9th	128	158
,,	16th	116	114
,,	23rd	52	54
,,	30th	89	85
Dec.	7th	37	30
,,	14th	219	196
,,	23rd	541	495
,,	28th	36	44
Jan.	4th, 1934	14	14
	Totals	7687	6527

The high figures in the second and third weeks of December were caused by the severe outbreak of cholera in Kerbela to which detailed reference will be made later. The totals in the above table must be regarded, on the evidence of unbiased witnesses, as considerably below the truth. From many places no returns at all have been received and when statistical returns have been received from other places there has frequently been positive proof from collateral sources that these fell considerably short of the actual numbers of cases and deaths. It is difficult to say how far short of the truth the official figures have fallen, but probably a moderate estimate would place the total cholera mortality in the last nine months in the Turkish Empire at not much less than 10,000.

The principal ports on the Syrian coast have suffered less than towns or villages in the interior. In Tripoli cholera was present from July 22nd to Sept. 13th. The following figures for Tripoli are in continuation of those published in my last letter.[2]

Date.	Cases.	Deaths.
From August 16th to August 22nd	89	67
,, ,, 23rd ,, ,, 29th	22	27
,, ,, 30th ,, Sept. 5th	44	4
,, Sept. 6th ,, ,, 13th	6	5

There followed a whole month during which Tripoli was declared day by day to be quite free from cholera but on Oct. 13th five cases with one death were reported to have occurred in the upper portion of the town. The patients were all inhabitants of the town; the first of them was taken ill on the 12th. The source of the infection was at first a mystery but it was subsequently shown that it had been reintroduced to Tripoli by persons coming from the *caza* or district of Akkar, where cholera was then present. From Oct. 13th to 21st 22 cases with 17 deaths were reported. Then the disease again disappeared; but on the 28th a single, imported, fatal case was observed and on Nov. 12th six fresh cases were suddenly reported. From Nov. 12th to 22nd, when cholera disappeared, it is hoped finally, from Tripoli, there were 31 cases and 25 deaths.

In Alexandretta a single imported case of cholera, followed by death, occurred on Sept. 5th. The patient was a camel driver who had come from the interior. Four more cases occurred on Oct. 12th. While Alexandretta escaped so lightly, cholera caused a considerable mortality in a number of villages in its neighbourhood, and at Payar, on the coast, five fatal cases occurred on Sept. 20th and 21st.

At Beirut only imported cases of cholera have been observed. The two cases brought by refugees from Tripoli on board sailing ships, which occurred in August last, were described in my last letter. Since then two exactly analogous cases have occurred. The first was that of a sailor on a small sailing ship of three tons, called the *Mabruca*, which arrived at Beirut on Oct. 25th. There were only three men on board and one of these was attacked with cholera two days after her arrival and died the same night. She had come from Suédié, where cholera was then present. The second instance occurred on Nov. 6th. The patient was a passenger on another sailing ship of the same name—the *Mabruca*—which had arrived the day before from Arvat, an island near Tripoli. It was from this island that the first imported case of cholera at Beirut in August last had sailed and though the presence of the disease on the island was never proved, it is at least remarkable that later an outbreak of cholera occurred in the Tarsous district, on the mainland but facing the island. The disease appeared there early in November but the extent of the outbreak was not known.

At Caiffa (or Haifa) three fatal cases occurred in one house on Oct. 25th. From that date to Nov. 17th 15 cases and 12 deaths were recorded there. At Latakia cholera did not make its appearance until so late as Dec. 21st. Between that date and the 29th of the month ten cases with seven deaths were reported to have occurred there.

It will be seen from the above brief summary that, as already stated, the Syrian coast ports have escaped with comparatively light visitations of cholera, while in the interior that disease has been causing very serious ravages. I propose now rapidly to trace the course of the epidemic northwards and eastwards.

Throughout the latter half of the year just ended, while there have been a considerable number of infected centres in the vilayet of Syria proper, it has been in the more northerly vilayet of Aleppo that the disease has been most active. At Antioch cholera was first detected on Sept. 16th. The recorded mortality was never very high there. The deaths in Antioch in the successive weekly bulletins, beginning with the week ending Sept 21st, have been as follows: 3, 9, 8, 12, 10, 15, 50, 7, 6, and 8. The highest figure fell in the week ending Nov. 2nd and the last recorded case was on Dec. 7th. Two days later than the appearance of cholera at Antioch it was reported from Aintab, an important town some 60 miles to the north of Aleppo. From Sept. 23rd to 27th there were 17 cases and eight deaths there. Then followed in successive weeks 24 deaths, 14, 6, 4, 4, none, 2, none, none, and 1 death respectively.

The outbreak of cholera at Biredjik, on the Euphrates, was mentioned in the postscript to my last letter. The fear there expressed that the disease would spread thence to Armenia and Mesopotamia has been unfortunately realised. The first cases occurred in Biredjik on August 16th; the week of highest mortality was that ending on Sept. 19th, when 19 deaths were reported. Cholera appeared at Orfa (or Urfa) on August 22nd. *Orfa* is in Mesopotamia and about as far to the east of Biredjik as Biredjik is of Aintab. The numbers of cases and deaths in Orfa in successive weekly bulletins have been as follows: 14 cases and six deaths in the week ending August 31st; then in the subsequent weeks 12 and 12, 8 and 4, 12 and 14, 33 and 25, 31 and 30, 24 and 21, 42 and 29, 21 and 15, 12 and 17, 4 and 2, and 5 and 5 respectively. The last known case of cholera occurred in Orfa on Nov. 7th. In all not far short of 200 deaths were recorded there; the last group of five cases and five deaths occurred among nomad tribes encamped in the neighbourhood.

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[2] THE LANCET, Oct. 10th, 1903, p. 1042.

From Orfa or Biredjik cholera has spread on the one hand northwards and eastwards to the important town of Diarb[illegible] to Anah, Kerbela, [illegible] the disease in Diarb[illegible] other places named it may be most conveniently considered first. There is, indeed, evidence that though unrecognised by the local authorities, cholera was present in Diarbekir as early as September and therefore considerably before it was believed to have spread down the Euphrates. The first official news of its appearance in or near Diarbekir was received on Nov. 20th, when it was reported that about a fortnight before the disease had appeared in the village of Habesh, some 15 miles away, and that 35 cases with 20 deaths had occurred there. Consular reports confirm this outbreak and state that the village is named Habeshi, that it is inhabited by Kurds, and that cholera was taken there by some camel-drivers from Aintab. One of the camel-drivers died, the corpse was stripped, as part of the funeral rites, the clothes were distributed, and the epidemic followed. The course of the disease in Diarbekir itself is uncertain. Consular reports state that it broke out there in September when it caused 16 deaths, six of which occurred in the American orphanage and two in the barracks. The local authorities refused to admit that the disease was cholera and no mention of this outbreak has been made in the telegrams to the Sanitary Administration in Constantinople. That administration has no permanent medical officer in Diarbekir but an officer sent there on special mission reported on Nov. 18th that on that date three soldiers had been admitted to hospital suffering from cholera. Two of these died. Then for three weeks there were said to have been no more cases. But on Dec. 15th four fresh cases were reported and on the 17th there were as many as 29 cases and ten deaths. This was a short but sharp outbreak. It lasted just one week, during which 54 cases with 32 deaths were reported. On one or two days no reports were received, so that the true figures were probably higher.

The first town of importance on the Euphrates below Biredjik where cholera is known to have made its appearance is Anah. This is a town of some size situated between 250 and 300 miles below Biredjik. Four cases of cholera were detected there on Oct. 29th. It was subsequently ascertained that among a group of persons who had come by raft from Biredjik to Anah a death had occurred and that the body had been buried at Anah. The first recognised case of cholera occurred there in a house adjoining the place where the body had been buried and the disease spread thence through the town. The following are the numbers of cases and deaths reported from Anah:—

Date.	Cases.	Deaths.
From Oct. 29th to Nov. 2nd	51	93
,, Nov. 3rd ,, ,, 7th	76	80
,, ,, 8th ,, ,, 10th	28	25
,, ,, 11th ,, ,, 17th	51	56
,, ,, 18th ,, ,, 19th	16	12
,, ,, 20th ,, ,, 27th	12	11
,, ,, 28th ,, Dec. 3rd	2	1

Since the last date named no positive news has been received from Anah, but at Rava, to the north and on the opposite bank of the river, a fatal case occurred on Dec. 23rd and another on the 24th.

Of far more serious import was the [illegible] Kerbela, one of the holy [illegible] Kerbela is situated on a [illegible] distance to the west of the [illegible] 32 and 33 north. [illegible] of pilgrimage of t[illegible] there in enormous numbers during their life and whose one hope is to be buried there after their death. The town of Kerbela is one vast cemetery, or to be more accurate, a vast network of underground vaults in which the bodies are deposited in their coffins, not buried in the earth. The corpses are brought from all parts of the Mahomedan world but principally from Persia and India. The law requires that death shall have taken place at least three years before the body is buried here but the law is constantly evaded and corpses are brought for burial in every stage of decomposition. The first news of the appearance of cholera in Kerbela was received on Dec. 11th. Five cases had then been observed. On the 12th there were 46 deaths and on the 13th as many as 84 The outbreak was believed to have come to an end on the 23rd of the month. The numbers of cases are not accurately known but the number of deaths officially reported exceeded 600. Among the measures taken to control the outbreak was the prohibition for both pilgrims and corpses to enter Kerbela and all communication with Nedjef was cut off. Fortunately, the disease did not appear in the latter and last week, in view of the accumulation of pilgrims in Nedjef and the fe[illegible] and force the cord[illegible] pilgrims (but not of [illegible] They are permitted to go there, however, only in groups of 200 at a time.

In the immediate neighbourhood of Kerbela cholera has attacked a few persons at Hindieh. At Musseyib, on the right bank of the Euphrates and considerably to the north of Kerbela, seven deaths from the disease occurred on Dec. 16th among persons detained in the lazaret there. Cases began to be observed in the town about the same time. 3000 pilgrims were reported to be collected on the opposite bank of the river and a few cases occurred amongst them. The later news from Musseyib has been very incomplete and there is positive evidence that many cases have occurred there which have not been reported.

On Dec. 26th it was reported that a suspicious disease had appeared in Mossul, on the Tigris, about half way between Bagdad and Diarbekir. On the 28th nine cases—all fatal—of this disease were stated to have occurred. On Jan. 1st another fatal case was reported and it was admitted that the disease was cholera. The only news since received from Mossul is that no fresh case has occurred there "since Jan. 6th."

Bagdad appears to have been infected with cholera at least since Dec 31st and probably longer. On that date the sanitary authority reported having seen a case indistinguishable from true cholera and added that other practitioners in the town had seen similar cases during the preceding eight days. On Jan. 7th it was reported that this case had died and that there were persistent rumours in the town that several deaths from a similar disease had occurred and the bodies been secretly buried.

The cholera epidemic as a whole is probably now at its lowest point. Yet there is constantly recurring evidence that the infection is still widely present. The vilayets both of Syria and Aleppo and the valleys both of the Tigris and Euphrates are more or less infected throughout. A serious revival and extension of the disease in the spring are almost inevitable. Fortunately the Hedjaz is, so far as is known, quite free from it and it may be hoped that this year's pilgrimage will escape without an outbreak of cholera.

Constantinople, Jan. 12th.

LATIN-AMERICAN CONGRESS OF MEDICINE AND HYGIENE.

(FROM OUR BUENOS AYRES CORRESPONDENT.)

THE Second Latin-American Medical Congress will be held at Buenos Ayres in April next. It will be opened on April 3rd and will close on the 10th as regards the Medical Congress, but the Exhibition of Hygiene, which is to be inaugurated at the same time, will remain open until May 30th.

The first Congress, which was held in 1901 and was reported in our columns, was a great success and the second Congress, judging from the preparations which are being made and the number of adherents who have registered, promises to be even a greater success. Over 300 Argentine medical men and sanitary engineers have sent in their names and the delegates from the other South American republics will probably number over 100, such distant places as Ecuador, Honduras, Colombia, and Mexico being well represented. The city of Buenos Ayres, from its great size, wealth, commercial and scientific activity, and its high reputation for lavish hospitality, is well adapted for a big congress, and no European scientific man who thinks of going there need fear any such want of organisation as was evident at Madrid last year. The Exhibition of Hygiene is a new feature and promises to be an interesting and valuable addition.

Of all Latin cities, not even excepting Paris, Rome, and Madrid, Buenos Ayres is easily foremost in matters hygienic. The huge drainage and water systems have been carefully planned and carried out by eminent English engineers and contractors at enormous expense, while the cleaning of the streets and the regulations for markets, lodging-houses, traffic, ambulance first aid, vaccination, compulsory notification of diseases (including tuberculosis), &c., have all been based by the municipality on the best systems at work at present in London, Paris, and Berlin. Not having any national tradition to keep up and not being hampered at every step by a fatherly Parliament, the municipality, aided by the advice of the National Council of Hygiene (Local Government Board), plans and orders the construction of houses and regulates the life of the individual. The opening of an Exhibition of Hygiene in such a city will, of course, be of great interest and value to the other and smaller South American States.

The following is a list of the principal medical communications already promised and some of which have been sent in, those marked with an asterisk promising to be of special interest:—A Study of the Different Systems for the Sanitation of Cities, Dr. Aragon (Mexico); the Utility of Studying Medical Technicality with the View to Forming a Permanent Committee for its Study and Application, Dr. Terry (Mexico); Extra-Uterine Pregnancies, Dr. Correa (Chile); Operations for Cancer of the Uterus, Chile, Dr. Kosner; *Analytical Study of Parturition and the Fœtus in Chile, Dr. Oliva; Urgent Surgical Interference in Grave Injuries and "The Surgical Complications of Dental Caries, Dr. Bazterrica (Chile); *Climatology and Demography of the Magellan Straits, Dr. Avaria (Sandy Point); *Twenty Years of Clinical Statistics in Eye Diseases, Chile, Dr. Cienfuegos; *Bubonic Pest in Chile, Dr. Cadiz; *Epidural Injections in Certain Urinary Diseases, Chile, Dr. Monteso (Chile); Differential Diagnosis of the Various Intra-abdominal Murmurs, Dr. Cadiz (Chile); Dementia (Precocious), Dr. Etchepare (Montevideo); Hydatid Cysts, Dr. Oliver (Montevideo); *Etiology, Clinical Forms and Geographical Distribution of Leprosy in America, Dr. Foreati (Montevideo); Tuberculin as a Method of Diagnosis in the Tuberculosis of Children, Dr Martirene (Montevideo); Biliary Lithiasis and its Complications, Dr. Poney (Montevideo); *Propagation to Man of Certain Parasitic Diseases, not Microbic, existing in South American Cattle, Dr. Berger; *International Prophylaxis of Yellow Fever, Dr. Lacerda (Rio de Janeiro); *Progress in Public Sanitation in Latin America, Dr. Sosa (Lima); *International Prophylaxis of Plague, Dr. del Rio (Chile); *The Results of the Compulsory Notification of Transmissible Diseases in Latin America, Dr. Canabal (Montevideo); *The Epidemiology of Malaria in the Argentine Republic, Types of Malaria Parasites, Parasites antagonistic to Quinine, The Problem of Disinfection of the Blood in Malaria, Dr. Delfino (Rome); *Hydatid Cysts in the Argentine Republic, Dr. A. Vega; *Frequency of Cancer in America, Dr. Bunge; *Infantile Tuberculosis in America, Dr. Araoz Alfáro; *Leprosy in America, Dr. Farini; *Yellow Fever, Dr. Penna; Carbuncle (Anthrax), Dr. Mendez; Framboesia, Yaws, &c., Etiology, Forms, and Geographical Distribution, Dr. Sommer; *Alcoholic Mania in America, Dr. Cabred; besides communications on Actinomycosis in the Argentine Republic, Malignant Early Syphilis, Malignant Neoplasms of the Skin, *Infantile Feeding in Relation to Rickets and Warloff's Disease in America, Physiology of Physical Exercise, Physiological Pathology of Tremors, *Penetrating Wounds of the Chest, Treatment of Prostatic Hypertrophies, Pelvic Suppurations, &c.

The subjects chosen for open discussion are very interesting and are as follows: (1) Causes of Deaf-mutism in the Argentine Republic; (2) Prevention of Blindness; (3) the Etiology of Goitre; (4) X Rays in Surgery; (5) Distocia in the Argentine Republic; (6) Hæmatology in Surgery; (7) Strictures of the Urethra; (8) Surgical Interference in Exophthalmic Goitre; (9) Treatment of Cancer; (10) Treatment of Laryngeal Tuberculosis; (11) Treatment of Tuberculosis of the Eye; and (12) Biliary Lithiasis and its Complications.

It will thus be seen that important papers will be read on yellow fever, plague, malaria, leprosy, tuberculosis, sanitation of cities, cancer, hydatid cysts, actinomycosis, and climatology, so that our knowledge of the above diseases as existing in tropical and semi-tropical countries should be correspondingly increased.

The Exhibition of Hygiene will be very complete in maps, drawings, models, and statistics. The official language is Spanish but French is well understood by all the educated people. All the steamer lines from Europe offer reductions of 30 per cent. on return tickets. April will be autumn in the Argentine Republic and the season favourable, but the harvest being over visitors will not be able to see the hundreds of square miles of wheat, maize, and flax which are one of the wonders of that land but they will be able to see thousands of sheep and cattle frozen daily in Buenos Ayres for export to Europe.

MALAGA AS A WINTER RESORT.

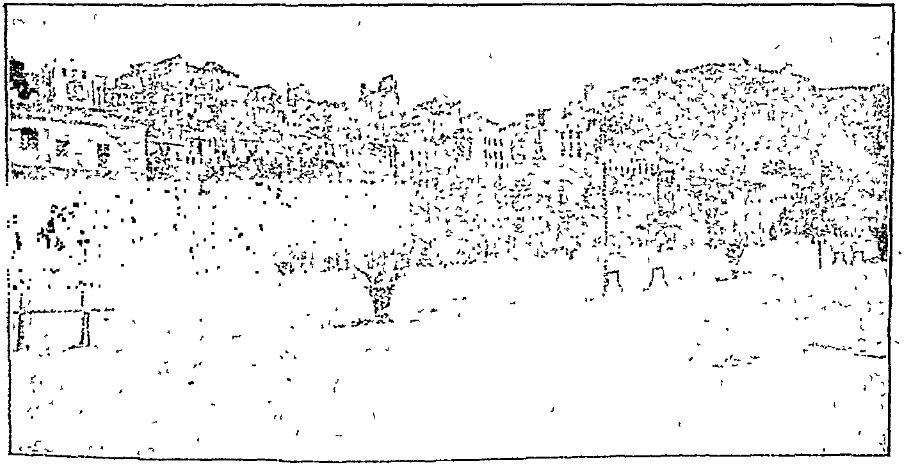
(FROM OUR SPECIAL SANITARY COMMISSIONER.)

GIBRALTAR direct by steamer from England can now be reached within four days. From Gibraltar the ferry boat conveys passengers to the Algeciras station in half an hour. Here a line, recently built by English engineers, connects with the main lines at Bobadilla Junction, where there is a good buffet and lunch can be obtained before taking the train for Malaga. It is, however, better to sleep at Algeciras. There are two very good hotels and by taking the early train Malaga can be reached in the afternoon after a daylight journey through some of the most romantic and beautiful mountain scenery of Andalusia. Indeed, the line from Bobadilla to Malaga traverses the Switzerland of Spain; it also enables the traveller to appreciate the mighty mass of mountains that shelter Malaga from the northerly winds. Thus it is that at Malaga, as on the French and Italian Rivieras, the vegetation is that of countries of more southern latitudes. After passing through 11 tunnels the wonderful and wild gorges of the Hoyo, which in Spanish means a hole or pit, the train descends into the fruitful *vega de Malaga*. Here the figs ripen early in June. The sugar-cane and the cotton plant thrive and also the sweet potato (*batatas*) and the custard-apple (*anona cherimolia*). Of course the melon, the pomegranate, the Japanese medlar, the prickly pear, the olive, the orange, and the lemon all ripen luxuriantly round and about Malaga but these sub tropical fruits also abound further north on the French and Italian Rivieras. Malaga being much more to the south ought to, and does, possess a vegetation that cannot be found even in the most favoured spots of the Riviera. There is consequently a distinct climatic difference and this, in certain cases, may afford an advantage over the ordinary and nearer winter resorts. The principal obstacle is the overland journey through the whole length of both France and Spain which is a very irksome undertaking. Of course, it is pleasant enough for those who can afford to travel by short stages, as there are many towns of great interest to be visited on the road. This, however, would hardly suit a patient whose chief object is to obtain, with as little fatigue and effort as possible, a complete change of climate. On the other hand, those who can stand the sea are likely to benefit by the rest and luxurious comfort of the manificent steamers that stop at Gibraltar on their way from England to the far East. As already pointed out, the journey from Gibraltar to Malaga is not long and can be accomplished by daylight.

It is perhaps scarcely necessary to expatiate on the merits of the climate of Malaga. The Malaga muscatel raisins that adorn our Christmas dessert are in themselves a sufficient witness. The proximity of the sea mitigates the extreme heat, while its southerly position and the shelter of the mountains prevent the advent of cold weather. Thus snow and frost are almost unknown and the thermometer, even on wintry nights, rarely falls below 50° F. Then there is hardly any rain. On an average rain does not fall on more than 30 days in the year and it only lasts for a few hours. But there are exceptions and then damage is done by an excessive downpour. The one thing to be feared is a land wind called the *tarral*. From the heated plains of the interior it produces in summer excessive and unpleasant dryness, while in winter it brings cold from the snow clad sierras. This wind, however, never lasts long and constitutes a the only fault that can be found with the climate of Mal Invalids are obliged to keep indoors when the *tarral* blowing. It comes from the north west and descends the Sierra de Abdalajis through the Hoyo, following the course *of the railway line—in other words, it is the mistral* of the Spanish Riviera. But just as on the French Riviera there are chosen spots that are almost completely sheltered from the *mistral*, so there must be eligible sites near Malaga that are equally protected from the *terral*.

Unfortunately the excellence of climate is not the only thing needed. The effects of the best of climates can be destroyed by bad hygiene and the death-rate at Malaga is appallingly high if we look only at the figures given. To speak of Malaga as a health resort when there is a death-rate of about 38 per 1000 per annum of the population seems like a misuse of terms. Yet it would be a mistake to consider that these statistics proportionately affect the class of patients likely to go to Malaga from England. There are certain things in the sanitation of a town that concern all alike, whether rich or poor, such, for instance, as the water-supply. Now Malaga has a very good water-supply. English and French capitalists and engineers contrived to surmount many and manifold difficulties and finally succeeded in installing extensive waterworks. The waters of the Torre Molinos were covered over at their source and taken to Malaga in large iron pipes. Thus pure water is delivered at the doors of the houses. It is true that for a considerable time private wells were allowed to subsist and these were dangerous, but since the great cholera epidemic of 1885 they have been closed. Now the only danger in regard to the water-supply is that it may get contaminated when inside the house. There are small cisterns still used within the houses and these may be dirty; mice and other animals may fall into them. But the same objection can be made to the London water supply, for in many parts of the metropolis the old and more or less dangerous intermittent supply with cisterns still exists.

The drainage of Malaga is certainly in a very defective condition. The sewers have in many cases insufficient fall and there are no good means of flushing them, so that deposits causing effluvia abound. It is only in some houses that the closets communicating with these sewers are efficiently trapped. Nevertheless, the desire to have proper sanitary closets is growing and they are now much more general than they were a few years ago. The municipality is unfortunately very much in debt, so that it would be difficult to carry out a comprehensive scheme of drainage Still some progress has been accomplished. For instance, many of the small streets have been covered over with asphalt. These thoroughfares abutting on the most fashionable and best streets were a great nuisance. The ground was sodden with every sort of filth and garbage. Even energetic scavenging could not really clean these places for the moist soil retained the worst part of the dirt. Now all is covered over with impervious asphalt, so that any rubbish can be effectively swept and washed away and there is no infiltration into the subsoil. But by far the greatest improvement, and this was a gigantic undertaking, has been the construction of the new harbour. A large amount of foreshore has been reclaimed and a sea wall has been built so far forward that the ships, instead of riding at anchor, can now come alongside When the water came far up into the land the deep parts were at a considerable distance from the shore and it was in this shallow water that the town drains emptied the sewage. The main outfall now passes close to, but outside, the sea wall or breakwater to the south-east Here a part of the channel is not covered over and therefore there are many bad odours. The outfall itself also does not go right out to sea. Indeed it is in an unfinished state and this work should be completed at once. It is quite evident, however, that the importance of such questions is not appreciated or this unfinished outfall would not have been allowed to remain in its present nuisance-creating condition and this too for a considerable time. What is better understood is the building of modern broad streets with fine, though commonplace, modern houses on each side and the laying out of public gardens. The prolongation of the Alameda to the new port, when the trees, the palms, and the other plants have had time to grow, will constitute one of the broadest, most handsome, and most picturesque sea fronts in existence. But here again the principal attraction is not appreciated. On one side there are the port, the shipping, and the sea. These are all interesting and beautiful but other and very fine ports and moles and piers can be seen elsewhere The view, for instance, from the Cannebière at Marseilles down into the old port, with its shipping, its many small levantine sails below, the white seagulls flying against the blue sky above, the old forts at the entrance of the antique, historic harbour, and the magnificence of the open Mediterranean beyond constitute a picture which the new port of Malaga cannot equal


Malaga View inland from the prolongation of the Alameda to the new port.

On the other hand, if the visitor turns his back to the sea and from one of the Malaga breakwaters or from the new prolongation of the Alameda looks inland, a view will be obtained that is unique. Covering the dome shaped hill to his right are still standing the grim battlements of the Castillo de Gibralfaro. At a lower level and rising above the surrounding houses are some formidable Moorish towers. These are the remains of the palace fortress called the Alcazaba and it is connected *with the* Gibralfaro by double walls. Here was the settlement of the early deserted and [illegible] people have gone to live in the abandoned quarter and there are scenes of squalor and much dirt on all sides. Yet these hills should be one of the chief attractions of Malaga. Rubbish should be cleared away, the best parts of the ruins well exposed, flower-beds planted near, and the whole quarter converted into a promenade after the fashion of the Alhambra at Granada. Here are ruins of real interest to the historian, the archæologist, the architect, the artist, and the ordinary tourist who can appreciate the beautiful and the romantic. They are priceless; all the money in the world could not reconstitute the history represented by these time- and war-worn battlements, but a comparatively small sum would suffice to preserve them. If they were rendered accessible to visitors, if their history was revived, and interest awakened the increase in the number of tourists passing through Malaga would soon pay for the small cost incurred. But this is not in the least understood and most of the town people very much prefer building ugly modern houses to preserving these most picturesque ruins. Yet they should bear in mind that there are no attractions in the town of Malaga. There is nothing to see. Had the Moorish mosque been preserved that would doubtless have brought many visitors, but the cathedral built on its site is a nondescript building principally remarkable for its size. The old Alameda is certainly a spendid thoroughfare and promenade, but its beauty is due to its many trees rather than to the buildings on either side.

It is the country around rather than the town itself which constitutes the chief charm of Malaga The semi-circle of mountains that spread out fan-like to shelter Malaga is about 50 miles in length. On the offshoots of these mountains and close to the seashore there are suburban districts which will doubtless constitute the health resorts of the future. Already a tram-line follows the coast far beyond the town. Here a hotel has been built for those who wish to live well away from the town. It overlooks the sea and on the other side there is a plain sheltered by mountains. All along this road there is a succession of fine views, and at some distance can be seen the hill from which Malaga derives its excellent water-supply. This is important, for it means that good water can be delivered to all the houses that are gradually springing up on this coast-line. At present there is plenty of space here. Of course, there are no sewers but there is open country and there is room for cesspools to be built well away from the houses; in any case, it is virgin soil that has not been polluted by previous occupants; indeed, in many places the sea used to come up the hillside and there was no place whatsoever for building. Other parts which used to be safe have now to be protected by sea walls. The fact is that something like half a mountain has been blown up and the material carted away to build the new port. The jutting out into the sea of the artificial breakwater has caused a swirl and backwash which have attacked some parts of the coast that used to be safe. In course of time a railway will supplement the present tramway communications, so that there will be a seaside country district created within easy reach of the town. As all the villas built there, or likely to be built, are beyond the town *octroi* or dues the cost of living will be cheaper.

Nevertheless, the town itself is the real centre and its sanitation must be improved. Dr. Don Ramón Martin Gil has proposed that sea water should be pumped to the top of the castle hill and from there used to flush the sewers. But then there are 95 streets that have no sewers whatsoever. In some places there still remain cesspools that are very porous and which allow the surrounding subsoil to be contaminated, but the inhabitants for the most part ignore these facts or altogether fail to appreciate their importance. A branch

enforced. But all these imperfections and the greatest possible ignorance and indolence cannot alter the wonderful climate prevailing on this coast-line. The sanitary defects of the town can be avoided by living outside, as Mr. Clarence Visick, the local British practising physician, generally recommends. Then for shopping and social purposes the new streets of Malaga and the newly paved old streets are all clean and as free from unpleasantness as in most fairly well-ordered towns. There are also some excellent and very clean hotels with the usual moderate charges that obtain in the provincial towns of Spain. So that altogether the invalid wintering at Malaga may rely on being able to enjoy the benefits of the climate while insuring but a minimum of risk in regard to defective sanitation if he selects with some judiciousness his place of residence.

LIVERPOOL.

(From our own Correspondent.)

Demolition of Insanitary Areas in Liverpool: No Small

There were 378 deaths during the week ended Jan being equivalent to an annual mortality of 27·1 per 1 The number of deaths above the corresponding week of year (when the rate of annual mortality was 23·9 per 10 was 48. The increased rate of mortality was due to insanitary condition of a number of courts in the slu the death-rate in which varied from 63 to 83 per 10 Through the instrumentality of Dr. E. W. Hope, the medic officer of health, the health committee has already accom plished the demolition of large areas of insanitary proper where sickness and mortality were excessive, and he is no energetically urging the demolition of the above name insanitary dwellings. This insanitary property, as pointe out by Dr. Hope at the meeting of the health com mittee, is an unfortunate legacy of by-gone years and the city council had sanctioned a policy by which so many of the houses in question should be dealt with annually. If the requisite number were reached, as might reasonably be expected, they would within a fairly short time rid the city of those excessively insanitary blocks. The *Liverpool Daily Post* of Jan. 16th finds fault with the health committee and the housing committee for not being more alive to the necessity of more prompt action in the matter of demolition. Dr. Hope is, however, assured that the housing committee will effectually grapple with the difficulty. The city is once more free from small-pox.

University of Liverpool: Corporate Grant.

The finance committee of the city council has received an influential deputation representing the University in respect to the proposal that the city council should give financial assistance to the University. The deputation consisted of the Chancellor (the Earl of Derby, K.G.), Vice-Chancellor A. W. W. Dale, Sir John Brunner, M.P., and others. The Chancellor presented a memorial from the University praying for a grant in aid and each member of the deputation addressed the committee in support of it. The finance committee considered the subject after the deputation had withdrawn and eventually came to the unanimous decision to recommend the city council to grant the sum of £10,00 to the University during the year 1904, such sum to be pa out of the city rate.

Midwives Act, 1902: Recognition of the Liverpool Ladie Charity.

Under powers given to it the Central Midwives Board ha accepted the certificates issued by the Liverpool Ladies' Charity and Lying-in Hospital as qualifying the holder to be registered under the Act, and applications are being received for registration by the medical officer of health at the municipal offices, Liverpool. The Central Board has now taken a further step and has intimated to the board of management of the Ladies' Charity and Lying-in Hospital that the charity has been placed upon the list of institutions approved by it for the purpose of training pupils for qualification as midwives under the Act. The various committees of the charity are doing all in their power to take advantage of the privileges thus conferred upon them for the benefit of such persons as desire to devote themselves to the calling of a midwife.

Hospital Sunday Collection: A General Decrease.

The annual collections in aid of the medical charities were taken in the various places of worship on Jan. 10th. Unfortunately the weather in the early forenoon was raw and wet and the church attendances suffered considerably. To this cause must be attributed the general falling off in the amounts received. Very few places of worship, indeed, show an increase. The Ullet-road Unitarian Chapel, which generally heads the list, was £60 short of last year's collection. Altogether the prospects of reaching last year's general collection are far from promising Repeated protests have appeared in the local papers against taking the collection in the winter but the committee of the fund has given some valid reasons in favour of taking the collections early in the year.

Southport's Low Death-rate.

The medical officer of health of Southport reports that during the past year the death-rate of Southport was 14·65 per 1000 of the inhabitants, as compared with 15 32 in the previous 12 months. This rate is the lowest in the history of the borough. The purely local death-rate (excluding bad lives imported) was 12·92 per 1000, as against 13·20 per 1000 last year. The zymotic death-rate was 0·98 per 1000. This is a slight increase compared with the previous year, when the rate was 0·64 per 1000, but that figure was the lowest previously attained. Of the deaths 286 were those of people aged 60 years and upwards. The estimated population of Southport is now 48,000, though the Registrar-General places the population at a higher number. The birth-rate was 18 45 per 1000.

Jan. 19th.

WALES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS.)

Proposed Reduction of the Salary of a Medical Officer of Health.

THE corporation of Aberavon, a Glamorganshire borough with a population of about 8000 persons, has suddenly shown a desire to curtail the expenditure of the town and as a first step has decided to reduce the salaries of the corporation officials, including the town clerk, the borough surveyor, the gas manager, the sanitary inspector, and the medical officer of health. This last-named official is Dr. J. Arnalt Jones who has been the medical officer of health for many years and receives a salary of £50 per annum, one half of this amount being refunded to the borough by the county council. At the meeting of the corporation at which these wholesale reductions were decided upon it was stated that last year there was paid as notification fees to the local medical practitioners no less a sum than £47 17*s*., which means that more than 380 cases of notifiable diseases must have occurred during the year in this small town which does not contain 1500 houses. About £20 of this sum was paid to the medical officer of health and several members of the corporation appear to consider that this was equivalent to an increase in his salary and a motion was accordingly proposed and carried that he be paid as medical officer of health £30 per annum, which sum should include his fees for notification certificates. In the very improbable event of this proposal receiving the sanction of the Local Government Board the Aberavon corporation would be paying no salary at all to their medical officer of health, for one half of the £30 would be paid by the county council and the other half would not equal the sum to which he would be entitled under the provisions of the Infectious Disease Notification Acts, always supposing that there was no considerable decrease in the number of cases of notifiable disease within the borough. Taking the county of Glamorganshire as a whole the salaries paid to the medical officers of health in the small towns and in the rural districts are distinctly below the average salaries paid in other counties of England and Wales.

A New Name for Workhouses.

There is a very creditable desire upon the part of many members of boards of guardians to reduce as far as possible any stigma which may be supposed to attach to residence in a workhouse. More than one board has made an unsuccessful attempt to designate its workhouse as an ordinary dwelling house by a number and the name of the street or road in which it is situated, more especially for the purpose of entries in birth certificates, and quite recently the Pontypridd board resolved to call its new workhouse in the Rhondda valley the "Rhondda Homes" and the Cardiff board proposed to call its auxiliary workhouse at Ely the "Ely Rest." The Local Government Board, however, insists that the name of the institutions shall in some way convey the idea of relief. In order, therefore, to meet the views of the latter body the institutions referred to will be known officially as workhouses, but the boards of guardians when speaking of them will call them by the names which they consider to be more appropriate.

Death of Mr. Edward Charles Garland, M.R.C.S. Eng., L.R.C.P. Edin.

Mr. E C. Garland, who died at Yeovil on Jan. 11th at the age of 69 years, was one of the oldest and most respected practitioners in Somersetshire. He was elected medical officer of health of Yeovil in 1872 and has been re-elected year by year since that date. A serious outbreak of scarlet fever in the borough during the autumn of last year threw upon him a great deal of extra labour, for he was especially interested in his public health work, and although he took a short holiday the strain of the epidemic appears to have affected him seriously. During the past few years Mr. Garland gradually relinquished private practice, devoting himself to the duties of medical officer of health and certifying factory surgeon. At the time of his death he was senior medical officer to the Yeovil district hospital and dispensary and medical referee under the Workmen's Compensation Act. Some articles from his pen have appeared in THE LANCET, the first of them being an account of a case of placenta prævia published in 1858. He leaves a widow, a daughter, and a son who is the Recorder of Winchester.

The Midwives Act.

The Gloucestershire county council has appointed Dr. J. Middleton Martin, the county medical officer of health and the medical officer of health of the Stroud urban and rural districts, executive officer under the Midwives Act at a salary of £105 per annum and out-of-pocket expenses. The Herefordshire county council has at present taken no action with regard to the administration of this Act.

Retirement of Dr. James Milward.

Dr. James Milward, who has been a Poor-law medical officer in Cardiff since the year 1867, has resigned his position as medical officer to the east district of the Cardiff union.

Bacteriological Diagnosis in Gloucestershire.

The bacteriological examinations required by the Bristol health department have hitherto been carried out in the municipal laboratory, but they are now intrusted to Professor Stanley Kent of the Bristol University College and at the last meeting of the Gloucestershire county council it was decided to pay to the college the sum of £105 annually in return for which medical officers of health in the county will be able to obtain from Professor Kent bacteriological examination of such specimens as they may send to him.

Vagrancy.

For many years past the members of the Gloucestershire county council have concerned themselves with the question of vagrancy within the county and by means of voluntary subscriptions certain tramps have been supplied with order tickets entitling them to a midday ration of bread in a distant town. In 1903 there were no less than 17 346 of these midday meals given out, an increase over the previous year of 4275. This increase is accounted for somewhat by the fact that there are extensive engineering undertakings being carried out at Avonmouth, at Gloucester, and at Winchcomb, and the professional tramp habitually follows in the track of the navvy. The standing joint committee of the county of Gloucester recently adopted the following motion and asked other county councils to consider the propriety of sending to the Local Government Board a resolution in similar terms :—

> That this quarterly meeting of the Gloucestershire standing joint committee views with great apprehension the progressive and serious increase in vagrancy in the country and respectfully submits that the subject should receive the careful consideration of the Local Government Board with a view to the establishment of a more effective and uniform system for dealing with tramps throughout the country.

Vaccination Expenditure.

At the meeting of the Bath board of guardians held on Jan. 13th it was reported that for the four years previous to the passing of the Vaccination Act of 1898 the vaccinations numbered 2100, the cost being £516, while for the four years subsequent to 1898 the vaccinations were 4403 and the expenditure amounted to £2052.

Jan. 18th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Small pox in Scotland.

THE following table shows the districts from which cases of small-pox have been intimated to the Local Government Board during the period from Jan. 1st to 15th inclusive :—

County.	Local authority.	Number of cases.
Ayr	Irvine burgh.	2
Dumbarton	Western district—	
	Alexandria.	1
	Dumbarton burgh.	1
	Kirkintilloch burgh.	1
Edinburgh	Edinburgh burgh.	10
	Leith burgh.	1
Elgin	Elgin county—	
	Findhorn.	1
Fife...	Lochgelly burgh.	1
Lanark	Lower Ward—	
	Shettleston.	2
	Middle Ward—	
	Bellshill.	1
	Cambuslang.	1
	Newton.	4
	Tannochside.	1
	Upper ward—	
	Lesmahagow.	3
	Airdrie burgh.	1
	Coatbridge burgh.	6
	Glasgow burgh.	102
	Govan burgh.	35
	Hamilton burgh.	2
	Kinning Park burgh.	2
	Motherwell burgh.	1
	Partick burgh.	4
Peebles	Peebles burgh.	1
Perth	Perth district—	
	Glencarse (Inchyra).	3
Renfrew	Upper district—	
	Scotstoun.	1
	Barrhead burgh.	2
	Greenock burgh.	5
	Paisley burgh.	1
	Pollokshaws burgh.	2
Stirling...	Stirling burgh.	1
		199

During the last few weeks small pox has made its appearance in Edinburgh chiefly among the inmates of common lodging-houses. One or two cases have occurred in the Craigleith Poorhouse. There are now 20 cases in hospital. One of them, which proved fatal, was of the confluent variety and occurred in a Christian Scientist.

Edinburgh Royal Infirmary.

The adjourned general meeting of the court of contributors to the Edinburgh Royal Infirmary was held on the afternoon of Jan. 18th in the new council chamber. There was an attendance of about 150. The report by the committee of contributors was submitted to the meeting by Mr. James Haldane, C.A., the convener. In this report the question of age limit for the medical and surgical staff was dealt with follows: "The managers report that they have after mo careful consideration made a new rule to the effect that th ordinary physicians and surgeons shall in future retire reaching the age of 65. The contributors may be reminde that any new rule requires to be passed by the court of co tributors. At the meeting of contributors held on Jan. 4 a motion was carried which enacted a new rule putting th professors of the University who hold wards in the infirma on the same footing as regards an age limit as the medic and surgical officers who would be affected by the ne rule framed by the managers. That new rule, althoug referred to in the motion as to an age limit f professors and therefore possibly by implication approve of by the court of contributors, has not been formall sanctioned by the court and technically it may be open t question whether the new rule as to the professors was i order in being passed. The matter appears to the committe to be very difficult and delicate both as regards th physicians and surgeons and the professors, and th committee do not at this stage, at all events, presume t offer any opinion upon it; but in reporting to the co tributors on the proposed new rule, as they are by preceden bound to do, they venture to suggest to the contributors tha they should in the meantime delay to deal with the ne rule proposed by the managers and allow further time t consider the whole matter. It is of serious importance an ample time ought, in their view, to be allowed for considera tion and discussion. As regards the rule affecting the pro fessors it has to be observed that although it was carried b two to one only 69 contributors took part in the division and it seems most desirable that the whole question shoul be fully ventilated and that a more adequate representa tion of the views of the contributors should be obtaine on an important matter affecting the welfare of the in stitution. The committee beg to suggest that it might b desirable to appoint a small joint committee of the manage and members of the committee of contributors to conside the whole matter and make a report to a future meeting o contributors" After some discussion this suggestion from th committee of contributors was carried by 91 votes as agains 52 for an amendment proposed by Mr. J. T. M'Lennan, advocate, to the effect "that this meeting approve of th new rule with this exception—that the words 'nor to th professors' be deleted." The meeting was adjourned unt the last week in April.

Rectorial Address at the University of Edinburgh.

On Jan. 21st the Lord Rector of the University of Edinburgh, Sir Robert Finlay, M.P., delivered an address to the students of the University in the M'Ewan Hall in his capacity of Lord Rector of the University.

The Retirement of Dr. D. Argyll Robertson.

Regret will be felt by a large circle of friends in Edinburgh at the news of the early departure of Dr. Douglas Argyll Robertson who is about to remove to Jersey and to take up his residence there. A good many years ago Dr. Robertson gave up his lectureship in ophthalmic surgery in the Edinburgh Royal Infirmary, to which he was appointed in 1870, and he has gradually, I understand, been dropping out of numerous other positions and restricting himself to his private practice, which was one of the finest in the country. Douglas Argyll Robertson was born in Edinburgh in 1837, his father being a well-known surgeon of high standing. He received his education at various schools in Edinburgh, on the Continent, and at St. Andrews. His medical education was also obtained at various universities—Edinburgh, St. Andrews, Berlin, and Prague. He is a graduate in medicine of St. Andrews (1857), and a *Licentiate*, and afterwards a *Fellow*, of the Royal College of Surgeons of Edinburgh (1862). He selected the branch of ophthalmic surgery when he commenced practice in Edinburgh. In 1863 he was associated with the discovery of the properties of the Calabar bean as an ophthalmic agent, and in 1881 he was vice president of the ophthalmic section of the International Congress held in London. In 1869 and 1870 he made valuable discoveries in connexion with the eye symptoms in certain spinal lesions. Three years assistant surgeon in the ophthalmic department of the Edinburgh Royal Infirmary he was appointed in 1870 ophthalmic surgeon to that institution. Dr. Robertson had splendid physical powers and was an admirable athlete in his younger days, golf in particular claiming his attention. He was also an archer of the Royal Bodyguard.

The Case of Dr. J. F. D. Macara and the Parish Council of Durness.

Lord Pearson in the Bill Chamber of the Court of Session, Edinburgh, last week disposed of a note of suspension and interdict for Dr. James Findlay Duncan Macara, Durness, Lairg, Sutherlandshire, against the parish council of Durness with the object of preventing the respondents carrying out a resolution passed by them on Nov. 20th dismissing him from the post of medical officer of the parish. On March 31st and April 1st the complainer attended a pauper child named John Macpherson who was suffering from chicken pox and advised his mother to isolate him an [illegible] Macpherson, from school for [illegible] wards learned that in disregard of his advice the sister was sent to school and she was taken ill and was absent from school from April 9th to 20th. The complainer was not called in to attend her, however. The respondents directed him to certify to the head-master of the school as to the absence of Barbara Macpherson but he declined to do so on the ground that, while he was bound and willing to give such certificates to the parish council and the Local Government Board, he was not bound to give them to teachers or to the School Board. At a meeting of the parish council held on Nov. 6th two members were disqualified and thereafter, it was averred, the resolution complained of was passed by a majority of three to two, being confirmed at the meeting on Nov. 20th. The respondents stated that the complainer refused to supply their clerk with the certificate and maintained that in so doing he acted in breach of his duty. The disqualification of the two members of council was, they explained, entirely independent of the matter at issue between the complainer and them. His lordship passed the note and granted *interim interdict.*

Jan. 19th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Poor-law Medical Officers of Ireland.

AN important meeting of the Poor-law medical officers of the South Riding of the county Tipperary was held recently in the town-hall, Clonmel, for the purpose of forming a new branch of the Irish Medical Association and in support of the claims of the medical men. There was a large and representative attendance. The articles and by-laws of the county Wexford branch of the association were adopted and the question of the salaries of workhouse officers was postponed. A vote of thanks was tendered to Mr. R. F. Tobin of St. Vincent's Hospital, Dublin, and to Sir Lambert Ormsby for their advocacy of the claims of the Poor-law medical officers.

The Dangers of Overcrowded Theatres.

The public health department of the corporation of Dublin has issued summonses against the managers of the two principal theatres of the city in connexion with alleged breaches of the rules as regards means of egress laid down by the urban sanitary authority.

University Education in Ireland.

In response to a requisition signed by the Roman Catholic Archbishop of Dublin, Mr. John Redmond, M.P., and all the Parliamentary representatives of the city, the Lord Mayor has convened a meeting to be held in the Mansion House on Jan. 29th in "support of the claims of the Catholics of Ireland for equality in the matter of university education." The Very Rev. Dr. Delany, President of University College in the Catholic University of Ireland, has addressed a letter to the Lord Lieutenant of Ireland, protesting against any proposal that the claims of the Queen's College, Belfast, should be at once and separately dealt with, instead of being held over for consideration in connexion with a scheme for the reorganisation of the whole system of higher education in the country. Lord Dunraven has suggested a scheme which, it is said, was approved of on Jan. 12th by the Roman Catholic hierarchy at a meeting held in Maynooth. This plan is practically the one put forward by Sir Anthony MacDonnel and in brief is that two colleges should be affiliated to the present University of Dublin (with which Trinity College is connected)—viz., the Queen's College, Belfast, and a new Roman Catholic college, to be called the King's College, in Dublin on which a sum of £300,000 is reported to be spent. Something is also to be given to Trinity College, Dublin, and to Queen's College, Belfast. The scheme, whether the scheme of the Government or of Lord Dunraven, would seem still to be in an embryonic state and the religious difficulties to be adjusted are very grave. The announcement was made on Jan 18th that the board of Trinity College had received from His Majesty the King a letter authorising it to admit women to the degrees of the University of Dublin.

The Proposed Sanatorium for Consumptives at Whiteabbey.

A meeting of the inhabitants of Whiteabbey and surrounding districts was held in the court-house, Whiteabbey (the High Sheriff presiding), on Jan. 16th to protest against the purchase by the Belfast board of guardians of the "Abbey" for a sanatorium for consumptives. There was a very large and representative attendance. Objections were strongly urged against the scheme on the grounds of (1) injury to the neighbourhood and depreciation of property; (2) bad situation and site of the place selected, with a cold clay soil and adjacent swampy ground; (3) close proximity of a densely populated manufacturing village containing a spinning-mill; and (4) great cost caused by altering the present buildings and erecting huts, &c.

Jan 19th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Inspector-General of the Sanitary Service.

Dr. Chantemesse, professor of experimental and comparative pathology at the Faculty of Medicine, has just been appointed inspector-general of the Sanitary Service in the place of the late Professor Proust. No one has done more than the newly appointed inspector for the furthering of the science of hygiene and for prophylaxis against epidemic and contagious diseases. As scientific adviser to the Pasteur Institute Dr. Chantemesse has no equal among bacteriologists as regards scientific work, more especially in respect to typhoid fever. Moreover, the various sanitary missions with which he has been intrusted during past years single him out as one admirably fitted for the post to which he has just been appointed.

The Feeding of Infants.

At the Congress of Hygiene, which was held in Brussels in September, 1903, M. Budin laid down the principles which should regulate the feeding of infants. At the meeting of the Academy of Medicine held on Jan. 5th the same physician read a paper on the subject. Convinced of the dangers of over feeding, even when the infant is breast-fed, M. Budin laid stress upon the necessity for regulation of the infant's meals. The infant at the breast should be regularly weighed and the quantity of milk taken at each meal should be verified by weighing the child before and after sucking, if, that is to say, its increase in weight appears to vary. Gastro enteritis, which kills so many infants, is a [illegible] the quantity. [illegible] m the breast [illegible] ling is better [illegible] s to increase [illegible] to digestive troubles which impair nutrition and cause rapid wasting. Absolute bottle-feeding should not be thought of unless the mother has not even a trace of milk and of all the children who come to M. Budin's consultation rooms scarcely 5 per cent. are purely bottle fed. M. Budin has the greatest objection to this mode of feeding during the early months of life, for he considers it both difficult and dangerous, and although there are undoubtedly fine children reared in this way yet it cannot be said that they have run no risks. When the infant is some months old and weighs five or six kilogrammes a diet of exclusively sterilised cow's milk may be employed in quantities of 100 grammes per kilogramme of body weight, presuming that the milk is pure and contains 30 grammes of fat per litre. These are mean figures which may have to be modified by the medical man in accordance with the exigencies of any particular case. If the child be fed in this way and the results are not good the milk should be analysed and it will for almost a certainty be found that it has been either deprived of its cream or else watered. During the second year of life milk should still furnish the basis of the diet, but to it may be added some farinaceous foodstuff. Bouillon is useless and only slightly nutritive, one litre of bouillon not having the same nutritive value as 100 grammes of milk. Eggs are not advisable, especially for the poor who can rarely get them of good quality. On an exclusively milk diet or on one with a little farinaceous food added to it infants can be seen who at the age of two years weigh from 11 to 13 kilogrammes, with a daily ration of from 1000 to 1050 grammes of food. M. Budin's results, which he obtained together with his fellow worker M. Planchon, are particularly good. Out of 712 infants who were brought to him and whom he was able to follow up daily the mortality was only 4·6 per 1000, whereas the mean for all Paris is 178 per 1000. No infant died from digestive troubles, of which the mean official mortality is 65 per 1000. Both infectious and pulmonary complaints occurred in far lower proportion than in Paris as a whole, which argues a greatly increased resistance on the part of the infants under observation.

Abscess of the Maxillary Sinus.

At the same meeting of the Academy of Medicine M. Jarre read a paper dealing with the importance of the etiology of the disease in the treatment of abscess of the maxillary sinus. In the great majority of cases an abscess of this character has its origin in some dental trouble and not primarily in an inflammation of the mucous membrane lining the sinus. If the cause be removed a rapid cure generally follows and this removal may be brought about by one of the following measures: extraction or conservative treatment of a decayed tooth, extraction of a root left after attempted extraction of the whole tooth, extraction of an unerupted tooth, or extraction of the affected tooth with removal of any fragments of necrosed bone. The secondary affections of the maxillary sinus heal up after removal of the offending cause and it is but rarely necessary to interfere with the antrum of Highmore itself.

The Institute of Colonial Medicine.

The second session of the Institute of Colonial Medicine has just come to an end and M. Doumer has distributed the diplomas in colonial medicine to the students. The number of students on the roll during the past session was 45. Of these 25 passed the examination for a diploma but owing to lack of vacancies only 19 received it. Of these 25 students 12 were foreigners and 13 were Frenchmen. Nearly all were doctors of medicine and already occupied high posts in the navy, in the colonial army, or in the sanitary service of the colonies of different countries. M. Doumer, Governor-General of Indo-China, has granted to the institute a subvention of 30,000 francs per annum. At present the practical work and the lectures are carried on in the laboratories of the Faculty of Medicine but this is merely a provisional arrangement. Professor Blanchard has arranged with the Association des Dames Françaises that the institute should be able eventually to use as a hospital both for treatment and for clinical instruction the new hospital which the association is building at Auteuil. Professor Blanchard and Dr. Wurtz, the latter of whom is in charge of the instruction in medicine and colonial hygiene, have started for England at the invitation of the London School of Tropical Medicine, accompanied by 15 students. They bear with them as an offering to your distinguished parasitologist, Sir Patrick Manson, the honorary diploma of the Society of Tropical Medicine which was inaugurated on Dec. 1st, 1903, by the students and professors of the Institute of Colonial Medicine.

"Chloridated" Diet and Hyperchlorhydria.

At the meeting of the Society of Biology held on Jan. 8th M. Vincent gave an account of a case in which he had noted the influence of a "chloridated" or "non-chloridated" diet on the gastric chemical process. The case was that of a patient suffering from hyperchlorhydria and it was found that "chloridated" diet produced a series of disagreeable results, such as pains in the alimentary canal and even vomiting. When, however, the patient was put upon a diet freed from all chlorides so far as possible a marked improvement set in and the hyperchlorhydria diminished.

Jan. 19th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Serum Treatment of Scarlet Fever.

Professor Bókay of Budapest has given in the *Deutsche Medicinische Wochenschrift* an account of the treatment of scarlet fever by Moser's polyvalent antistreptococcic serum. He explains that out of 46 cases of scarlet fever 12 showing severe symptoms were selected for serum treatment, the amount injected being from 100 to 200 cubic centimetres. The result was that the general state of the patients, especially the cerebral symptoms, obviously improved in from 24 to 48 hours. The exanthem also was modified, for it either became paler or, if not yet fully developed at the time of the injection, it did not show itself profusely. The most striking effect of the serum, however, was the decrease of temperature, the fall ranging from 3·4° to 0·9° C. within 24 hours and in three cases the temperature even came down to normal. The pulse became less frequent and its quality improved. With respect to the other symptoms Professor Bókay agreed with Professor Escherich and Dr. Moser that when necrosis of the palate occurred it was less extensive and less deep than usual; well marked nephritis and arthritis developed twice in a mild form; adenitis developed in four patients, of whom two died from septic pyæmia, these being the only fatal cases. Otitis developed, too, in several cases but only in a mild form. As to undesirable complications Professor Bókay mentions that there was one instance of suppuration at the place of the injection which healed after an incision had been made. Transitory albuminuria was once observed; albuminuria existing already at the time of the injection did not increase and sometimes even disappeared. An eruption attributable to the injection developed in seven cases—i.e., in 58 per cent. of the patients, whereas this symptom was observed by Dr. Moser in 75 per cent. It usually appeared between the sixth and sixteenth day but was once as late as the fourth week; it took either the form of urticaria or of erythema multiforme or was like the eruption of rubeola and scarlet fever. Professor Bókay concludes from his observations that Moser's serum has a specific antitoxic action against scarlet fever and that the results of the treatment are satisfactory but that further experience is indispensable previously to its introduction into general practice.

The late Professor Jolly.

Dr. Jolly, professor of psychiatry at the University of Berlin and chief of the university clinic for mental and nervous diseases, died suddenly on Jan. 3rd. He was born at Heidelberg in 1844. He came of a prominent Baden family, several members of which distinguished themselves in public and academical life. His father was a professor of physics at the Universities of Heidelberg and Munich; his uncle served the Government of Baden in a political capacity and had duties to perform in connexion with the revival of the German Empire in 1870 Professor Jolly received his professional education in Munich and Göttingen, where he obtained his medical qualifications in 1868, and then became an assistant in the medical clinic at Munich under Professor Pfeufer. After a time he left this place for an appointment at the lunatic asylum of Werneck under the celebrated Professor Gudden who, as is generally known, lost his life in tragic circumstances, together with the late King Ludwig of Bavaria. Afterwards he became an assistant to Professor Rinecker at Würzburg, where he was recognised *privat-docent* in 1872. When Professor Krafft-Ebing left Strasburg for Vienna in 1873 Dr. Jolly was called to take the chair of psychiatry at the former university which he quitted only 1890 to succeed Professor Westpfahl as ordinary professor mental diseases at the University of Berlin. His published work was on the subject of the Cerebral and the Circulation in the Brain. At a later he contributed the chapters on Hysteria and H to Ziemssen's "Handbook of Clinical Medicine" a series of essays on different psychiatric questions the *Archives of Psychiatry*, *Charité Annals*, and o periodicals. Recently he devoted much attention to the reconstruction of the Royal university clinic for mental and nervous diseases, an institution which seems destined to become a model of its kind. A sudden death from rupture of an aneurysm of the aorta has, however, prevented him from seeing the completion of this work. Professor Jolly was president of the German Psychiatric Association and of the Berlin Psychiatric Society; he was very highly esteemed by the profession and by the public, so that the news of his death has been received with general regret.

Death of Dr. Dettweiler.

The death of Dr. Dettweiler, late chief physician to the Falkenstein sanatorium for consumptives, is announced. The deceased, who was one of the earliest and most successful advocates of the open-air treatment of tuberculosis, was born in 1837 at Wintersheim in Hesse. On receiving his medical qualification in 1863 he entered the army medical service and took part in the wars of 1864, 1866, and 1871, after which he proceeded to Görbersdorf to join the late Dr. Brehmer, the founder of the first sanatorium for consumptives in Germany. They worked together for six years, at the expiry of which Dr. Dettweiler left Dr. Brehmer and founded a new sanatorium at Falkenstein, near Kronberg in the Taunus Mountains. Whilst Dr. Brehmer laid great stress on the elevated position of his sanatorium and on the value of systematic walking exercise in strengthening the heart muscle the principal features of Dr. Dettweiler's method at Falkenstein were the so-called "Liegekur" and dietetic treatment. One of his greatest merits was the foundation of a sanatorium for the indigent classes as early as 1891, at a time when none but the wealthy enjoyed the benefits of this special treatment. Both in national and international congresses and in numerous publications he pleaded for the hygienic treatment of tuberculosis and it was principally due to his influence that the movement for providing sanatoriums for the poorer classes has been so successfully developed in Germany. Dr. Dettweiler retired from practice a year ago on account of the state of his health. The Falkenstein sanatorium, so well known both in Germany and abroad, and specially in England, has since that time been, and will continue to be, conducted according to the principles followed by its founder.

Statistics of the University of Berlin.

The number of students at the University of Berlin is higher just now than at any time since its foundation in 1810. According to the daily press there are 7503 matriculated students [illegible] ·ological, 2565 to the [illegible] 1193 to the medical [illegible] medical students fortunately shows a slight decrease. It is interesting to observe the increasing number of foreigners, of whom no less than 1184 are registered, being nearly one-sixth of the students. As regards numbers the Russians head the list, of which nationality there are 440; then of the other European nationalities there come 136 Austrians, 93 Swiss, 55 Hungarians, 46 British, 36 Roumanians, 23 Servians, 22 Italians, 21 French, 20 Greek, 18 Bulgarians, 15 Scandinavians, 14 Luxemburgers, 11 Dutchmen, 10 Spaniards, 8 Turks, 7 Danes, 3 Belgians, and 2 Portuguese. Of students from other countries 160 come from America, 40 from Asia, 3 from Africa, and 1 from Australia The regulations of the University do not allow females to matriculate but 532 women are nevertheless admitted to the lectures. The Army Medical Academy, which is to some extent in connexion with the medical faculty of the University, has 318 students.

Medicine and the Law.

A man who was suffering from gonorrhœa and syphilis was recently brought before a law court in Munich on a charge of infecting a young woman by cohabitation. He had been informed by his medical attendant as to the nature of his ailment and warned against cohabitation and on this ground he was found guilty of having caused bodily injury by neg[illegible] sentence [illegible] parison [illegible] hoped th[illegible] kind, th[illegible] brought [illegible] a law court in Germany. Another judgment, also of medical interest, had reference to a man who was prosecuted for having caused the death of his daughter by neglect. The child suffered from suppuration of the knee-joint and the surgeon in attendance declaring an operation to be urgent advised the father to take her to a hospital. The child, however, implored him to leave her at home, which he accordingly did. On her death, which was due to pyæmia, the father was found guilty by the local court but on appeal he was acquitted by the Supreme Court which decided that he had acted excusably in complying with the wishes of the patient.

Jan. 18th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Sanitary Improvements in Cairo.

THE first serious attempt at improving the sanitary arrangements of Cairo has just been made by the Savoy Hotel. This is the adoption of the septic tank system for the disposal of sewage in place of the unpleasant cesspit which has for so long been considered the acme of perfection in sanitation in Egypt. The whole plant, which is most solidly built in Hennèbique cement, stands in the grounds behind the hotel at the base of the V formed by the diverging wings of the building. The general arrangement of the system adopted is as follows. The pipes which carry the waste from the kitchen, laundry, and baths join with those from the water-closets and urinals and with the waste pipes from other parts of the building in one large drain at the entrance of the collecting pits. All the waste water and sewage are in this way passed directly into two deep cement pits and thence into a set of smaller pits or grease traps in which all the grease and oily matters generally are collected and removed. The residue passes on again into a large underground cement tank which is capable of holding a 24 hours' supply and is very dark and tightly closed. Here, as the manager of the hotel quaintly but correctly puts it, the microbes do their work. After a sufficient time has elapsed for all the bacterial processes to take place the fluid contents of the tank are led off by way of pipes, opening below the level of the surface of the sewage, straight on to a large filter bed (seven metres thick and more) consisting of alternating layers of stone, sand, and coke, and filters into the old, now disused, cesspits, from which it may be pumped and used for the garden, or it is allowed to percolate through the soil beneath the filter-bed into the subsoil water, which is particularly plentiful in Cairo in such close proximity to the Nile. A varying amount of semi solid matter remains in the septic tank and this must be removed at long intervals. There is really no danger to be feared from sewage treated in this way provided that no escape of gas is permitted and that the effluent easily reaches the subsoil water and is thus carried away. Sufficient time must be allowed for thorough disintegration to occur and the sewage must therefore be slowly let into the tank from the collecting pits, the rate of inflow varying with the rapidity of the bacterial action. The whole installation is arranged in a comparatively small space, but the first cost is considerable, the present plant requiring nearly £700 to complete. It says a great deal for the management of the Savoy Hotel that so soon after putting in an elaborate system of cesspits they should have gone to such an expense in adopting a better method of sewage disposal as soon as experience demonstrated the unsatisfactory working of the former system. That this is not the only direction in which the Savoy Hotel caters for the comfort and well-being of its visitors is evident from the fact that a new system of electric heating has just been completed throughout the hotel. It is gratifying to know also that the Standard Life Insurance Company, which is about to build a large block of buildings quite close to the Savoy Hotel, conditional on the success of the present scheme, intends to adopt the same system in preference to the more antiquated and unsavoury methods hitherto in vogue in Cairo.

The New Italian Hospital.

The various foreign nations in Egypt have during the last few years begun to realise their obligations towards their rapidly increasing colonies and have built hospitals in which their people may be treated by medical men of their own nationality and be nursed by their fellow countrywomen. It is to be admitted that the British colony, numerically a small one it is true, has been about the last of all to awaken in this respect and the new Anglo American hospital, which is shortly to be opened, is the result. There are now in Cairo, in addition to others on a less pretentious scale, a French hospital, a German, an Austrian, an Anglo-American, and now an Italian has just been opened. By the kindness of Dr. Tonin, the physician to the hospital, and of Dr. Gaglio, who is in surgical charge as well as being resident medical officer, I had an opportunity of inspecting the building on the day before that on which the patients were admitted. The King of Italy has contributed largely to the building fund and the Italian community in Cairo—numbering in all some 16 000 persons—has very generously assisted. At the present time accommodation is provided for 50 patients but there is ample space for further buildings as funds become available The hospital is a distinctly impressive building situated at Abbassieh, well away from the main road and on the fringe of the desert between it and the Mokattam hills. It is built in pavilions all connected together by covered passages. The front block, which is parallel to the road, contains the administrative offices, special wards for paying patients and serious operations, and the operating theatre. In the latter all the most practical aseptic arrangements are made and the whole set of rooms, consisting of a small anæsthetic room, the theatre proper, and the sterilising room beyond, is coated throughout with a splendid enamelled surface which can be washed down periodically by means of a small hydrant that can be attached to a hot-water plug in a hidden recess in the wall. One was particularly struck with the perfectly plain flat doors which when closed were quite flush with the walls and the absence of all ledges liable to collect dust, and also with a particularly good washing basin with pedal action one of Shanks' latest In the upper floor of this block are the resident's quarters with a lovely view of Cairo and the desert. The air is beautifully clear and dry and a better site for a hospital could hardly be imagined. The general wards are in two separate blocks, connected with the front by covered ways and consisting for the present of only one floor. In each block are several small wards for special cases and a large ward of 14 beds beyond, which is sure to be always well filled, as the hospital is intended primarily for poor Italians who are entirely unable to pay anything for their hospital treatment. Separate buildings are provided for the kitchen, the laundry, and the mortuary, which latter is finished in enamel composition to facilitate cleaning and washing. With the very large Italian colony in Cairo it may be confidently anticipated that this hospital will prove a very great boon to its suffering poor and it is reasonable to expect that further additions will be required in the near future. It was found that after the French hospital had been opened a year it had to be enlarged to twice its original extent to accommodate the many applicants for admission. This augurs well for both of the new hospitals, the Italian and the Anglo-American of which I hope to be able to chronicle the opening very soon.

Cattle Plague.

Hardly anything could be more expressive of the danger to be anticipated in connexion with the recrudescence of cattle plague in Egypt than the last bulletin of the Director-General of the Sanitary Department. It states that during the week ending Dec. 20th, 1903, there were 2234 deaths from "bovine typhus" reported throughout the country. Of these 1983 occurred in Upper Egypt and there was an increase of 752 over the number for the preceding week The total number of deaths which have occurred since the commencement of the epidemic amounts to 13.462 The Director-General complains in emphatic terms that owners of cattle not only do not give assistance to the sanitary administration in the efforts which the latter is making to wipe out the disease, but that they even do their utmost to conceal the disease and to deceive the agents of the administration in their inspection of villages. He makes no objection to sick animals being slaughtered and their flesh sold for food but he regrets that the hides of these animals are also sold, as they spread the disease when taken from place to place by the purchasers.

Jan. 10th.

Obituary.

FRANKLEN GEORGE EVANS, M.R.C.S. Eng., L S A.

Mr. Franklen George Evans, who died on Jan. 17th after an attack of apoplexy, had given up general practice for more than 20 years but he was so closely identified with many large undertakings in the Cardiff district that his death will be regarded as a distinct loss to the community. Mr. Evans, who was born in Cardiff in 1827, was the son of Edward Evans, at one time the only surgeon in Cardiff for in 1821 the population of the borough was less than 3500. Mr. Franklen Evans received his medical education at St Bartholomew's Hospital and in 1849 qualified as M.R.C.S. Eng. and L S A. After being house surgeon to the Cardiff Infirmary, or as it was then styled, the Glamorgan and Monmouthshire Infirmary and Dispensary, he was appointed surgeon to the Pentyrch Colliery and Ironworks and to the Melingriffith Tinplate Works, holding this position until 1878, when the colliery and ironworks were closed. Mr. Evans was at the time of his death chairman of the Rhymney Railway Company and a director of the Pontypridd Waterworks Company as well as of many other large industrial concerns. He was very much attached to the study of astronomy and was a Fellow of the Royal Astronomical Society. A few years ago he presented to the Cardiff corporation a large and valuable astronomical telescope Mr. Evans was twice married, his second wife being a grand-niece of Mrs. Wyndham Lewis who subsequently became the Countess of Beaconsfield.

Deaths of Eminent Foreign Medical Men.—The deaths of the following eminent foreign medical men are announced:—Professor Karl Gebhard, a well-known teacher of gynæcology in Berlin. His death followed an operation.—Dr. Ewald Wolff of Breslau, at the age of 88 years. In early professional life he was distinguished as an operator in cases of strabismus. Later he was appointed to high administrative rank and wrote on many subjects connected with State medicine.—Dr Georg Freiherr von Liebig a son of the celebrated chemist, at the age of 76 years. He possessed an English qualification and was for a time in the East India Company's service. He also acted as professor of natural history in Calcutta. After the Mutiny he returned to Germany and was for many years *privat-docent* of climatic medicine in the University of Munich.—Dr. Emile Leidié, professor of chemistry and toxicology in the Ecole Supérieure de Pharmacie in Paris.—Dr. Karl Emmert, professor of State medicine and senior member of the medical faculty of Berne, at the age of 91 years.—Dr. Ryher, formerly lecturer on clinical medicine in the University of Dorpat, at the age of 72 years.—Dr. Theodor von Schröder, editor of the *St. Petersburger Medicinische Wochenschrift*.—Dr. S. Verekundoff, *privat docent* of the history of medicine in the Military Medical Academy of St. Petersburg.

Medical News.

University of Cambridge.—Graduates in Arts of the University of King's College, Windsor, Nova Scotia, are to be admitted to the privileges of affiliated students of the University of Cambridge. At the Congregation on Jan. 14th the following degrees were conferred:—

M.B.—T. Guthrie, King's.
B C.—N. C. Carver, King's; H. A. Clarke, Trinity; H. D. Hoffmann, Trinity; J. E Pellow, St. John's; C M. Murray, Pembroke; G. E. Davidson, J. H Donnell, and E Gardner, Caius; P. Hardy, Trinity Hall; and E. Higson, Magdalene.

Foreign University Intelligence.—*Bonn*: Dr. Fischer has been recognised as *privat docent* of Pathological Anatomy.—*Copenhagen*: Dr. V. Rubow has been recognised as *privat docent* of Medicine and Dr. V. Jensen as *privat docent* of Bacteriology.—*Erlangen*: Dr. Robert Heinz, *privat docent* of Pharmacology, has been promoted to an Extraordinary Professorship. He has also been appointed to the charge of the Pharmacological Institute.—

Freiburg: Dr. K. Schleip has be
docent of Medicine.—*Halle:* Dr.
been offered the chair of Mental
Heiorenner is obliged to resign on account of the state of his health.—*Kiel:* Dr. Hans Nösske has been recognised as *privat docent* of Surgery.—*Munich:* Dr. Seitz has been appointed chief physician to the Gynæcological Clinic.—*Naples:* Dr. Giuseppe A. Petrone has been recognised as *privat-docent* of Pediatry.—*Pavia:* Dr. Luigi Devoto, Extraordinary Professor of Internal Pathology, has been promoted to be Ordinary Professor.—*Salamanca:* Dr. Arturo Nuñez y Garcia has be
burg: Dr. F.
Professor of
been recognised as *privat docent* of Midwifery and Gynæcology.—*Vienna:* The selections for the Dermatological chair of the late Professor Neumann are: (1) Professor Rille of Leipsic, (2) Professor Anton Mracek, and (3) Professor Maximilian von Zeissel. Dr. Leopold Harmer has been recognised as *privat-docent* of Laryngology.—*Würzburg:* Dr Dieudonné, *privat-docent* of Hygiene, has been appointed Professor. Dr. Josef Arneth has been recognised as *privat-docent* of Internal Medicine.

DONATIONS AND BEQUESTS.—Sir W. T. Lewis, the president of the Hamadryad Seamen's Hospital, Cardiff, has given £1000 for the endowment of a bed in memory of the late Lady Lewis.—The Clothworkers' Company has voted £1000 payable in five yearly instalments of £200, to King's College Hospital Removal Fund.—The employés of Messrs. J. S Fry and Sons, Limited, have contributed £617, and the workpeople of the Imperial Tobacco Company £500, to the Bristol medical charities.

LITERARY INTELLIGENCE.—A volume, announced by Messrs. J. and A. Churchill, is just ready for publication and comprises the second series of lectures on Diseases of the Nervous System, by Sir William R Gowers, F.R S The lectures, which are ten in number, deal with the following subjects: Subjective Visual Sensations; Subjective Sensations of Sound; Abiotrophy: Diseases from Defects of Life; Myopathy and a Distal Form; Metallic Poisoning; Syphilitic Diseases of the Nervous System; Inevitable Failure; Syringal Hæmorrhage into the Spinal Cord; Myasthenia and Ophthalmoplegia; and the Use of Drugs. They have been carefully revised by the author for publication in this form.

LECTURES IN MEDICAL JURISPRUDENCE.—On Jan. 14th Dr. F. J. Waldo, coroner for the City of London, delivered the first of a series of six lectures on medical jurisprudence at the Old Hall, Lincoln's Inn, under the auspices of the Council of Legal Education. The subject of the first lecture was the Medical Man as Witness. At the
disabilities attached to the registra-
ere dealt with. A medical man might
a common witness to facts or as an
leduction and experience. The why
and wherefore of conflicting medical evidence were next
and reasons were given to show
could contradict each other in
onesty. The illustration of this
railway spine," cases of accidental injury in which the widest difference of opinion often prevailed. The ending of litigation was often attended by a speedy recovery on the part of the patient Quite as great or greater differences existed among lawyers, as proved by the reversal of decisions, time after time, in successive courts, until the House of Lords
question of profe important
able length and consider-
nt appeal
of a provincial head constable to the local medical men for information likely to identify the offender in a case of infanticide. A medical witness is bound to answer fully in the witness box if required to do so by the court, except where by so doing he would incriminate himself. In ordinary life, however, any violation of professional secrets might involve an action at law. The unwritten law of the medical profession appeared to be that there was no obligation to reveal anything that came under their notice short of murder or the very gravest criminal charges. This professional secrecy dated from the earliest times, as shown by the oath of Hippocrates, the substance of which was still adopted in the declaration of the Scotch medical graduate The lecturer concluded with an analysis of the various kinds of medical evidence and some of the points concerned in the medical examination of prisoners.

GUY'S HOSPITAL.—On Jan. 19th a concert in aid of the funds of Guy's Hospital was given in the public Hall, Eltham, by the Toy Orchestral Society of that place. Two toy symphonies were given, one being by Gurlitt and the other by Desmond Ryan. Songs, violin solos, and musical sketches were contributed by Mr. N H. Cox, Mrs. Reynolds, Mrs. Worthington, and Mr. Tom Clare. The concert was a great success and the sum of £28 will be handed over to the charity as a result.

WEATHER AT SEVENOAKS IN 1903.—We have received an interesting printed report of the weather at

years, nearly 34 inches, is now made up, the rainfall of Sevenoaks greatly exceeding that of London. The rain at night time was in the proportion of two to one more than during the day.

THE COLONIAL NURSING ASSOCIATION.—The Goldsmiths' Company has forwarded £50 and the Mercers' Company 10 guineas, in addition to sums from other contributors, to the Colonial Nursing Association. The association has since its foundation in 1896 supplied nearly 200 nurses for work in the Crown colonies and in other British communities abroad. At the present time 105 nurses are at work in various parts of the empire and many applications are being received for nurses in all directions from new districts in India, the Transvaal, and East Africa. Subscriptions may be sent to the honorary secretary, Colonial Nursing Association, Imperial Institute, London, S.W., from whom all particulars may be obtained.

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—A meeting of the council of this society was held at 20, Brunswick-square, London, W.C., on Jan. 12th, Mr. Joseph Smith being in the chair. The following resolutions were unanimously agreed to and ordered to be sent to the College:—

1. That this council considers the reply of the College Council to the
Fellows and Members
repeated refusal to
n meetings to which
ouncil emphatically
esent the Members,
its efforts to obtain
the body corporate.

It is stated to be the intention of the society to hold meetings of Members in various provincial centres during the year in order to protest against their continued exclusion from all collegiate rights.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent-garden, W.C.
Aids to Surgery. By Joseph Cunning, M.B, B.S, F.R C S.Eng., Senior Resident Medical Officer, Royal Free Hospital. Price, cloth, 4*s.* 6*d*, paper, 4*s.*

BLACK, ADAM AND CHARLES, Soho-square, London, W.
The Englishwoman's Year book and Directory 1904. Sixth year of new issue Edited by Emily Janes, Organising Secretary to the National Union of Women Workers of Great Britain and Ireland. Price 2*s.* 6*d.* net.

BROWNE, T B., LIMITED, 163, Queen Victoria street, E.C.
The Advertiser's A B C. The Standard Advertisement Press Directory. 1904. Price 10*s* 6*d.*

CHURCHILL, J AND A., 7, Great Marlborough-street, W.
The Value of Ureteric Meatoscopy in Obscure Diseases of the Kidney a Study in Clinical and Operative Surgery. By E. Hurry Fenwick F R C.S. Surgeon to, and a Lecturer on Clinical Surgery at, the London Hospital. Price 6*s* 6*d.*
A Manual of General or ts and
Practitioners By Wa B.C.,
M D. F R.C P., Direc torica
of the Middlesex Hospi

F. A. Davis Company, 1914-16, Cherry-street, Philadelphia.

The Practical Care of the Baby. By Theron Wendell Kilmer, M.D., Associate Professor of Diseases of Children in the New York School of Clinical Medicine. Price $1.00 net.

Fischer, Gustav, Jena.

Die Chirurgischen Untersuchungsarten. Einführende Vorlesungen uber allgemeine chirurgische Diagnostik. Von Dr. Otto Manz, Privat-dozent der Chirurgie. I. Teil. Price M.6.

Masson et Cie., 120, Boulevard Saint-Germain, Paris.

Les Lésions du Rein et des Capsules Surrénales. Par L. Hoche, Chef des travaux d'Anatomie pathologique à la Faculté de Médecine de Nancy. Avec la Collaboration de P. Briquel, Préparateur d'Anatomie pathologique. Préface de M. le Professeur Cornil. Price Fr 12.

Poor Law Publications Company, 18 and 19, Whitefriars-street, E.C.

The Law Relating to Pauper Lunatics. By Sydney Davey, B.A., LL.B., of the Middle Temple, Barrister-at-Law. Price 5s. 6d.

Richards, Grant, 48, Leicester-square, W.C.

How to Keep Well: An Explanation of Modern Methods of Preventing Disease. By Floyd M. Crandall, M.D. Price 6s.

Rowe Publishing Company, 1312-34, East Washington-street, Chicago.

A Non-Surgical Treatise on Diseases of the Prostate Gland and Adnexa. By George Whitfield Overall, A.B., M.D., formerly Professor of Physiology in the Memphis Hospital Medical College. Price, cloth, $2 00; morocco, $3.00

Schoetz, Richard, Luisenstrasse, 36, Berlin.

Hygiene und Seuchenbekampfung. Gesammelte Abhandlungen. Von Dr. Martin Kirchner, Geheimem Obermedizinalrat und vortragendem Rat im K Preussichen Ministerium der Geistlichen, Unterrichtsund Medizinal-Angelegenheiten. Price, paper, M.18; bound, M.20.

Steinheil, G., 2, Rue Casimir-Delavigne, Paris.

Manuel Pratique d'Hygiène a l'Usage des Médecins et des Etudiants. Par le Dr. Guiraud, Professeur d'Hygiène à la Faculté de Médecine de l'Université de Toulouse. Troisième édition, revue et augmentée. Price Fr.12.

"The Chemist and Druggist," 42, Cannon-street, E.C.

Elementary Dispensing Practice. For Students of Pharmacy and Medicine By Joseph Ince, F.C.S., F.L S, F.R.M.S., Pharmaceutical Chemist, Associate of King's College, London. Price 3s. 6d. net.

Walter Scott Publishing Company, *Limited*, *London* nd Newcastle on-Tyne.

Proposed Sterilization of Certain Mental and Physical Degenerates. An Appeal to Asylum Managers and Others. By Robert Reid Rentoul, Doctor of Medicine; late Member of the General Council of Medical Education for the United Kingdom. Price 1s. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to The Lancet *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

Bennett, Ernest, M.B. Glasg., has been appointed House Surgeon to the Derbyshire Royal Infirmary.

Boyton, A. J. H., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Watlington District of the county of Oxford.

Butterworth, Rupert, M.B. Cantab., has been appointed House Physician to the Derbyshire Royal Infirmary.

Coleridge, A., M R C.S., L.R.C.P. Lond., has been appointed Senior Resident Medical Officer at the Mount Vernon Consumption Hospital, Hampstead.

Condell, A. P., M.D., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

Donald, C. W., M.B., F.R.C.S. Ed., has been appointed Assistant Honorary Physician to the Cumberland Infirmary, Carlisle.

Evans, J. Howell, M.B., M.Ch. Oxon, F.R.C.S. Eng., has been appointed Registrar to the Chelsea Hospital for Women.

Goodwin, Robert, M.D., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

Grant, Lachlan, M.D. Edin., has been appointed Medical Officer to the Ballachulish Workmen's Medical Club.

Hardy, Percy, M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the Derbyshire Royal Infirmary.

Hight, John, M.D. Glasg., D.P.H., has been appointed Medical Officer of Health of Burgh of Prestwick, Ayrshire.

Jones, H. Buckland, M.B., M.Ch. Edin., has been appointed Assistant Surgeon to the Metropolitan, Ear, Nose, and Throat Hospital.

Kirkby, Walter, L.R.C P., L.R.C.S. Ed., L.F.P.S. Glasg., has been appointed Medical Examiner of Recruits for the Glamorgan Imperial Yeomanry in the Maesteg District.

Mummery, J. P. Lockhart, B.C. Cantab., F.R.C.S. Eng., has been appointed Assistant Surgeon to St. Mark's Hospital for Fistula and other Diseases of the Rectum, City-road, London, E.C.

Phillips, James, F.R.C.S. Ed., has been appointed Honorary Surgeon to the Bradford (Yorks) Children's Hospital.

Rose, Thomas, M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer to the Chelsea Hospital for Women.

Wilson, Basil M., M B. Vict., has been appointed House Surgeon to the Derbyshire Royal Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Bournemouth National Sanatorium for Consumption and Diseases of the Chest.—Resident Medical Officer from Feb 13th to June 30th. Salary £50, with board, residence, and washing.

Bradford Workhouse and Hospital.—Resident Assistant Medical Officer, unmarried. Salary £125, with rations, apartments, and washing.

Central London Ophthalmic Hospital, Gray's Inn road, W.C.—Assistant Surgeon.

City of London Hospital for Diseases of the Chest, Victoria-park, E.—Two House Physicians for six months. Salary at rate of £30 per annum, with board, washing, and residence.

Darenth Asylum (Training School and Industrial Colony) near Dartford, Kent.—Medical Superintendent Salary £600 per annum, rising to £800, with house, coals, light, washing, &c.

Dumfries and Galloway Royal Infirmary.—Assistant House Surgeon. Salary £25 per annum, with board and washing

Exeter, Royal Devon and Exeter Hospital.—Male Assistant House Surgeon, unmarried. Salary £60 per annum, with board, lodging and washing.

Gordon Hospital for Fistula, etc., Vauxhall Bridge-road, S.W.—House Surgeon. Honorarium £15 15s. for six months, or £40 for twelve months, with board and residence.

Hampstead General Hospital.—Resident Medical Officer for six months, eligible for re election. Salary at rate of £120 per annum, with rooms, coals, and gas.

Hospital for Sick Children, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £20, with board and residence.

Liverpool, David Lewis Northern [illegible] Surgeon. Salary £70 per annum, [illegible]

London Hospital, Whitechapel roa[illegible], [illegible] Clinical Assistants (Aural).

Manchester, Monsall Fever Hospital.—Fourth Medical Assistant. Salary £100 per annum, with board, lodging, and washing

Middlesbrough, North Riding Infirmary.—Assistant House Surgeon, unmarried. Salary £75 per annum, with bed, board, and washing.

National Hospital for the Paralysed and Epileptic (Albany Memorial), Queen-square, Bloomsbury.—Junior House Physician. Salary £50 a year, with board and residence. Also Registrar. Honorarium of 50 guineas.

Papa Westray, Orkney.—Lady Medical Officer and Public Vaccinator Salary £80, with fees, house, and garden.

Poplar Union.—Medical Officer. Salary £130 per annum.

Royal Buckinghamshire Hospital, Aylesbury.—Resident Surgeon, unmarried. Salary £100, rising to £120, with board and apartments.

Royal Ear Hospital, Frith-street, Soho, W.—Honorary Assistant Anæsthetist.

St. Pancras and Northern Dispensary, 126, Euston-road.—Honorary Surgeon.

Winchester, Royal Hants County Hospital.—Honorary Surgeon-in-Ordinary.

York County Hospital.—House Physician. Salary £100 per annum, with board, residence, and washing.

York Dispensary.—Resident Medical Officer, unmarried. Salary £120 a year, with board, lodging, and attendance.

The Secretary of State, Home Office, S.W., gives notice of a vacancy for a Medical Referee under the Workmen's Compensation Act, 1897, for Birmingham, in County Court Circuit No. 21, and for Bromsgrove, Redditch, and Solihull, in County Court Circuit No. 22.

The Chief Inspector of Factories, Home Office, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory Act at Yeovil, in the county of Somerset, and at Herne Bay, in the county of Kent.

Births, Marriages, and Deaths.

BIRTHS

Hinds.—On Jan 13th, at Tennyson-road, Worthing, the wife of Fras Hinds, M.D., of a son.

May.—On Jan. 20th, at Ivanhoe, 50, Archers-road, Southampton, the wife of Henry J. May, M.B., B.C. Cantab., of a daughter.

Newton.—On the 13th instant, at *Brookhill, Sheffield*, the wife of Duncan Gray Newton, M.B., C.M., of a daughter.

Williams.—On the 19th inst., at Bryn Derw, Penarth, the wife of W. Williams, M.A., M.D., County Medical Officer, of a son

MARRIAGE.

Swales—Pentin.—On Jan. 20th, at St. James' Church, West Derby, Liverpool, by the Rev. G. Fred Wills, vicar of Up-Holland, near Wigan, Edward Swales, M R.C.S., L.R.C.P. Lond., to Florence Booth, third daughter of the late F. J. Pentin, of Liverpool.

DEATHS.

Barry.—On Jan. 14th, at the residence of his uncle, Alfred Palmer, Esq., J.P., Wokefield-park, Mortimer, Gerald Exall, the beloved and only son of Mrs. Barry, 3, Nevern-square, S.W., and of the late Dr. F. W. Barry, of H.M. Local Government Board.

Longden.—On the 18th inst., at Kempe-road, Kensal-rise, Duncan Campbell Longden, F.R.C.S. Ed., aged 37.

Turner.—On Jan. 2nd, 1904, at his residence, 197, Walm-lane, Cricklewood, N.W., Alfred James Turner, M.D., aged 58 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE PREVALENCE OF QUACKERY.

WE have received a little handbill entitled "The Health Guide," which bears on its front page the names of Messrs. "Constantine and Jackson," with their address and the statement that they are the sole agents in England for Dr. Henry Paterson. The bill goes on to state that Dr. Paterson, who, we suspect, is an American product, has made "marvellous medical discoveries" which "radically cure most chronic diseases from whatever cause arising." We learn also that at a depôt near the Law Courts, London, "those afflicted with skin, blood, and nervous disorders may rely upon obtaining sound scientific and conscientious treatment." We are also asked to note that "all consultations concerning various complaints of men and women are absolutely free," that "a specialist attends daily," that "Dr. Paterson's Soluble Sandal Oil and Copaiba Capsules are prepared with the greatest care," that "all kinds of surgical instruments and rubber goods are kept in stock," and that "analyses are undertaken." The handbill is addressed "To the Editors of THE LANCET, Quack Department."

We wish that it were possible for us to have a bureau attached to this office where the rapacity and mendacity of quacks could be systematically exposed. We feel, however, that we can only touch upon the fringe of this enormous subject. Dupes demand to be swindled all the world over, while it is but human nature that unfortunate sick people, failing from the very nature of their diseases to find relief in scientific medicine, should have recourse to the ministrations of the charlatan. The demand thus created for quacks is stimulated by the venality of newspaper proprietors who accept disgusting and disgraceful advertisements from persons of well-established roguery, careless of the harm that may thus be done to the health and the pockets of their *clientèle*. Only a few years ago column after column of newspapers, the proprietors of which would certainly have been annoyed if they were told that their journalistic enterprise was not respectable, teemed with the advertisements of abortion-mongers. The abuse became so grave that we directed close attention to it and in a short series of articles were able to show that the "female remedies" and "medicines to cure all obstructions" offered to women at high prices presented the following features: (1) they were intended to be used by women for the purposes of criminal abortion; (2) they were in some cases actively mischievous in the direction intended; (3) they were in many more cases inert, the woman merely having been swindled out of her money instead of having been abetted in her intended crime; and (4) their price was completely extortionate, sums ranging from 5*s.* to £5 being demanded for medicine that would have been dear at five farthings. As a result of our articles respectable papers refused advertisements of the sort that we indicated as criminal or fraudulent and the infamous trade came practically to an end. Against definite groups of quack remedies of this sort definite action can be taken, but with regard to quackery in general we can only make the general remark that its increasing prevalence forms a poor comment upon the intelligence of the people and a queer sidelight upon commercial morality.

ICHTHYOL IN BONE DISEASES.

To the Editors of THE LANCET.

SIRS,—Could any of your readers give me any information dealing with the effect of ichthyol on chronic bone diseases or refer me to any literature on the subject?—I am, Sirs, yours faithfully,

Jan. 18th, 1904. JUNIOR PRACTITIONER.

"SO HERE I AM FOR FIGHT."

THIS heading aptly describes the proceedings of both sections at a recent meeting of the North Dublin board of guardians, where questions of some medical importance were ventilated. On Jan. 7th a very unseemly discussion took place at a weekly meeting of the North Dublin guardians with reference to the action of the visiting surgeon to the North Dublin Union Hospital. It appears that a refractory patient at the union who, according to Mr. Caleb J. Powell, the surgeon in question, "committed the most filthy nuisance in the ward where there were other patients, some of them dying," and who "on more than one occasion assaulted the attendants," was ordered to be removed to the lunatic infirmary. Whereupon a section of the guardians appear, by the account in the *Dublin Express*, to have charged Mr. Powell with having exceeded his duty, it being said that no complaints had been made against the patient in question by the attendants. This, however, was shown to be false and one of the guardians said that attempts had been made to injure Mr. Powell on several occasions during the past six or seven years. Expressions such as "a cad," "hunt him down," and "make him sit up" were said to have been used by female guardians with reference to Mr. Powell. These allegations were denied by the women implicated and the approval by the board of guardians of Mr. Powell's action was entered on the minutes. The whole tone of the proceedings showed that a proportion of the guardians present looked upon the meeting as an opportunity for the exercise of pugnacious proclivities. A speaker, who had a green patch over one of his eyes (we learn this from our contemporary's picturesque account) read the following stanza in support of Mr. Powell:—

> "I hope you will excuse me all,
> As I have got an ugly fall;
> The just man falls seven times a day—
> Then how could I escape, I pray?
> I fell 'gainst will a rough curbstone,
> I slipped my foot, and down was thrown;
> A little blood no doubt was sped—
> But still the green's above the red;
> So here I am for fight, 'tis true,
> The Faugha Balla! whack, hurroo!'

Immediately afterwards some one called a brother guardian "a bigoted Papist," and a female guardian objected to the statement that she was "no lady." Ireland is not the only country where a board of guardians has been found to misbehave, but we think that such a meeting as the one to which we have been alluding could hardly have taken place anywhere except in Ireland. The regrettable religious question gets mixed up with public affairs and thus any official, however capable or honourable, runs a chance of being vilified by opponents whose attitude is dictated by their creed and not by their judgment.

AN INLAND HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—Can any of your readers kindly inform me, a medical man, which is the best health resort in England during the spring in order to escape the early winds. An inland place would be preferred and it should not be relaxing Is there any better place than Clifton?

I am, Sirs, yours faithfully,

INQUIRER

HIDDEN TREASURE.

SOME little time ago we suggested that the perpetual digging up of the roads and footpaths might be due to the fact that the diggers, or the authorities on whose directions they acted, imagined that hidden treasure existed. Our hypothesis, which was at the time received without the gravity due to it, has to some extent become realised. For parts of London are now infested with excavators who are avowedly searching for money. A Sunday newspaper, as many of us have reason to know, recently issued advertisements to the effect that tokens to the value of £50 were buried in certain districts of the metropolis, which districts became thereupon infested with roughs intent on digging through or into anything in their quest of loot At Marylebone police-court on Jan. 18th a labourer was sentenced to a fine of 40*s.* or one month's imprisonment for damaging the roots of a tree in Maida Vale, the property of the borough council. At Clerkenwell police court on the same day four other persons were charged with damaging property while hunting for the treasure. Evidence was given at both courts of widespread damage but at Clerkenwell the magistrate took the defendants' bail for their good behaviour. Mr. Debenham, who prosecuted at this court, said very rightly that the persons really responsible were the proprietors of the newspaper, but Mr. Bros pointed out that he did not see his way to issue any process against them. The law, as we know on very good authority, "is a ass, a idiot,' but surely some way could be found of bringing to justice persons who are no more or less than inciters of others to commit illegal acts. Action can be taken against the dupes of the paper for trespass and damage but the real offenders go unpunished. The proprietors of the paper in question may think themselves fortunate that they do not live in the Western States of America for there they would probably receive the sentence of lynch law from outraged private citizens. It is difficult to bear with equanimity the mining operations of our municipalities; there is no need to be patient at all in the matter of these treasure-seekers.

OLD LAMBETH.

THE January issue of the *St. Thomas's Hospital Gazette* contains an interesting article on the excavations being made for the erection of a nurses' home at St. Thomas's Hospital Two coloured prints accompany the article. One is a reproduction from a mezzotint dated 1795 which shows the palace, Bishops' Walk, and some small houses on the river bank. The other shows the north end of Bishops' Walk with the small houses on the west side of the road and the wall of the palace garden opposite Bishops' Walk was a beautiful promenade lying between the Archbishop's garden and the river. It was swept away to make room for the Albert Embankment. In early times Lambeth was part of the great marsh on the south side of the river and was submerged by the stream at each high tide. On the opposite side of the river was the Isle of Thorney, now Westminster, through which all the trade of the north passed on its way to Dover or to the south coast. The merchants crossed the river by ford or by ferry—the name of Horseferry-road commemorates th [illegible] was a Royal house where it is said [illegible] after a drinking bout or, as Sir [illegible] rom a blow received while engaged in the dangerous sport of bone-throwing. This Royal house was at one time the home of the Black Prince and his son Richard II. In the sixteenth century and onwards Lambeth fields were the favourite resort of Londoners and the place was celebrated for the variety of sweet-smelling flowers and medicinal herbs which grew there. In the reign of William III., where now is Lambeth-walk, there was a celebrated place of amusement called Lambeth Wells, and its waters were held in high repute; they were advertised at "a penny a quart, the same price paid by St. Thomas's Hospital." Searle's boat house, which is to be seen in the second of the two prints, was quite familiar to boating men of 40 years ago, and here the boys of Westminster School kept their boats. About the time when it was demolished one of the boys being given the quotation, "*Non sors sed fors sua cuique loco est,*" upon which to write an epigram produced the following:—

> "Searle's boat-yard's taken from us
> And embankments *sore* provoke us,
> We've no *locus* for our boat house,
> Where we used to keep our *Fours.*
> If the poet truly tell us
> There's a *fors* for every *locus*,
> Then doubly hard on us 'tis
> We've no *locus* for our *Fours*,
> While to Searle's yard succeeding
> By a slightly different reading
> The patients of St. Thomas
> Find a *locus* for their *sores.*"

The writer concludes his article by saying that, "Probably before very long Lambeth, as we know it at present, will be only a memory; we shall find it then as hard to reconstruct the Lambeth of to-day as now we find it to form any real picture of Lambeth before St. Thomas's migrated."

MUGNA'S SMOKE-WASHING APPARATUS.

MR. L. BARNABÈ of 12, North-crescent, Tottenham-court-road, London, W., has drawn our attention to the application of this smoke-washing apparatus to two chimneys at a restaurant in the Strand where it may be seen daily in action. The apparatus was described in THE LANCET of March 21st, 1903. It consists of a fan which sucks the smoke from the chimney into a chamber fitted with revolving paddles which bring the smoke into intimate contact with water. The effect is excellent. Instead of black smoke pouring out of the chimney, as was previously the case, there is now only a slight discharge of white and practically odourless vapour. Both the fan and the paddle are revolved by means of a small dynamo, the whole arrangement being on the roof. The effectiveness of this appliance is very obvious from the filthy condition of the wash-water. The apparatus serves also to accelerate the draught up the chimney, while it effectually prevents the down draught. This is a very important consummation where kitchens on the top floor are concerned. We have often pointed out that it is the chimneys of hotel and restaurant kitchens which contribute largely to the foul smoky state of the atmosphere of London. It is stated that this apparatus is economical in use and the soot and tarry matter which accumulate in the tank may be used as fuel or for other useful purposes.

DANIEL LAMBERT.

To the Editors of THE LANCET.

SIRS,—In regard to your references to Daniel Lambert and Edward Bright in your annotation "The Fat Boy of Peckham" in THE LANCET of Jan. 9th, 1904, perhaps the following note which I have discovered in the *Monthly Magazine* of July, 1804, may be of interest to your readers:—

> "One of the greatest prodigies at present in this kingdom, if not an extravagation of nature, is Mr. Samuel (*sic*) Lambert of Leicester, and master of the county jail there, who weighs not less than 45 stone 12 pounds, which is about half a hundred-weight more than what the famous Bright of Malden weighed, who, as appears from authentic testimonies, could button seven men within his waistcoat. Mr. Lambert had often objected to being weighed, but getting into a postchaise by a preconcerted plan of some of his friends he was taken over a weighing machine where it was ascertained with great facility to his no small mortification."

All the Year Round of August 25th, 1860, stated that when Daniel Lambert died he weighed 53 stones. In conclusion, I believe that a certain Mr. Joe Grimes of Cincinnati, U.S.A., claims to be the largest man in the world. He is 6 feet 4 inches in height and weighs 54 stones.

I am, Sirs, yours faithfully,

Jan. 18th, 1904. S. B.

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Ismail.—We are only in a position to advise our correspondent very generally. In the working of the suggested new and joint practice there will be two things influencing the shares of profits: (1) the prestige of the medical men and (2) the amount of work done by each. It is clear that the older firm will enter upon the new practice with excellent introductions, so that they may fairly attribute some of the earlier patients as coming to them, their names being well known. On the other hand, it is possible that the gentleman with the smaller practice will have more time to devote to the new work. Supposing that the junior partner in the old firm and the prac tioner with the smaller practice did the new work equally betwe them then the profits might be divided into three shares, one-thi going to each of the two men doing the work and one-third for certain period of time to the older firm in return for the introducti afforded by its name. It would be well to instruct a solicitor to p this or some such agreement on paper when the details could settled by friendly argument between the parties concerned. T idea of amalgamation is a good one.

A. F.—Gardiner's "Household Medicine and Sickroom Guide," ed by W. H. C. Staveley, F.R.C.S., thirteenth edition; London, Smit Elder, and Co., 1898, price 8s. 6d. "Practical Nursing," by I Stewart and H. Cuff, M.D. Lond., will also be found useful. T work is in two volumes and is published by William Blackwood a Sons, London and Edinburgh. Our correspondent might also apply to the St. John Ambulance Association, St. John's Gate, Clerken-well, London, E.C., for their "Manual of First Aid."

Ex-civil Surgeon (late Boer war, now in private practice) asks:—On what occasions can I with good taste wear the South African medal? Can it be worn when in evening dress at public dinners, functions, &c.; should the medal or only the ribbon be worn?

Urgent should consult his solicitor as to the proceedings to be taken under what is termed a Deed Poll.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 21st, 1904.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 a.m.
Jan. 15	29 63	W.	0 09	63	46	38	36	38	Fine
" 16	29·79	N.W.	...	58	40	35	35	37	Fine
" 17	30 25	W.	...	54	42	33	Fzn.	33	Cloudy
" 18	30·21	S.W.	0·05	52	51	33	41	42	Raining
" 19	30 33	N.	0 02	51	51	42	48	50	Overcast
" 20	30·53	E.	0·04	42	38	35	34	36	Cloudy
" 21	30 42	S.W.	0 05	48	44	33	35	35	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.).

WEDNESDAY (27th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M).

THURSDAY (28th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), [illegible] North-West London (2 P.M.), Gt. Northern [illegible] Metropolitan (2.30 P.M.), Londo [illegible] (2 P.M.), Samaritan (9.30 A.M. and [illegible] (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (30th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

ONDAY (25th).—MEDICAL SOCIETY OF LONDON (11, Chandos street, Cavendish square W.).—8.30 P.M. Discussion on Pelvic Lesions in Relation to Abdominal Diagnosis (opened by Dr. M. Handfield-Jones).

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M. Council. 8 P.M. Casual Communications:—Mr. S. Sewill: (1) Congenital Deficiency of Permanent Teeth; (2) A Supernumerary Tooth in the Molar Region. Paper:—Mr. F. J. Bennett: Some Conditions of the Pulp in Relation to Dentine and Interglobular Dentine (with lantern illustrations).

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ilban:

EDNESDAY (27th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8.30 P.M. Pathological Evening.

E NITED
Cases
G W.
0 P.M.
sbank-
.—Mr.
Eye Symptoms of Rheumatoid
e to the Field of Vision.—Major
ulsating Exophthalmos due to
ic Nerve accompanying Internal
Notes of a Case of Tuberculosis

RIDAY
Otolo
W.)—
Wylie
Andres-

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ndon Hospital,
ctical Surgery.
Chenies street,
Skin.) 5.15 P.M.

UESDAY (26th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Bidwell: Plaster-of-Paris Splints
) (22, Chenies-street,
(Medical.) 5.15 P.M.

EPILEPTIC (Queen-
Family and Here
itary Disease

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle street, W.).—5 P.M. Prof. L. C. Miall: The Development of Animals. (Lecture III.)

EDNESDAY (27th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.).—5 P.M. Dr. Beddard: Practical Medicine.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.)—4 P.M. Mr. P. Paton: Clinique. (Surgical.) 5.15 P.M. Dr. W. Carr: *Infant Feeding.*

LONDON TEMPERANCE HOSPITAL (Hampstead-road, N.W.).—4 P.M. Lecture:—Diseases of the Stomach, Gastric Ulcer. (Post-Graduate Course.)

COLLEGE (West London Hos-
P.M. Mr. L. Williams: Dental

POLYCLINIC (22, Chenies-street,
Clinique (Surgical.) 5.15 P.M.
ancer of the Tongue and Naso

Carson: Abdominal Surgery.
Dr. Murray: Demonstration
Course.)
UMPTION AND DISEASES OF THE
P.M. Dr. G. Johnston: Fibrosis
t-Graduate Course.)
OF THE SKIN (Leicester square,
krell: Syphilis. (Chesterfield

ITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—
Significance of Some Common Sym-

(Old Hall, Lincoln's Inn)—8 P.M.
isprudence. Lecture III.—Death in

COLLEGE (West London Hospital
P.M. Mr. Bidwell: Plaster-of-Paris

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr H. Tilley: Clinique (Throat.)

NATIONAL HOSPITAL FOR THE PARALYSED AND (Queen-
square
ROYAL
9 P.M. W.).—

EDITORIAL NOTICES.

IT is most important that communications relating to the ditorial business of THE LANCET should be addressed clusively "TO THE EDITORS," and not in any case to any ntleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

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A Clinical Lecture
ON
HYSTERICAL SKIN SYMPTOMS AND ERUPTIONS.

Delivered at the West-End Hospital for Diseases of the Nervous System,

BY THOMAS D. SAVILL, M.D. LOND.,
PHYSICIAN TO THE WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM AND TO THE ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN.

GENTLEMEN,—The skin symptoms of hysteria, other than sensory changes, with which I do not propose to deal on the present occasion, have not attracted the attention they deserve. They are, however, of great importance, first, because we can very often see them for ourselves in a manner which cannot be done in many of the other symptoms of hysteria; and, secondly, these same lesions which we see upon the surface of the body may, as I pointed out on a previous occasion, also take place in the central nervous system and other parts in the interior of the body and produce many and various hysterical symptoms according to the part involved. I have met with seven different kinds of [illegible] algia; (6) urticarial, erythematous, and hæmorrhagic exudations; and (7) localised ischæmia. The first three are quite peculiar to the emotional vaso-motor neurosis, as I regard it, which we call hysteria. The other four are far more often met with in hysterical than in non-hysterical subjects. Some observers consider the fourth and the seventh as special to hysteria but I prefer to regard all the last four skin conditions as an expression of a vaso-motor neurosis *plus* a toxæmia in varying proportions. All of these, I believe, are specially related to hysteria. Other skin diseases are without doubt influenced or modified by it, and Dr. Paul Briquet,[1] an analytical observer of great power, made the following important remark: "On sait quelle puissante influence les passions, et surtout le chagrin, les préoccupations et la contention de l'esprit, ont sur la production des maladies de la peau, et principalement sur celle des acnés, de la mentagre, et des ecthymas." This indirect influence very probably depends on the marked tendency in these subjects to vascular changes in the skin, but we shall only be concerned to day with those I have named.

1. *Attacks of pallor* of the surface generally accompany or alternate with some of the hysterical cerebral attacks which we have discussed on previous occasions.[2] Sometimes attacks of pallor occur alone, without cerebral manifestations of any kind, sometimes they alternate with flushings. Their explanation has already been fully dealt with. They are parts of what I have ventured to call "splanchnic storms" which are so common in hysteria and which, starting with an emotional disturbance, result in sudden dilatation of the splanchnic vascular area and consequent anæmia of the brain or the skin or, more frequently, of both.

2 *Attacks of flushing*, morbid blushing, and "flush storms" affecting part or the whole of the body are met with in all hysterical patients They are, in my experience, the most important of the stigmata of the hysterical diathesis and are one of the evidences of the vaso-motor instability, central and peripheral, which must be regarded as the essential somatic part of that diathesis. They are met with in all women at the menopause—at which time, by the way, the patient is often described as "hysterical"—but they occur throughout life from time to time in subjects of the hysterical diathesis. Dr Harry Campbell[3] has dealt so ably and so thoroughly with these morbid blushings and their pathology that I can add nothing to his admirable work. Speaking of their pathology he says: "For me, then, a so-called flush belongs to a very comprehensive class of nerve storm, closely allied to, and, in fact, sometimes indistinguishable from, an epileptic or an hysterical aura and starting like them in a nervous level situated high up, possibly even in the highest level, the parts ('nervous arrangements') involved being more particularly those which represent the organic viscera—above all, the thoracic viscera. The representatives of these parts in the highest centres constitute the chief physical basis of the emotions; and in women—in whom the emotional element is most fully developed—they are peculiarly unstable and liable to explode." Thus Dr. Campbell and I are practically in accord. An emotional state, he says, is the determining cause and this acts on the visceral nervous apparatus, sometimes on that in the thorax and sometimes on that in the abdomen. This is the same mechanism as that which I have just described to you. There is a sudden oscillatory dilatation or constriction of a visceral vascular area (splanchnic or thoracic), initiated in most cases by an emotional condition in the brain, and this is attended by a corresponding constriction or dilatation of the surface vessels. This same kind of storm can in some patients be determined by pressure on the peripheral terminations of the ilio-inguinal nerve (so-called "ovarian" region) which is in very close relation with the solar plexus.

3 Small, extremely fugitive *patches of congestion*, more or less abrupt in outline and localised to parts usually pale, such as the front or side of the neck, may be seen by any close observer in a great many patients who are subjects of the hysterical diathesis. Here, for instance is a note—one of many—made in my private case-book concerning a woman, aged 36 years, who consulted me for attacks of tremor of the hands, palpitation, associated with what she described as "bursting attacks," and other symptoms, all of entirely hysterical origin. While I was percussing her chest two or three patches of congestion varying in size from that of a threepenny-piece to that of half-a-crown appeared suddenly on both sides of the back and front of the chest, [illegible] not fading into the surrounding [illegible] ace, but terminating abruptly [illegible] like that of a map of Europe, [illegible] and passing away in a few minutes as suddenly as they came. She stated that she had been liable to these patches whenever she was nervous for as long as she could remember and her relatives had noticed them. I have often pointed out such fugitive patches in our hysterical patients occurring just below the ears, which seems to be their favourite situation, but they may occur anywhere. Their chief importance lies in the fact that they are definite and visible evidences of the abnormal reflex excitability of the vaso-motor centres. Just as in the flush storms we were considering the visceral vaso motor centres of the thorax or the abdomen are affected, so do these localised congestions depend on an abnormal irritability of the peripheral vaso-motor centres.

4. *Dermatographia* is a congestive streak which appears after a few seconds in the track of a scratch on the skin with some blunt article such as the top of a penholder. If an urticarial streak also appears it amounts to urticaria factitia. The latter we shall discuss shortly under exudative conditions. Dermatographia is regarded by some as of hysterical origin and a stigma of the hysterical diathesis, but others regard it as toxic. The latter is certainly not always true as in cases where the *sight* of an article of food which had previously produced urticaria determines an attack. The truth probably lies between these extremes. My own experience is that these streaks can be produced in [illegible] though much [illegible] ner. My belief [illegible] toxæmia, very often of gastro-intestinal origin, or some other cause of irritability of the nervous system. The "tache cérébrale" which Trousseau described as indicative of cerebral meningitis as distinct from enteric fever is dermatographia. Very generally some kind of toxæmia can be revealed, but a neuro-vascular irritability is the essential factor in the causation, either acquired as in tache cérébrale, or congenital and innate in the hysterical diathesis.

5. *Acroparæsthesia* (sensations of tingling, &c., in the extremities occurring for the most part in attacks) and *erythromelalgia* (redness and swelling of the extremities which, though paroxysmal, is more chronic in its duration)

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[1] Traité Clinique et Thérapeutique de l'Hystérie, par le Docteur Paul Briquet, p. 206. Paris, Baillière et Fils. 1859.

[2] THE LANCET, June 1st, 1901, p. 1513.

[3] "Flushing and Morbid Blushing," by Dr. Harry Campbell, p. 123. London. H K. Lewis. 1890.

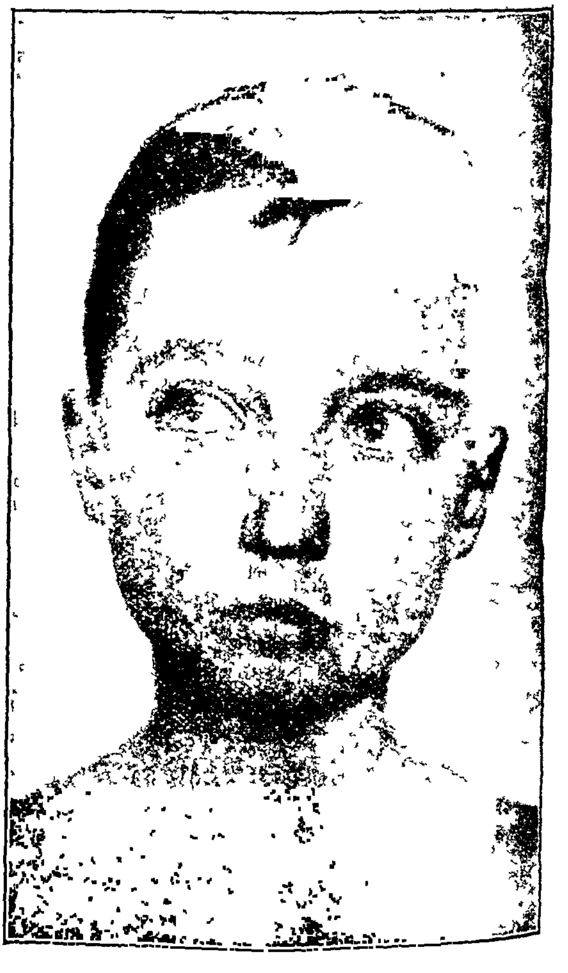
have been already fully described.[4] They are most frequently met with in hysterical subjects and in the female sex, though they may be associated with other diseases. Out of a series of 45 cases (seven males and 38 females) which I have recently observed and of which a previous history was obtainable, 39 cases (five males and 34 females) presented either evidences or a history of hysterical manifestations. Similarly attacks of deadly white pallor of the fingers are more common in hysterical subjects.

6. *Exudative skin conditions* are almost, if not quite, as closely related to hysteria as are the last two skin conditions, strange as it may appear at first sight. Nevertheless, such disorders as urticaria, erythema, and localised circumscribed œdema are met with far more frequently in hysterical than in non-hysterical subjects, and though it is not sufficiently known may be determined purely by emotion, as in cases which I shall show you directly. Evidences of the hysterical diathesis can be revealed in between 85 and 90 per cent. of my hospital cases of urticaria factitia, erythema (all kinds), and circumscribed œdema taken collectively. There are three degrees of dermal exudation—serous effusion, consisting of lymph only, as in urticaria; sero sanguineous effusion, in which some of the blood corpuscles also escape from the blood-vessels, as evidenced by a certain degree of staining, as in chilblains or erythema nodosum; and purpuric effusion of all the blood elements. In regard to the etiology of these exudations I quite agree that they are very often in the main due to some alteration in the blood of an auto- or hetero-toxic kind. But I hold—and shall show you cases in proof—that they may also be dependent, at any rate in many instances, entirely or in large part on nervous (neuro-vascular and emotional) influences. And that is why these diseases are in general terms met with more commonly in the female, in hysterical and nervous subjects, in direct association with other neuro-vascular symptoms, and exhibit the same fugitive and other characters which other hysterical phenomena do. I do not wish to claim all exudative skin conditions as solely of nerve origin—far from it—but there are at least three ways in which they may be produced: (1) by chemical changes in the blood; (2) by nervous influences (neuro-vascular and emotional); and (3) by a combination of the two preceding causes. It is to this last class that I believe the majority of exudative skin conditions belong. When we come to deal with the etiology of hysteria I shall on a future occasion indicate what a large and important part gastro-intestinal conditions, especially such as result in autotoxis, play in the causation of all hysterical manifestations. This is important because if I am correct it brings the etiology of the two morbid conditions—exudative skin conditions and hysteria—more or less into line.

(*a*) Urticaria is the best known type of the *serous exudations*. It is in the great majority of instances traceable to an autotoxis of gastro-intestinal origin, but it may be also produced by emotion—with and even without any gastric disturbance. Dr. A. E. Wright at a discussion at the Medical Society of London[5] remarked that there was certainly a nervous influence in the exudative processes in the skin, and mentioned the case of a young surgeon who could produce an attack of urticaria at will by fixing his mind on the subject. A case of recurrent urticaria is referred to by Dr. Stelwagon,[6] where the condition was traceable to eye-strain. Dr. Stelwagon, writing of the etiology of urticaria, says: "The action of nervous influence, direct or indirect, is shown in a case [of urticaria] reported by Oliver, where the eruption was due to eye-strain, persisting or recurring when a change in lenses was necessary; his patient had been the subject of frequently recurring attacks for years, but after suitable fitting of glasses for diminishing vision full relief ensued; if not worn constantly the eruption would return, to disappear upon resuming their use; later the return was again persistent and was found due to vision changes requiring new lenses; on one occasion a mistake was made by the optician and the eruption again appeared." Professor M'Call Anderson[7] writes, under the causes of urticaria: "In some persons mental emotion is sufficient to call it forth, such as an excess of joy or grief. ...... Some remarkable cases of this kind have been reported by Alibert. He once saw a young woman who could not enter a drawing-room without having the whole skin covered with nettle rash, so much so that she could not dance or enjoy any other recreation; and an ecclesiastic who could not celebrate divin service because the eruption immediately came out an caused him to scratch himself with the greatest violence Dr. H. Radcliffe Crocker[8] states: "Everything in urtica points to its being primarily a vaso-motor disturbance, direct reflex, central or peripheral." He also refers to the emotion element in urticaria, particularly in the chronic or recurre variety; and he mentions the case of "a woman in who the advent of strangers produced urticaria and this sensitiv ness increased until a knock or ring at the front door woul determine an immediate outbreak."

Many other instances could be mentioned, but here is case, which I am fortunately able to show you, of urticari produced entirely by emotion. The little boy, aged eight an a half years, who was sent to me by Dr. M'Emin, had be taken away from school eight or nine weeks ago becau of the round raised wheals which appeared on the face an upper part of the trunk whenever he worried over his lesso or was teased by the other boys. In the evening an effo to learn his lessons will produce an attack and then th irritation prevents his making any further attempt. An emotion or source of nervousness will cause the eruption appear. His skin, which five minutes ago was quite clea is now, you observe, without having been touched in any wa covered with numerous small wheals owing to his nervousne in coming before us (Fig. 1). The spots consist of circula definitely raised urticarial patches of about the size of millet seeds or split peas surrounded as usual by a zone of congestion. The face and upper half of the trunk are alone affected

FIG. 1.



A case of urticaria in a boy, eight and a half years of age, due to emotion.

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[4] THE LANCET, June 1st, 1901, p. 1513.

[5] THE LANCET, Oct. 31st, 1903, p. 1235.

[6] Stelwagon: Diseases of the Skin, p. 168. London and Philadelphia: Saunders. 1902.

[7] A Treatise on Diseases of the Skin, p. 268. London: Griffin and Co. Second edition.

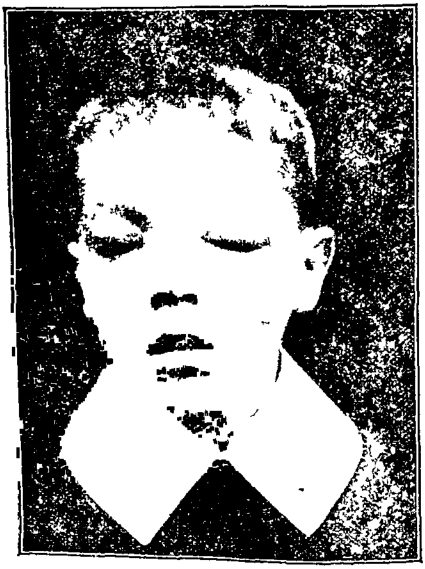
[8] Diseases of the Skin, pp. 128 and 129. London: H. K. Lewis. 1903. Third edition.

These attacks last about from one to three hours if the emotional cause is removed His mother says that he is an extremely nervous, excitable, and sensitive child His gastro intestinal functions are perfectly normal

Here is a case of urticaria factitia (urticaria produced by pressure) but nevertheless one which can also be determined by emotion The patient, now aged 16 years, was first brought to me four years ago at the age of 12 years, complaining that for the last month whenever she "washed her face in the morning it swelled and wheals came out", the same appearances came on the body She was noted as being a very nervous child, easily startled, and crying very easily A descending constant current to the spine was ordered and compound infusion of gentian and she recovered in a couple of months, remaining well till six or eight months ago She now comes complaining that "her face and other parts come up very red and swelled when she feels nervous or is worried about her work, or when the parts are touched"

The disease known as localised circumscribed œdema (giant urticaria, Quincke's disease, angioneurotic œdema) another serous exudation, though connected by some of the older authors with gastro intestinal disturbance is now admitted by others to be an angioneurosis That the attacks may be determined by emotional or angioneurotic conditions is evidenced by the following case which I am able to show you The patient is a single woman, aged 35 years and she has for the past nine months been troubled with localised œdematous swellings on the face every three or four weeks—namely, just before or just after the catamenial period, when she is also subject to nervous derangements which are not unusual at such times The swellings vary in size from that of a Barcelona nut to that of a walnut, are pinkish white in colour, and give rise to much irritation They are specially prone to affect the eye lids (as shown in Fig 2, which illustrates the next case) sometimes symmetrically, but they also occur on other parts of the face and occasionally in other parts of the body At times they vanish in an hour or two but may remain for a day She has neither indigestion, constipation nor any other abdominal abnormality and is at the present time in perfect health except for this troublesome condition She had "anæmia" as a girl and was subject to nervous attacks from time to time Calcium chloride has only given her partial relief and now I propose to try ichthyol and bromide of ammonium In this case there is not the slightest evidence pointing to any change in the blood or blood vessels The main cause must surely act through the neuro vascular apparatus, and the flushing which is so common in these subjects, especially at the catamenial period, takes the form in her of localised œdema The sudden onset and sudden disappearance of the lesions, without leaving a trace behind them, also support this view

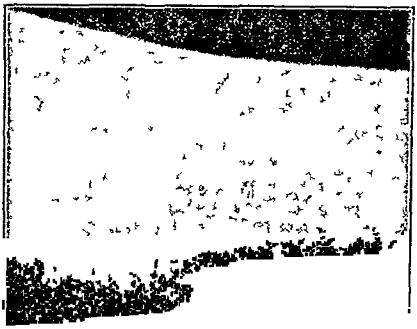
FIG 2.



Angioneurotic œdema in a boy aged six years

Here is another example of the same disease occurring in a child, six years old who was sent to me by Dr Evan Evans This picture (Fig 2) shows an œdematous swelling of his upper eyelids which came on quite suddenly and spontaneously and disappeared equally as suddenly next day He has had similar swellings across the face (when his features become unrecognisable), the scrotum the hand, and elsewhere, coming on in the same mysterious way This little boy has also had attacks of purpura from time to time so that there probably exists in him a defect in the blood as well as the neuro vascular defect Professor William Osler[9] has found that cases of angioneurotic œdema are sometimes benefited by the prolonged administration of small doses of trinitrin—another fact pointing to their neuro-vascular origin

FIG 3



Erythema gyratum in a woman 22 years of age

Hysterical œdema was described by Sydenham[10] in 1681 as one of the symptoms which might be associated with
hysterical attacks
the ankle, which
involving one ankl
greatest in the n
Benjamin Brodie[1] refers to the diffuse pale swelling of a limb which may follow prolonged hysterical pain in the part Professor J M Charcot[12] in addition to the œdème blanc des hystériques gives a very lucid description of a congestive form of hysterical œdema (œdème bleu) in which the swollen parts are cyanosed, cold, and exhibit scattered spots of red In one of his cases the condition could be reproduced by means of hypnotism It is probable that all the conditions described by these princes among clinical observers belonged to the same angioneurotic œdema which is met with largely if not exclusively among hysterical and nervous persons

(b) *Sero sanguineous exudation* is but a transitional form of the preceding as may be seen for example, in the two

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[9] Osler Principles and Practice of Medicine p 1141 London Kimpton 1901

[10] Processus Integri chapter 3 paragraph 2 and Epistolary Dissertation to Dr Cole paragraph 69 Works of Thos Sydenham M D New Sydenham Society London 18.0

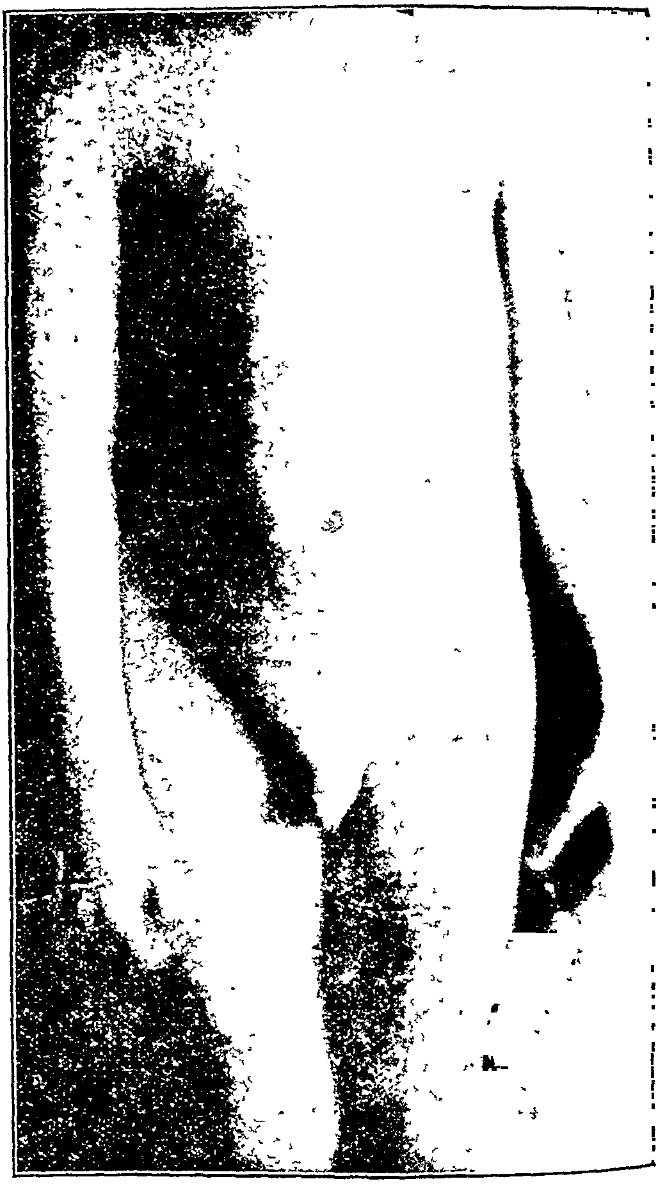
[11] Lectures Illustrative of Certain Local Nervous Affections by Sir Benj … 1837 pp 110 and 120 By

[12] … Paris 1892

Profe

varieties of hysterical œdema described by Professor Charcot. Its best illustrations are to be met with among the erythemata. Erythema nodosum, for instance, one of the best known forms of erythema, is almost confined to young hysterical women with menstrual irregularities. I have frequently pointed out how often a history of this disease and erythema pernio (chilblains) is revealed in hysterical subjects and *vice versâ*, both the erythema and the hysteria being, in my view, indications of the morbid instability of the neuro-vascular centres. Erythema multiforme (including erythema annulare, erythema iris, erythema marginatum, erythema gyratum, and even erythema vesiculosum and bullosum, in which the exudation is sufficiently pronounced to produce vesicles and bullæ) is very generally regarded as either angio-neurotic or neuro-toxic in origin.[13] Its occurrence chiefly in young women, the strange way in which it comes and goes, and the associated phenomena, all point to the correctness of this view. In a good number of cases of erythema multiforme the exudation is only serous and it leaves no staining, as in this case of a young woman, aged 22 years (Fig. 3), who suffers from constantly recurring, somewhat fugitive, attacks of erythema gyratum on both forearms, especially when she is "upset" or nervous. You will note the symmetry and the associated hysterical phenomena. But in most cases the exudation is sero-sanguineous and the staining is more or less distinct. For instance, in this woman, aged 45 years, who is at the climacteric and who suffers from a widespread eruption of what is sometimes called purpuric erythema, the staining is very marked. I should also like to show you a boy suffering from a relatively rare disease, urticaria pigmentosa (of Sangster), in whom the associated hysterical features, both personal and hereditary, are sufficiently obvious. It is a condition closely allied to the foregoing, which appears in successive crops of urticaria, leaving behind them marked and persistent staining of a purpuric type. The patient is five years of age, and you will see that his body, limbs, and neck are covered with brownish-purple stains of different shades corresponding to their age. His mother tells us that "spots like nettle-rash" have been coming out in successive crops attended by a good deal of irritation ever since he was a few months old, and that they leave these stains, which very gradually fade away (Fig. 4). This little boy has once or twice passed blood in his stools and has had bleedings from the nose, so there probably exists in his case the dual cause of which I have spoken (hæmic and neuro-vascular). He is a very nervous and emotional child, his tears (his mother says) "are very near the surface" and he has attacks of extreme irritability of temper in which no one can do anything with him. At these times the spots are worse and even the face becomes affected. His mother has had "hysterical attacks" all her life, which have been especially marked during her pregnancies. There is said to be a "tendency to rashes" in the two other children but I have not seen them.

FIG. 4.



Case of urticaria pigmentosa in a boy five years of age.

(c) *Hæmorrhagic* or *purpuric effusions* have a less constant and less certain causal relationship with hysteria than any of the preceding, but it exists. I have notes of several cases where spontaneous hæmorrhage occurred from the ears, nose, or other mucous surfaces, as part of a hysterical seizure while the patient was under observation. Subcutaneous hæmorrhages have been described by several authors.[14] A recent case of "black chromidrosis with hysterical paralysis" described by Dr. Putnam of New York[15] probably comes under the category of hæmorrhagic effusion associated with secretory perversion. In this patient ink-black spots appeared on the skin whenever she was tired, and this condition and the associated hysterical paralysis which had lasted 14 months only cleared up when she went into the country. The taches and spontaneous hæmorrhages in the religious votaries of the Middle Ages were probably instances of hysterical hæmorrhage.

7. *Localised ischæmic conditions*—i.e., where there is a constriction of the arterioles of a given area, of one limb for example—are recognised by many observers among the manifestations of hysteria. For instance, Dr. J. A. Ormerod, in Professor Clifford Allbutt's System of Medicine, says: "Hysterical patients may present curious symptoms in the domain of the arterioles and capillaries. Limbs that are paralysed or anæsthetic may exhibit also 'ischæmia'; that is to say, when cut or pricked they bleed less freely than normally, or not at all. This is commonly ascribed to a vaso-motor spasm."[16] I think it is not sufficiently recognised that this ischæmic condition, using the term to mean spasm of the arterioles, may also occur quite independently of true paresis or true anæsthesia. The patient may complain of a "heaviness" or immobility of a part, yet there may be no actual loss of power. She may describe her abnormal sensations as a

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[13] Vide Dr. Stelwagon: Diseases of the Skin, p 148 London and Philadelphia. Saunders and Co. Mr. Malcolm Morris (Diseases of the Skin, p. 102) Dr. Schwimmer (Die Neuropathischen Dermatonosen, p. 101), and Dr Lewin (Berliner Klinische Wochenschrift, No 23, 1876) consider it to be purely an angioneurosis. Dr. Radcliffe Crocker (loc. cit.) appears to regard it as inflammatory.

[14] Gilles de la Tourette, Nouvelle Iconographie de la Salpêtrière. Paris, 1890.

[15] New York Medical Journal, July 4th, 1903, p. 26.

[16] A System of Medicine by Many Writers, edited by Thomas Clifford Allbutt, vol. viii., p. 112.

"numbness" or "prickling," yet she can feel when the part is touched and the more intelligent patients will tell you so spontaneously. The skin, when we are able to see it, may be normal in colour or it may be of waxy whiteness, especially when the end of a limb, as frequently happens, is mainly affected. The symptoms often start at the end of an extremity and spread upwards; sometimes all one side of the body is affected. The symptoms are always more or less transient and may be extremely fugitive. Sometimes they are associated with what I have described as hysterical cerebral attacks (Group A) or other hysterical manifestations, sometimes they occur alone, and sometimes, as in the following case, they are severe enough to constitute an attack in themselves. The clinical features of these symptoms—their transient nature, the pallor of the skin occasionally observed, the relative bloodlessness—stamp them undoubtedly as a vaso-motor spasm of the arterioles.

This patient, a single woman, 27 years of age, an extremely intelligent person, is suffering from what I believe to be ischæmic attacks of hemiplegic distribution. She gives us a lucid and typical history of the emotional and vaso-motor neurosis which we call hysteria. The hereditary taint is well marked. She herself was nervous and excitable as a child but studied her lessons well and was generally top of her classes. She volunteers the statement: "All my life I have been very liable to flush even when I was anæmic." Her history presents many dermal and circulatory symptoms. As a girl her hands used to become "red, mottled, and swelled in places, resembling chilblains, excepting that they were worse in summer than in winter." She was affected with what her medical attendant called "erythema nodosum" on the legs when she was 12 years of age and at 13 years began to menstruate. From that time until a year ago she has been subject to attacks of hysterical globus. Asked to describe them she says: "I first get very pale and the heart beats violently, than I get a sinking in the stomach which rises to the throat like a ball." She has also had attacks of violent palpitation without the globus and *vice versâ*, and other hysterical attacks, some of a syncopal type (Group A) All these attacks were more frequent at the menstrual period or when she was out of health, and were all determined by the slightest excitement. 12 months ago these attacks almost ceased but they were replaced by others of a worse kind, though they are started by exactly the same causes as the globus, flushings, tachycardia, and other hysterical attacks. It is for these that I am consulted In these a "numbness" or "dead feeling" (sometimes accompanied by "prickling of pins and needles") starts in the left thumb and "rushes down the left side like a wave into the leg," on one or two occasions spreading to the opposite side. She states that she can feel things when the affected parts are touched.. "The throat," she says, "feels swollen and the left half of my tongue feels numbed so that I cannot move it. A stupid kind of dazed feeling then comes over me, so that I cannot speak, though I know what is going on around me." The whole attack lasts from five to 15 minutes and it is generally followed by a splitting headache on the left half of the head, lasting some hours and only relieved by sleep. She has had an average of two or more of these attacks a week of varying severity. On one occasion I had the opportunity of witnessing one of these attacks. The left hand was pale and bloodless and when pricked with a needle did not bleed; she could feel with that hand, though not so well as with the other. One of these attacks, caused by running after and missing a train, was attended by distinct mental symptoms. She took the next train and while in it another severe attack came on. When met by her friends at her destination she was stated to be "delirious," doing and talking "silly things." This lasted an hour or two; then the mental confusion passed off as suddenly as it had come and she did not remember any of the silly things she had previously said or done. These seizures had given her much anxiety because her mother died at the age of 49 years from "paralysis after a stroke."

This patient presents the hysterogenic phenomenon to a certain extent [illegible] succeeded by pressure in [illegible] one of the "throat attack [illegible] a complete attack of the numbness. The organs are healthy, but all the superficial and deep reflexes are considerably exaggerated. I should like, just in passing, to refer to the treatment. On June 1st she commenced to take a mixture containing small doses of nux vomica and 15 grains of ammonium bromide thrice daily but she made very little improvement. On July 9th, her digestion being rather out of order, she took a mixture containing bicarbonate of sodium and gentian, with ammonium bromide as before, but there was only very slight improvement. On August 13th she commenced to take thrice daily 15 grains of calcium chloride and 15 grains of ammonium bromide, and the improvement was immediate and marked. Prior to August 13th she had been having attacks daily but for the past six weeks she has not had a single one. She was taking bromide all the time but the effect of the calcium chloride was almost magical. The fact of my having found this remedy useful in various forms of erythema induced me, in view of her history, to try it in her case. It is a most interesting one. Throughout life she has had unmistakeable hysterical attacks of various kinds—globus hystericus, tachycardia, and syncope. In early life she was troubled with various skin symptoms of a congestive and erythematous type, which we have seen are so frequent in hysterical subjects She has had several kinds of unmistakeably hysterical seizures. Latterly these have been replaced by attacks of hemiplegic "numbness" or dead feelings, starting in the left thumb, without loss of sensation and attended by pallor and bloodlessness—determined by the same causes as the other attacks. There can be no reasonable doubt that these latter attacks are also hysterical and are due to a widespread vaso-motor spasm starting from the centre controlling the vascular area of the left arm and spreading to the vaso-motor centre or centres of the left half of the body and head. At one stage of her history the vaso- [illegible] kind [illegible] ther [illegible] we [illegible] two (generalised pallor and flushings) are part of the "splanchnic storms" which form an integral part of hysteria. The third (the congestive patches) constitute visible evidences of the reflex excitability of the local vaso-motor mechanisms which also form part of the same disorder. The fourth, fifth, and sixth (dermatographia, acroparæsthesia, and exudative skin [illegible] products in widely varying proportions, of this [illegible] y *plus* hæmic changes. [illegible] ame pathology but is manifested as a vascular spasm only. Among the coöperating causes sometimes in operation may be mentioned toxins of gastro intestinal origin, articles of diet, traumatism, toxins of insects, and other causes to be considered hereafter. But without the vaso-motor instability, innate—i.e., hysterical—or acquired, these cannot act.

RESEMBLANCES OF THE SKIN TO THE CENTRAL NERVOUS SYSTEM.

I have entered at this length into hysterical skin symptoms and eruptions because, in the first place, I believe that the slighter and more transient pallor and congestions included in the first three classes above referred to are often overlooked and are hardly sufficiently recognised as part and parcel of the hysterical diathesis. They are, in my experience, veritable stigmata of hysteria. Secondly, I hope I have demonstrated that serous and sero-sanguineous effusions—urticaria, erythromelalgia, erythemata, ischæmic spasm, and even hæmorrhage—may be produced by the same emotional and other causes which determine undoubted hysterical manifestations and that these effusions depend in part or *in toto* on the neuro-vascular irritability and irregularity which form, in my view, the essential element of hysterical conditions. In committing myself to this statement I do not wish to exclude the toxic or blood factor in the causation of these effusions. In fact, a toxic or nutritional element can very often be revealed in these dermal effusions, *just as it can be in hysterical motor and sensory disorder* [illegible] *hysterical visceral attacks* (Group I [illegible] the [illegible] rent two factors are [illegible] cases Congestion, pallor, and ischæmic spasm may be, and generally are, of purely neuro-vascular (angioneurotic) and emotional origin, hæmorrhage may be purely toxic, while in serous and sero-sanguineous effusions the two factors are nearly always combined. In the third place, I hope to prove to you hereafter that these same lesions, pallor, flushing, congestion, exudation, ischæmia, and possibly even hæmorrhage, which we can see on the skin, may in like circumstances be determined in the central nervous system and other places and give rise to hysterical motor, sensory, visceral, and other symptoms, thus explaining one of the leading features of that strange disorder—namely, its "mimicry" of organic disease. It is as true to-day as it was in 1682, when Sydenham wrote, "Whatever part of the body it [hysteria] attacks it will create the proper symptom of that part. ...... Few of the maladies of miserable mortality are not imitated by it."

Fourthly, it is, however, in relation to the central nervous system that the best marked, the strangest, and the most definitely hysterical symptoms appear; and I should like, in conclusion, to indicate the marked resemblances—embryonic, physiological, and pathological—which exist between the integument and the central nervous system, structures which at first appear so different from one another. The first and most fundamental change which takes place in the development of the embryo is the arrangement of its cells into three distinct layers, the epiblast, hypoblast, and mesoblast. Now, from the epiblast both the tegumentary covering of the body and the central nervous system are developed. The central nervous system is formed solely by an infolding of the superficial cells of the embryo which afterwards form the skin; and these are the only two structures of the body which are developed from the epiblast. The physiological resemblance is to be found in the fact that whereas the skin with its tactile corpuscles, the eyes and other external sense organs (developed from the epiblast) represent the external projection of the sensorium, just as the central nervous system represents the internal projection of the sensorium. A consideration of syphilis affords a striking illustration of their pathological resemblance, for this disease is specially apt to affect both the skin and the central nervous system in preference to, though not to the exclusion of, the other parts of the body. Undoubtedly the places in which to study syphilis are in a skin and in a nerve clinic—and these, if I mistake not, are also the best places in which to study hysteria.

Oration

ON

THE SANATORIUM TREATMENT OF PULMONARY TUBERCULOSIS.

Delivered at the Opening Meeting of the Reading Pathological Society on Oct. 15th, 1903,

BY C. THEODORE WILLIAMS, M.A., M.D. OXON., F.R.C.P. LOND.,
CONSULTING PHYSICIAN TO THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

GENTLEMEN,—I think we shall all agree that the introduction of sanatorium and hygienic treatment into the therapeutics of pulmonary tuberculosis has proved an undoubted boon to sufferers from that complaint, and while it has gone far to arrest the disease in initial cases it has also done much to mitigate the sufferings and to reduce the symptoms of the advanced cases and has given a very different aspect to the wards of consumption hospitals and Poor-law infirmaries. For the efficient treatment of consumption the first step is the separation of the consumptives from the healthy and their housing, not in the wards of a general hospital, as is still done in many continental hospitals the authorities of which ought to know better, but in separate buildings, the incipient cases in sanatoriums and the advanced cases in consumption hospitals with more complete arrangements for nursing and special treatment. It is the proud boast of this country that England was the first to recognise this important doctrine and to build consumption hospitals for the special treatment and study of such cases and this was done without reference to infection theories. At least four hospitals were established in London before it entered into the heads of our foreign neighbours to attempt anything of the sort.

Now it is generally recognised that consumptives should be separated, partly to prevent their infecting the healthy and partly because the open-air system, which for them is essential, is not suited to all kinds of disease. With the chief features of the open-air system you are all probably familiar and I do not propose to describe it in detail but to select certain points and on these to offer remarks based on personal experience and a careful examination of many sanatoriums and their arrangements. I may claim to have visited the principal sanatoriums of Germany, Switzerland, Sweden, and Denmark, as well as many in this country, and I am a member of the building committees of three sanatoriums, two of which are in course of construction, and I consequently have had some opportunity of gaining experience in the subject. I will first say a few words on sanatorium construction. It is not necessary to erect a building of great architectural pretensions or of a very solid character. Some sanatoriums which are apparently of great utility consist of a series of huts or one-storeyed cottages constructed of wood for sleeping rooms with a larger hut for dining room and kitchen. Such are the Docker huts in Germany and those of Dr. Denton Johns at Parkstone, near Bournemouth, and the Adirondack cottage sanatoriums in the United States, and some authorities prefer these to more permanent structures on account of their cheapness and of their necessitating an open-air life. But in bad weather there are difficulties, especially of service, and another trouble is the danger of fire. It has been found by experience that completeness of arrangement and organisation cannot be arrived at without solid and permanent buildings and the following may be regarded as essential elements of a well-organised institution as exemplified in all first-class European sanatoriums.

1. A block of two storeys or more facing south or south-east, containing the patients' bedrooms and the day rooms, with a corridor behind, out of which on the north side would open the sanitary towers containing bathrooms, water-closets, and slop-sinks; while in the basement would be the hydro-therapeutic department.

2. A block behind the first and connected with it, containing the dining rooms, kitchens, and on one side the medical officers' consulting rooms, sleeping rooms, and laboratories, and on the other the matron's and nurses' quarters.

3 An administration block placed at some distance from the first two to avoid noise, taking in the laundry, heating apparatus, electric plant, and the disinfector and other machinery and the mortuary.

4 An isolation block.

5. Medical superintendent's house. In most sanatoriums of any size there are three medical officers and the head physician usually has a house apart in the sanatorium precincts.

6. The Liegeballen or shelters. These can be connected with the patients' block or placed in front of the basement and form part of it, but they must not be placed in front of the patients' bedrooms which they would only darken.

Dr. Walther and his followers are opposed to Liegeballen altogether and think it inadvisable for a number of male or female patients to pass their rest hours together and prefer that they should repose in the solitude of their chambers. There are no doubt invalids who rest more completely when alone and in that case the resting hours should be passed on a private balcony with the air circulating round them as is so well contrived at the Wehrawald and Schatz Alp sanatoriums and not while lying on their beds, as is often done. However, for the mass of consumptives Liegeballen are, if not too crowded, excellent, as patients have their own reclining chair and table, on which is a *model* sputum bottle, and can have abundant wraps to keep them warm. A space of at least four feet wide should be allowed to each patient, so as to preclude all chance of infection through droplets as pointed out by Flügge. Here the inmates can pass a great part of the day in all weathers and can be easily supervised by the medical man. Warmth is maintained without difficulty in the prone position by the aid of blankets or woollen coverings and in the German people's sanatoriums the feet are incased in felt boots or plunged into a Fuss-sack as is the habit in Danish institutions. Liegeballen are generally from 10 to 15 feet in height and from 10 to 13 feet in depth, the length depending on the number of patients to be treated. If too lofty there is a difficulty in protecting from bad weather and sun and if too deep, the sun does not always penetrate to the innermost recesses. The rain or snow or sun glare is kept out by blinds drawn down from above or by curtains. These shelters facing the south often become too hot in summer and consequently a special set placed in the shade and facing north is provided in the grounds, or the shed is sometimes arranged to contain a double row of couches separated by a partition, those for winter facing south and those for summer facing north. All Liegehallen should have swing windows above the patients' heads to secure a cool current in warm weather. It is also advisable to have some rotatory shelters which can be arranged for protection from the prevalent winds, and these can be placed in different parts of the grounds. Such small shelters are very convenient for consumptives when treated in their own homes.

Every sanatorium must secure for the patients a bountiful supply of air, by night as well as by day, and in addition to the Liegehallen a certain number of rooms should be fitted with balconies protected with blinds from rain and glare on to which the beds of feverish patients can, when required, be wheeled through the window. All windows must be made to open, and the best plan is to have the upper portion falling in, louvre fashion, and the lower to open fully inwards as a French casement. The upper part will always be kept open by night and by day, and also, as a rule, the lower part, but when necessary to exclude storms or too strong light, jalousie blinds can be used. Over the door of each ward should be a swing window so as to admit of a through current of air even when the door is shut. Some sanatoriums have with great advantage double doors to exclude noise from the passages. All wards should be fully ten feet high, 11 feet is better, and some foreign sanatoriums allow 13 feet. There should be a space of not less than 1000 cubic feet per head. It is often urged that this cannot be essential with all the windows open, but it must be borne in mind that it is highly important to avoid wind and draught and the larger the air space the less likelihood there is of draughts. What is required for a consumptive is that the air should be continually renewed without his knowledge. If the open-air system is properly carried out there is no need for artificial ventilation, and though in many well-known sanatoriums some system exists it is unnecessary and being generally unused becomes a receptacle for dust.

A word about heating as I have touched on ventilation and here we have to confess that the coal fire and hearth, the stronghold of British domestic life, do not assimilate well with the open-air system but promote draughts. Fires often smoke under the ordeal of open windows and are not found to furnish sufficient or even heating, while they necessitate more labour. Central heating with radiators placed in the wards and corridors answers admirably and reduces service. It need not be added that electric lighting is the best for adoption.

GRADUATED EXERCISE.

This is a most important feature of the system and one that Brehmer dwelt on strongly, this being proved by the fine series of graded walks constructed at Görbersdorf which extend over miles of the park. Walther has planned his grounds with this view and all complete sanatoriums set aside a large portion of their property or utilise the neighbouring woods and paths for this purpose. The best plan is to give the patient the uphill at the commencement of his walk and the downhill at the end, and walks should be provided in sheltered places at gradients of 1 in 20, 1 in 10, and even 1 in 8. The most extensive and best arranged set of walks I have visited are at the Vejlefjord Sanatorium in Denmark, made under the supervision of Dr. Saugman, an old patient and afterwards medical assistant at Görbersdorf, the beautiful grounds of the sanatorium, extending over wooded hills and sloping to the sea, the purpose. Dr. Saugman has series, according to the strength licitously named them after the s on tuberculosis and on sanatoriums, so that we come across "Laennec's Vej," "Villemin's Vej," "Brehmer's Vej," "Dettweiler's Vej," and the like. The pace generally enjoined is about two miles an hour, and as Dr. P. Horton-Smith[1] well shows, this very slow walking requires sustained muscular exertion and is not the easy toddle that might be supposed. In the German and foreign sanatoriums generally walking is the only exercise recommended, chiefly because other forms are not understood, but for English men and women who love games there is no reason why some moderate game, such as golf or croquet, should not be introduced for some patients, which certainly renders o of the English or three days a w raduated exercise. Muscular strength is gained, appetite increases, the processes of digestion and assimilation are stimulated, sleep is promoted, the standard of nutrition is raised, the respiratory power is augmented, the depth of inspiration is increased, and some enlargement of the thorax takes place, and though this does not equal what is achieved at high *altitudes something is done in this direction.*

An abundant dietary, representing all groups of food, is requisite to sustain the patient against the bacillar attack, but we hear too much of gain of weight and too little of gain of muscular power. When a patient is stated to have gained a stone or two or three stones during six months' residence in a sanatorium this is generally in the form of fat and such increase speedily vanishes when the stuffing process ceases. In patients with extensive excavation and probable aneurysmal dilatations of branches of the pulmonary artery from exposure in the cavity, the gorging of the vascular system from a very rich and plentiful dietary often leads to rupture of the vessels and fatal hæmoptysis, so *that it is desirable* not to stuff the individual with as much as he can assimilate but with as much as his vascular system can safely bear. Gain of weight is easily accomplished and is often as much due to want of exercise, as is seen during sea voyages, as to large feeding. It can be attained even in pyrexial cases if the patient be confined to bed while the stuffing goes on, as I showed many years ago at the Brompton Hospital.[2] It is too much the fashion to cite improvement and even ortunately we find disease is extending, and many a sanatorium medical officer has lamented to me over the fact that improvement in general condition is not always accompanied by improvement in the physical signs. Unless by means of regulated exercise we improve muscular vigour a large gain of weight is not much advantage.

MEASURES OF DISINFECTION.

The sputum must either be disinfected by high-pressure steam or strong carbolic acid—5 per cent.—or, what is very convenient, mixed with sawdust and burnt in a furnace or automatic destructor. At many sanatoriums peat is used for the purpose and in olden days at the Brompton Hospital immediately after the discovery of the tubercle bacillus the sputum was stirred in with the small coal used in the furnaces and thus consumed. At present it is burnt in an automatic destructor and the sputum cups are sterilised by steam. Dettweiler's pocket flask seems the best for the use of patients who are out on walks and in the Liegehallen, but where it is necessary to supply spittoons in passages and halls it is advisable to place them not on the floor but at a height of four or five feet above it so as to facilitate a safe lodgment of the sputum.

Patients' clothes should be disinfected with steam before being washed. All mattresses, blankets, pillows, and cushions should pass through the disinfecting chamber and the patients' rooms after they leave should be disinfected by formalin vapour. In the construction of the sanatorium and its fittings and furniture care must be taken to avoid any ledges or crannies on which dust can collect. The experiments of Flügge and others have proved that not only is dried sputum a possible source of infection but that the droplets ejected by a consumptive in the act of coughing or conversing may also prove a danger, and Fraenkel and others ed by the spray it not wonderful chest hospitals and their assistants in close conversation for hours together not more often affected? s on the few experiments to ignore the great and obvious living experiments which we witness any day in our consumptive hospitals and sanatoriums. When we are informed that the cough spray drop containing tubercle bacilli contains them in a high degree of virulence and we know that a large number of medical men, nurses, and students inhale these droplets every day and escape infection altogether, we must conclude that there is something in the human organism which specially protects it from the bacillar attack and renders it more or less invulnerable.

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[1] Practitioner, September, 1903.

[2] Brit. Med. Jour., Sept. 7th, 1872.

HYDRO-THERAPEUTICS.

For the greater number of consumptive patients, and especially in the cases of limited tuberculous consolidation, some form of bath is desirable. The "daily tub" of cold or tepid water when patients are without fever has a bracing effect on the nervous and muscular systems and promotes appetite, while the douche or shower bath, if the patients be strong enough, causes them to take deep inspirations and consequently produces more complete aeration of the lungs. All well-organised sanatoriums are provided with a good hydro-therapeutic department.

SUN BATH.

This treatment, which I believe originated in South Austria, is practised in certain sanatoriums and is well worth a study. The patients, with the smallest modicum of clothing, lie at full length in the open on mats exposed to the sun's rays in the hottest part of the day for periods varying from a quarter of an hour to one and a half hours and are then rubbed down or have a douche or shower bath administered before the friction. Dr. Saugman of Vejlefjord reports that the sun bath is popular with consumptives who are in no great hurry to resume their clothes. After the sun bath the rectal temperature rises two, six, and even eight points Centigrade, reaching 38·1° (100 3° F.) or 38·3° C. (100·9° F.) and then falling very quickly. After many baths the daily rise is only one point Centigrade and in some patients even a fall of temperature was noted. Appetite was generally increased, but no great influence was observed on weight. Patients with stationary weights appeared to fall off, while those with rising weights continued to gain. Dr. Saugman gives an account of 26 consumptives who were given these baths—13 men and 13 women—five in the first stage (Turban), six in the second stage, and 15 in the third stage. 20 patients improved from the treatment, but two ladies gave up after the first bath, one on account of the languor induced thereby. Two patients suffered from erythema and in one it was accompanied by considerable fever. This lady, however, eventually became accustomed to the baths and was able to endure them from 20 to 40 minutes without discomfort. In one case the bath was followed by a rise of temperature and dry pleurisy. Cases of strumous joints seem to do well under this treatment.

Dr. Denton Johns showed me some patients whom he had submitted to sun-bath treatment even in the months of February and March. They were well developed and splendidly tanned and looked pretty vigorous generally. The great difficulty in this country is to provide a sequestered spot for the sun bath and Dr. Johns has utilised for male patients an old high-walled circular fruit garden for the purpose, which is arranged with mats on a sunny slope with a good douche at hand. He has placed the ladies in a pit-like depression of the grounds, well sheltered from the vulgar gaze, and during the hour of the bath a flag is hoisted to warn off all intruders.

SANATORIAL RESULTS.

Let us now inquire what results have been obtained from the sanatorium treatment of consumption which has been in vogue for some years in Germany and Switzerland and of which tolerably trustworthy statistics have lately been published. The German Imperial Board of Health[3] has been collecting statistics of the sanatoriums since the year 1896 based on 6000 cases kept under observation until 1901 with the following result. Of every 100 sanatorium patients at the close of the treatment (presumably three to six months) 67·3 per cent. were capable of resuming work in their former calling; 7·1 per cent. undertook occupation of a less arduous nature; 14 6 per cent. were partly capable of work; and 11 per cent. were incapable of work. This, of course, is regarding results from the invalidity insurance point of view, but stated generally the results are: 87·7 per cent. were dismissed as cured or improved; 8·8 per cent. were not improved; 3·1 per cent. were worse; and 0·5 per cent. died. Of the patients who came in the first stage the percentage of "improved" reached 96·2 and of those in the second stage, 89·9. We must bear in mind that these figures are supplied by the sanatoriums themselves to the Imperial insurance department which is not answerable for their accuracy and therefore the first classification according to the ability to work is valuable as a means of checking these last figures. The insurance statistics further show that for the years 1897, 1898, 1899, 1900, and 1901 "at the conclusion of the sanatorium treatment, there was a successful result excluding in all probability the appearance of invalidity in the near future" among those insured. The subjoined table (Table I.) shows the percentages of those discharged fit for work and their gradual reduction after leaving the sanatoriums.

TABLE I.—*Showing the After-results of German Sanatoriums in 6000 Consumptives.*

—	Discharged from sanatoriums capable of work.				
	1897.	1898.	1899.	1900.	1901.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
—	68	74	74	72	77
At close of 1898	44	—	—	—	—
At close of 1899	30	—	—	—	—
At close of 1900	30	—	—	—	—
At close of 1901	27	—	—	—	—

The question naturally arises how far these results were permanent and this is answered by the statement that the success of the treatment obtained in 1897 (68 per cent.) had lasted till the close of 1898, 1899, 1900, and 1901 in 44, 30, 30, and 27 per cent. respectively of the persons under permanent supervision. This does not say much for the durability of the arrest of the disease as in four years 41 per cent. had relapsed. But according to the German authorities the State and the family ought to be grateful if the ability to work is preserved to a man even for some years who otherwise would have fallen a victim earlier to disease or death and thus the expense of maintaining sanatoriums is justified. They remark, as worthy of note, that a few of the patients who were admitted into the sanatoriums with advanced tuberculosis and were afterwards discharged as "not improved" were found to be on subsequent examination completely capable of work.

Dr. Schmid,[4] the director of the Swiss Health Office, has published a noteworthy report on the results of six public sanatoriums with an aggregate of 366 beds for the years 1899 to 1901. The report has been made under considerable difficulties, as each institution framed its results in a different way, but the particulars and conclusions are most valuable and well worth study. The total number of patients used for these statistics is 2954, among whom the male sex slightly preponderated and included a large proportion of severe cases. 547 patients were admitted with pyrexia of various degrees and some of these never lost it; 1189 were admitted without fever. Of these patients 38·5 per cent. were in the first stage of Turban's[5] category, 34 5 per cent. were in his second stage, and 27 per cent. were severe cases in his third, so there were a considerable number of advanced cases. The sanatoriums included Heiligen-Schwendi, altitude 3224 feet; Wald, 2925 feet; Braunwald, 4920 feet; Leysin, 4800 feet; Malvilliers, 3900 feet; and Basel-Davos, 5200 feet; all therefore were at fair altitudes. These patients appear to have belonged chiefly to the middle and lower classes. The length of stay in the sanatoriums varied from 70 to 204 days but averaged four months each.

The results of the treatment may be stated as follows: Of the total number at the time of leaving the sanatoriums 82 5 per cent. had improved; 16·2 per cent. had not improved; and 0 8 per cent had died. Classifying by the capacity for work, in from 48 to 50·9 per cent., or about half, arrest of the disease took place, and about one-third were fit for work for a longer or shorter time. Only one-sixth did not recover their power of labour. The effect of extent of disease and stage is well shown in Table II.

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[3] Tuberculosis, June, 1903.

[4] Tuberculosis, July, 1903.

[5] Turban includes under the first stage slight cases, where the disease affects, at the least, one lobe or two half lobes. In the second stage are more extensively affected patients with either two lobes involved, or one severely so, and softening or excavation present. The third stage includes all other degrees of disease not embraced in the first and second stages.

TABLE II.—*Showing the Influence of Stage.*

On discharge.	Stage. First.	Stage. Second.	Stage. Third.
	Per cent.	Per cent.	Per cent.
Work power unimpaired	83·9	40·6	10·1
" " but little impaired	14·1	47·6	34·5
" " much impaired ...	2·0	11·8	55·4

The most interesting part of the whole paper is the account *of the after-results in these patients which has been drawn* up by an entirely impartial committee consisting of three Basle professors—Dr. Egger, Dr. Hägler, and Dr. von der Mühls—but unfortunately it only deals with the results of one institution—viz., the Basel-Davos Sanatorium. We here learn what has become of the patients during the years since they left Davos, and this record is very satisfactory, a marked contrast to the German sanatorium results (*vide* Table III.).

TABLE III.—*Showing the After results of Basel Davos Sanatorium.*

—	Discharged. 1897. Well and capable of work.	1897. Partly or not capable.	1897. Died.	1893. Well and capable of work.	1893. Partly or not capable.	1893. Died.	1899. Well and capable of work.	1899. Partly or not capable.	1899. Died.	1900. Well and capable of work.	1900. Partly or not capable.	1900. Died.
	%	%	%	%	%	%	%	%	%	%	%	%
At close of 1899	70·1	5·1	24·8	67·4	13·8	18·8	—	—	—	—	—	—
At close of 1900	64·3	5·1	30·6	62·6	8·1	29·3	63·1	17·4	19·5	—	—	—
At close of 1901	58·2	5·1	36·7	59·1	9·4	31·5	59·7	12·4	27·9	73·1	9·2	17·7

Table IV. shows the influence of degree and stage at the patient's admission to the sanatorium on the after-results and points out clearly the importance (1) of early admission to treatment and (2) the unsuitability of the advanced cases for sanatoriums; hence the absolute necessity of consumption hospitals where these cases may receive appropriate medicinal treatment and nursing.

TABLE IV.—*Showing the Influence of Degree of Disease when admitted on After results.*

At the close of 1901.	Discharged. 1897. Well and capable of work.	1897. Partly or not capable.	1897. Died.	1893. Well and capable of work.	1893. Partly or not capable.	1893. Died.	1899. Well and capable of work.	1899. Partly or not capable.	1899. Died.	1900. Well and capable of work.	1900. Partly or not capable.	1900. Died.
	%	%	%	%	%	%	%	%	%	%	%	%
(Turban) Stage 1	84·3	2·0	13·7	81·6	5·3	13·1	81·9	10·9	7·2	97·1	2·9	0·0
Stage 2	46·4	7·2	46·4	32·2	21·4	46·4	47·8	17·4	34·8	58·2	11·6	30·2
Stage 3	5·3	10·5	84·2	17·4	8·7	73·9	8·0	8·0	84·0	21·1	26·3	52·6

The superiority of the Swiss over the German results confirms an opinion that I have long held and published that the climate of high altitudes exercises a most valuable healing influence—equalled by no other conditions—over tuberculosis of the lung and disproves the absurd opinions lately promulgated that climate has no influence in the treatment of consumption. The results of the English sanatoriums have not as yet been sufficiently large and complete to permit of comparison with the German and Swiss statistics. Dr. F. W. Burton-Fanning's report on the results of sanatorium treatment in the United Kingdom published in the Transactions of the British Congress on Tuberculosis (1901) was too scanty to enable clear deductions to be drawn, but his recent paper on three years' results of Mundesley Sanatorium[6] contains some interesting conclusions though the number of cases (146) is too small to justify definite deductions. 84·60 per cent. of his patients improved and only 15·38 received no benefit. Since they quitted the sanatorium 43 have died (two not from tuberculosis); the greater part of the remainder seem to be in good condition and even able to work. I have other sanatorium statistics from England and the United States but on a smaller scale than the Swiss and German and therefore less trustworthy for conclusions; but although we may hope for better results as the sanatoriums develop and improve, and especially when the unsuitable cases can be housed separately, we find so far that although sanatoriums are a great boon to consumptives they cannot be depended on to arrest tuberculous disease beyond all chance of relapse. They may, however, be expected to produce great improvement in all except advanced cases. In all but these we may look for reduction of temperature and pulse-rate, lessening of cough and improvement of respiration, disappearance of night sweats, gain of weight, and increase of muscular power. Many patients leave sanatoriums with no cough, no bacilli in the sputum, with diminished physical signs, and with the appearance of healthy men and women.

The educational value of sanatoriums must never be overlooked; the patient, having been trained to deal with his sputum and other secretions, is no longer a source of danger to his neighbours and he returns to his family and friends as the apostle of fresh air and wholesome living and the opponent of all those sins against hygiene and common sense which produce physiological misery and degrade the human constitution, while they surely tend to decay and death. Such an apostle, though sometimes trying in a household where the parents are aged or suffer from bronchitis and rheumatism, does incalculable good, and especially in the dwellings of the poor, and enforces his gospel by example as well as by precept.

I have spoken of sanatoriums, but it should be remembered that the open-air system is now practised in all the consumption hospitals of London and that the report of the Brompton Hospital, which is by far the largest institution, shows a considerable rise in the number of the improved class, even in advanced cases, since its introduction. We must not be satisfied with the sanatorium treatment of consumption alone but endeavour to discover other weapons to employ in our warfare against the terrible foe. Antituberculous serum has had only a limited trial and in some cases in which I employed it it certainly offered a prospect of future success if persevered in. Medicine accomplished much before the open-air system was introduced and should be combined with it and climate has proved over and over again of the greatest efficacy.

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[6] THE LANCET, August 15th, 1903, p. 453.

SOCIETY FOR THE STATE REGISTRATION OF TRAINED NURSES.—At a special general meeting of this society, held in London on Jan. 23rd, at which Miss Isla Stewart, matron of St. Bartholomew's Hospital, presided, amendments to the Draft Bill of the society were considered. The Bill will be introduced into the House of Commons during the coming session by Dr. R. Farquharson, M.P. for West Aberdeenshire. The following Members of Parliament have also promised to back the Bill:—Sir Thomas Wrightson, Bart., Member for East St. Pancras; Sir John Batty Tuke, M.D. Edin., Member for Edinburgh and St. Andrews Universities; Mr. Hugh Crawford Smith, Member for Tyneside division of Northumberland; Mr. R. C. Munro-Ferguson, Member for Leith Burghs; Mr. H. J. Tennant, Member for Berwickshire; Mr. Alexander W. Black, Member for Banffshire; The Right Hon R B. Haldane, Member for Haddingtonshire; Sir Jam [illegible] C[illegible]ster-le Street, Durham; [illegible] Member for Thornbury; Mr. [illegible] Harry Trelawney Eve, divis[illegible] Member for Mid-Devon; and Dr. Edward Charles Thompson, F.R.C.S. Irel., Member for North Monaghan.

An Introductory Address

ON

THE RELATION OF THE MEDICAL PRACTITIONER TO PREVENTIVE MEASURES AGAINST TUBERCULOSIS.

Delivered at the Post-graduate Course of the Mount Vernon Hospital for Consumption and Diseases of the Chest on Jan. 7th, 1904,

By ARTHUR NEWSHOLME, M.D.,
F.R.C.P. LOND,
MEDICAL OFFICER OF HEALTH OF BRIGHTON.

GENTLEMEN,—When asked to give an address in connexion with this post-graduate course a consideration of the preventive measures, and particularly the public preventive measures, against tuberculosis from the family practitioner's standpoint appeared likely to yield matter of interest and importance. For five years I have been practically engaged as medical officer of health in work on this subject from the standpoint of public health in connexion with a system of voluntary notification of cases of pulmonary tuberculosis which has been in operation in Brighton since January, 1899. To-day I ask you to consider some aspects of the same subject in the light of the relationship between the medical practitioner and the patient on the one hand and between these two and the medical officer of health on the other. Our main conclusion will be, I believe, that the professional duty of the practitioner and the private welfare of the patient are not only completely compatible with, but are, in fact, best advanced by, a complete adoption of the measures which the interests of public health demand.

It may be taken as accepted that pulmonary tuberculosis (or phthisis, as it will be named throughout) is an infectious disease which is capable of being communicated from sick to healthy. The conception of necessary preventive measures will vary according to the view taken as to the degree of infectivity and it is necessary therefore to give a preliminary consideration to this point. True, infection is followed by active disease in only a relatively small proportion of those acquiring it. But as in some 50 to 60 per cent. of the necropsies made in hospitals signs of old tuberculous lesions, cured by calcification or fibrosis, have been found, it follows that in a very large proportion of the total population a struggle has occurred between host and unwelcome guest, the former having in these instances come off victor. And although so many in the end escape an obvious attack of clinical tuberculosis, the number who are susceptible and fall victims to the infection is very large in proportion to the total population. Thus all forms of tuberculosis caused a death-rate in England of 1·8 per 1000 in 1902. If we assume that there are three persons constantly ill with tuberculosis for every death, then one in 185 of the total population suffers from tuberculosis, or on the assumption of uniform distribution approximately 1 in every 35 families. If we instance the life period from 35 to 45 years and confine ourselves to phthisis we find that in 1896–1900 the death-rate from phthisis was about 1 in 330 of the male and 1 in 500 of the female population at these ages. In calculating the duration of sickness involved in the deaths at these ages I prefer to take five years instead of three as the average duration of sickness in fatal cases as being in my experience nearer the truth. It is well known that the attack of phthisis ending in death has often been preceded by earlier attacks from which the patient has temporarily recovered. On this five years basis 1 in 66 of the men and 1 in 100 of the women aged from 35 to 45 years are at any one time ill with attacks of phthisis which eventually prove fatal. This estimate does not include the enormously larger number of cases which end in recovery or quiescence. Between the 1 in 66 or 1 in 100 of the adult population who suffer from phthisis ending in death and the 50 per cent. of total necropsies from all causes of death in which healed tuberculosis is found there are numerous minor degrees of sickness which have been overlooked but which have had their effect in diminishing the efficiency and enjoyment of life, and it may be added in disseminating infection. Our own experience must tell us that it would be difficult to make accurate inquiries into the history of three or four families without coming upon evidence of tuberculous disease. Such a large proportion of the total population suffers from active tuberculosis, happily in most instances not fatal, as to render it unwise and unsafe to act on the supposition that very exceptional susceptibility is required before active tuberculosis is developed.

At the same time, there need be no hesitation in agreeing that what Dr. T. Clifford Allbutt[1] happily describes as an "openness to consumption" is an important influence in favouring the growth of the seeds of this disease. The same remark would apply, probably almost equally, to many of the acute infectious diseases. For some years past I have kept a record of all the susceptible persons—i.e., those not having previously suffered from an attack of the same disease, in houses in which cases of diphtheria and scarlet fever have occurred. Owing to failures to secure early medical treatment and in recognition of these cases their notification is frequently delayed and the majority of presumably susceptible persons have been exposed to infection for two or three days before isolation was begun. And yet only 22 per cent. of the persons not previously having had scarlet fever who were temporarily exposed to infection developed the disease. The escape from attack of the majority of those drinking water or milk containing the germs of enteric fever can similarly not be sufficiently explained on the supposition which would explain the escape of a soldier in battle from being shot when bullets were flying about. Some persons are less susceptible than others to each of the infectious diseases and such persons only become infected when the virulence of the contagium is exceptionally great or the dose of contagium is exceptionally large or frequently repeated, or personal susceptibility is temporarily increased by dissipation or over fatigue or mental distress or by an intercurrent illness like influenza. Obviously there must be exposure to infection before it can operate and it will furthermore be agreed that dosage and particularly cumulative dosage of infection is a pre-eminently important factor in producing tuberculosis. If it be admitted that day for day tuberculosis is less easily communicable than most acute infective diseases the difference in the duration of infectivity is to be set against this. The healthy occupants of a phthisical home, especially among the poor, may be compared to a city which is subjected to a protracted siege, in which the combined effect of arms, deficient nutrition, and depressing emotions are at work. The inhabitants of such a city may escape with but little damage if the siege is raised at a comparatively early period; but they succumb in large numbers if it is prolonged. Similarly, the healthy members of a phthisically invaded household may be able to withstand infection if the disease is diagnosed early and if precautionary measures are at once begun and are continued thereafter; but they eventually fall victims to the repeated doses of infection if ignorance or fatalistic inertia prevails.

It is, however, urged by many that indirect measures not specially directed against tuberculosis have been in the past the main causes of the great decline in the death-rate from this disease which has occurred, and they will suffice for the future. Stress is properly laid on proper dwellings with efficient through ventilation and access of sunlight, and even more on a high condition of personal nutrition. These are important factors both in the prevention and the cure of phthisis. It is necessary, nevertheless, to preserve a sense of perspective in our preventive measures. Doubtless phthisis is most common among the poor whose conditions are a contrast to those just enumerated. But phthisis is caused by phthisis and does not occur, so far as we know, apart from the existence of a previous patient suffering from this disease. The tubercle bacillus is not ubiquitous. It haunts the vicinity of the consumptive. An extensive experience among notified cases compels me to the conclusion that defective nutrition, insufficient sunlight and ventilation, and domestic uncleanliness are mere adjuvants to the spread of infection and that this spread may occur in their absence. Unless cleanliness involves also the prompt destruction of infective material infection may spread almost regardless of environment. In the following instance such spread occurred to servant maids belonging to a family which had never previously suffered from tuberculosis, although the sanitary conditions of their mistress's house were, apart from the lack of precautions in connexion with the mistress's illness, perfect

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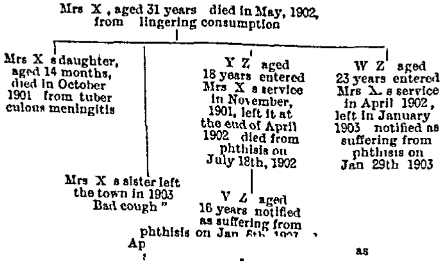
[1] Brit. Med. Jour., Oct. 28th, 1899, p. 1149.

Mrs X lived in a large house open to the sea, and in an excellent sanitary condition After several years' illness she died from phthisis in May, 1902 The disease was acquired before coming to the town As shown in the following scheme her only child died seven months earlier from tuberculous meningitis and her sister who nursed her for some months before she died had a "very bad cough" when she left the town some months after Mrs X 's death

Y Z, aged 18 years, entered Mrs X 's service as general servant in November, 1901 One of her daily duties was to wash Mrs X 's handkerchiefs and to clean out her spittoon No precautionary instructions were ever given to her She left her place in the following April when she was admitted to hospital suffering from "bronchitis and pleurisy" Before entering Mrs X 's service she had been in good health She subsequently returned to her mother's home and died there from acute phthisis on July 18th, 1902 Her brother, V. Z, living at the same address, who, up to the onset of his illness had a healthy outdoor occupation (driving a cart for a news agent) was notified on Jan 6th, 1903 to be suffering from phthisis He was then stated to have been ill for only nine weeks, though he looked ill for a few weeks previously The early diagnosis was made in consequence of the detection of tubercle bacilli in his sputum He died from acute phthisis on April 30th, 1903 Meanwhile a sister, W Z, entered Mrs X 's service just before her sister Y Z left it, and took on the latter's duties, except that she declined to wash the handkerchiefs of the patient (These were sent to wash without any preliminary treatment What about the poor "sorter" at the laundry?) Mrs X 's sister now washed out the spittoons W. Z swept out the sick room. She remained in Mrs X 's service until January, 1903 and as she frequently visited her sister Y Z during this time she had double opportunities of infection, assuming carelessness on the part of either patient. On Jan 29th, 1903, W Z was notified to be suffering from phthisis She was admitted to the borough sanatorium on Feb 19th and discharged on March 21st greatly improved On June 4th she was readmitted owing to a return of cough and expectoration She left on July 2nd and since then has kept well and is in domestic service (She was seen in January, 1904, and had continued to make weight)

The Z family consisted of the two phthisical sisters and the phthisical brother mentioned above, their father and mother, and another sister, aged 20 years There is no history of phthisis in the family It cannot, I think, be doubted that this family owed the decimating invasion of tuberculosis to the lax medical and nursing arrangements of Mrs X 's household


Mrs X, aged 31 years died in May, 1902, from lingering consumption
Mrs X 's daughter, aged 14 months, died in October 1901 from tuberculous meningitis
Mrs X 's sister left the town in 1903 Bad cough "
Y Z aged 18 years entered Mrs X 's service in November, 1901, left it at the end of April 1902 died from phthisis on July 18th, 1902
W Z aged 23 years entered Mrs X 's service in April 1902, left in January 1903 notified as suffering from phthisis on Jan 29th 1903
V Z aged 16 years notified as suffering from phthisis on Jan 6th 1903
Ap
as

Such cases as the above—and the experience of most medical men will furnish somewhat similar instances—indicate that statements like the following must be received *cum grano salis* "The testimony of experience . should, I think, be sufficient to satisfy us that the communicability of pulmonary tuberculosis can only be contrasted, not compared, with diseases such as small pox, typhus fever, or whooping cough It cannot, indeed, be compared with the communicability of enteric fever which is, perhaps, the least communicable of the diseases which are at present classed together as the infectious diseases and concerning which preventive measures are taken "[2] The limited communicability of enteric fever is, I venture to maintain, strictly comparable with that of tuberculosis Accurate statistics on a sufficiently large scale of the incidence of enteric fever and phthisis respectively among nurses or relatives engaged in nursing each of these diseases would go far towards settling this point In order to solve the problem they would need to be more definite and complete than those supplied to Dr. Bulstrode on the basis of the experience of the Ventnor Hospital On these no reliable conclusion can be based.[3] Phthisis is rarely acquired by nurses in public institutions; so with enteric fever Phthisis is frequently acquired by nurses or relatives in private houses, so with enteric fever. That is all that can be said until more exact facts are available

The relative rarity of infection of hospital nurses by tuberculosis is important from the medical practitioner's stand-

following scheme sets forth the main precautionary measures that are required —

- I The infection
  - 1 Dose
  - 2 Cumulative dosage
  - 3 Closeness of contact
  - 4 Lack or absence of precautions
  - 5 Defective ventilation and cleansing of rooms
- II Receptivity
  - 1 Inherited
  - 2 Acquired
    - 1 Exhaustion from nursing &c
    - 2 Depressing emotions
    - 3 Insufficient nutrition
    - 4 Defective ventilation and cleansing of rooms

This scheme does not pretend to be logical or exhaustive but it serves to draw attention to some of the more important points

In hospitals, long before the communicability of phthisis was recognised, expectoration was received into spittoons and large dosage of infection was thus prevented Similarly hospital wards have usually been well ventilated and kept scrupulously clean, all surfaces both of walls and floors being washable Again, hospital nurses are not so long on duty as wives or other relatives, the contact between them and the patient is less intimate as well as less prolonged than that of home nurses they have periodical holidays, are well fed, and are not subjected to the same extent to the influence of depressing emotions or of insanitary house conditions They are better trained in regard to the washing of hands and other personal precautions In view of the above circumstances the difference between the infectivity of phthisis and of enteric fever in hospital and in private practice is easily understood Which of these two diseases is the more communicable remains to be proved.

I can imagine no better means of converting those who underrate the infectivity of tuberculosis than the task of administering the notification of this disease in a large town, of interviewing some 200 patients each year, of examining over 100 patients who are yearly treated for a month each in our borough sanatorium with a view to train them so as to diminish the probability of their continuing sources of infection, of obtaining the family and personal histories of each of these and tracing as one gradually comes to do,
links of infec
be conclusive,
as any evider
disease of chronic course

We can all agree that the tubercle bacillus varies greatly in infectivity and virulence We know it does so when grown in the laboratory In varying in a similar fashion clinically it but follows the fashion of all the recognised infectious diseases Obviously the safer policy in instituting precautions in family practice is to assume that we have to deal with the more infective type of tuberculosis The preceding considerations enable us to conclude that phthisis is an infectious disease, that a certain personal vulnerability favours the disease, but that this vulnerability is widely distributed and may be acquired under unfavourable conditions of life, and that weight must be attached to the usually chronic course of phthisis involving repeated cumulative dosage of infection when certain simple precautions fail to be persistently and conscientiously carried out likely to be punctuated by the occurrence of infection than would otherwise have been the case. I regard the sanatorium training of consumptive patients, as distinguished from any pretension to cure, as the most important preventive measure which has hitherto evolved from our system of voluntary notification of phthisis in Brighton.

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[2] Dr H T Bulstrode's Milroy Lectures THE LANCET, July 11th, 1903 p 75

[3] Ibid, p 76.

I do not propose to discuss the subject of compulsory notification of phthisis. It is certain to come, but there are strong reasons against "forcing the pace." The surest progress is gradual and preventive measures must be organised and elaborated before we can in most districts obtain much good from universal notification of cases. The Local Government Board has recently supported an enactment providing for the compulsory notification of phthisis in Sheffield on the understanding that the powers are confined to the enforcement of notification and of cleansing and disinfection. No powers of compulsory isolation of phthisical patients are conferred and no responsible person has so far as I am aware ever suggested or is likely to suggest that the granting of such powers is desirable.

I have endeavoured in the preceding remarks to indicate the ideal position of the medical practitioner in relation to tuberculosis. If my contention be correct it is equally true that therapeutical measures are in the widest sense measures of prophylaxis, and that the aid of measures of public and private hygiene is as indispensable to cure as are therapeutical measures. But the practitioner in the majority of cases—i.e., those of the working classes—can scarcely be said to be the "family" practitioner. Even in the higher social strata his efforts at prophylaxis may be hampered by prudential and other considerations and he cannot undertake those wider inquiries which are required in order most completely to stop the sources of infection. Clearly, then, everything indicates the necessity of coöperation between medical practitioner and medical officer of health, and the more complete is this coöperation the greater is the benefit to the consumptive patient and to every member of the public.

APPENDIX I.

PRECAUTIONS FOR CONSUMPTIVE PERSONS.

Consumption is, to a limited extent, an infectious disease. It is spread chiefly by inhaling the expectoration (spit) of patients which has been allowed to become dry and float about the room as dust, or by directly inhaling the spray which may be produced when a patient coughs.

Do not spit except into receptacles, the contents of which are to be [illegible] *dry. If this simple precaution is taken* [illegible] *of infection.* The breath of consumptive [illegible] except when coughing.

The following detailed rules will be found useful both to the consumptive and to his friends:—

1. Expectoration indoors should be received into small paper bags and *burnt* immediately; or into a receptable which is emptied down the drain daily and then washed with boiling water

2. Expectoration out of doors should be received into a suitable bottle, to be afterwards washed out with *boiling water*. If a paper handkerchief is used this must at once be placed in a waterproof bag, [illegible] rnt and the bag washed daily.

[illegible] if ever used for expectoration, should be [illegible] *e they have time to become dry*, or into a [illegible] directed by the doctor.

4. *Wet* cleansing of rooms, particularly of bedrooms occupied by sick persons, should be substituted for "dusting" and sweeping.

5. *Sunlight* and *fresh air* are the greatest enemies of infection. Every patient should sleep with his bedroom window *open* top and bottom, a screc [illegible] y, to prevent direct draught and the [illegible] bedroom.

N.B.—The pat [illegible] *ainer* by the above precautions, as his recovery is retarded and frequently prevented by renewed infection derived from his own expectoration.

6. Persons in good health have little reason to fear the infection of consumption. Over-fatigue, *intemperance, bad air, dusty occupations and dirty rooms favour consumption.*

APPENDIX II.

DEAR SIR,—I beg to inform you that   of
was admitted to the phthisis ward of the sanatorium on   and
discharged on   .

The following is a report of   condition:—

	On admission.	When discharged.
Weight...	—	—
Expectoration—		
(a) Amount	—	—
(b) Microscopically	—	—
Temperature	—	—
General condition	—	—
Remarks	—	

The patient has been instructed to resume attendance under you.

Yours faithfully,

Medical Officer of Health.

NOTE ON THE PROBABLE MODE OF INFECTION BY THE SO-CALLED FILARIA PERSTANS, AND ON THE PROBABILITY THAT THIS ORGANISM REALLY BELONGS TO THE GENUS TYLENCHUS (BASTIAN).

By H. CHARLTON BASTIAN, M.D. LOND., F.R.S.,
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IN the reports of the Sleeping Sickness Commission, No. 3, recently issued by the Royal Society, Dr. Cuthbert Christy calls attention to, and illustrates by maps, the distribution of Filaria perstans in East Equatorial Africa so far as it was known up to Oct. 23rd, 1902, and shows how that area corresponds almost exactly with the area of "distribution of the banana cultivation and clothed people." The attire of the natives in these regions, as described by him, is so scanty and of such a kind as to make it difficult to suppose that the fact of its existence could favour infection of the natives by the nematoids in question. But great importance undoubtedly attaches to the striking similarity between the area of cultivation of the banana and that of the prevalence of Filaria perstans in East Equatorial Africa. The fact of this coincidence in area is all the more significant, seeing that the information supplied by Dr. Christy does not, as he says, favour the notion that mosquitoes are agents concerned with the causation and distribution of this disease. Dr. Christy says: "Wherever the banana is growing in the districts I have examined there is found the F. perstans. What is more, it would seem that where the banana is most luxuriant (on Mount Elgon) there the inhabitants are most infected (60 to 70 per cent. and the blood crowded). The converse of this is also clearly correct, as will be seen by the map—viz., where the banana is scarce (in Southern Bukedi and Northern Kavirondo, in which latter place it is only grown within the mud walls of the small villages) there the percentage of F. perstans is small; and where there is no banana there is no F. perstans." The uses to which the banana is put are thus referred to: "The banana when fully grown is peeled and boiled or steamed in an earthenware pot. The leaves are used for plates and dishes, for thatching houses, for clothing, for mattresses to sleep upon, for pipe stems, and many other things. The skins of the fruit are used for making soap, and the stems for rope, &c."

The author makes no allusion to, and perhaps may not be aware of, the fact that free nematoids are frequently to be found in the roots, stems, and leaves of plants, and that they are known to be found in the roots at least of the banana as it grows in Eastern Australia. The best known of the plants to be affected in this way are wheat, the common teasel, the feverfew, the cucumber, and the banana. In my "Monograph on the Anguillulidæ or Free Nematoids"[1] after referring to the mode of infection by wheat owing to the young nematoids passing from the earth in which wheat is growing, getting between the sheaths of its leaves and proceeding thence onwards to the immature germens, I say: "In several grasses I have found different species of these free nematoids lying between the inner sheaths of the leaves near the bottom of the culm. In Festuca elatior I met with no less than five species in this situation belonging to the genera Dorylaimus, Mononchus, and Plectus; and in the stalks of wheat and oats removed from stubble fields I have frequently found specimens either of these genera or of Rhabditis, Aphelenchus, or Cephalobus."

Many years since I ascertained that the nematoids which were to be found in the nodosities on the roots of certain cucumber plants in this country belonged to the genus Tylenchus and some years later (in 1879) I received an interesting pamphlet from Dr. Bancroft of Brisbane on certain "Diseases of Animals and Plants" from which I found that a very similar disease was common in Queensland among the bananas. From the merely rough figures there given of the worms it seemed to me evident that these nodose roots of the banana are also infested by nematoids of the genus Tylenchus. The females become so enormously distended with embryos that they assume somewhat the shape of a

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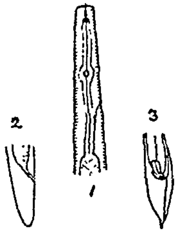
[1] Transactions of the Linnæan Society, vol. xxv., 1865, p. 88.

Florence oil flask, so that Dr. Bancroft spoke of them as "flask-worms." I have found the mature worms, also assuming the same kind of shape in cucumber roots and from the same cause. Dr. Bancroft makes the following statements in regard to the occurrence of such worms in the roots of bananas: "The root of Musa maculata breaks off where the worm colony has been located; the sugar banana is more tolerant of the parasite and does not break off. This latter is the species of Musa which produces the fruit now sold in Brisbane." He found nematoids also in vine roots, in the roots of many culinary vegetables, and likewise in various weeds, particularly Sida retusa.

Sir Patrick Manson in his description of the embryo of Filaria perstans in Quain's "Dictionary of Medicine"[2] says, in regard to one of its distinguishing characters: "From time to time a minute tongue-like organ is rapidly protruded and withdrawn at the extremity of the cephalic end." A reference to Plate X., Figs 109, 112, 115, and 117 of my "Monograph [illegible] four species of [illegible] spear-like bod[illegible] genera of free nematoids in which bodies at all like this are met with are Aphelenchus and Dorylaimus. I reproduce drawings of the anterior and posterior extremities of one of these species of Tylenchus which was many years ago discovered by me in "sandy soil, about the rootlets of oats." This species has a blunt posterior extremity, such as is found in Filaria perstans, but in others it is sharp and pointed, as in the closely allied Filaria demarquayi.



Tylenchus obtusus. 1, Anterior extremity of worm. 2 Posterior extremity of female. 3, Posterior extremity of male. × 150 diameters.

The probability seems great, therefore, that the embryos found in the blood of human beings and known as Filaria perstans are really embryos of some species of Tylenchus; and further, as a species of Tylenchus has been found in Queensland by Dr. Bancroft infesting the roots of bananas, it seems quite possible, looking to the facts revealed by Dr. Christy, that a *nematoid belonging to the same genus* may infest the roots and perhaps different parts of the bananas in Equatorial Africa.

The modes in which the natives use the different parts of the banana [illegible] m to be infected either (1) thro[illegible] the alimentary canal. The fa[illegible] penetrate in some way through the skin—perhaps through the perspiratory ducts—is, I think, clearly shown by what is known concerning the parts of the body principally infested by Dracunculus. The evidence seems overwhelmingly in favour of this mode of infection, as originally suggested by H J Carter, and against a now commonly *received* view that the nematoids, through the intermediation of a cyclops, are taken into the alimentary canal with unfiltered water that has been drunk. It is quite possible that in some experimental investigations in which the young of the guinea worm were associated with these entomostraca, Fedschenko, the author of this latter view, may have seen young nematoids bore their way into the abdominal cavity of a cyclops, and yet his hypothesis as to the manner in which human beings become infected with guinea-worms may be wholly incorrect. As I long ago pointed out in a memoir on the guinea-worm[4] infection through the alimentary canal cannot reasonably account for the well-attested fact that in four-fifths or more of the whole number of recorded cases of guinea-worm the worms have been situated in the subcutaneous tissue of the lower extremities, and mostly below the knees, of persons who are in the habit of going about with bare legs and feet. The exceptions, too, are of a kind to prove the rule of external contamination, seeing that the Indian water-carriers, who bear on their backs water in eather bags or in skins, are not infrequently affected with guinea-worms in such exceptional situations as the back and the loins. Major Harrington of the Indian Medical Service, who has seen more than 200 cases of guinea-worm disease, is also firmly convinced that the views now commonly received are erroneous, and he has added further evidence in support of Carter's original view and direct external contamination.[5]

Although, therefore, I freely grant the possibility of such direct infection through the skin I think the evidence in regard to Filaria perstans points strongly to infection through the alimentary canal. The use by the natives of the banana leaves for "plates and dishes" would probably be one means by which infection could be thus brought about.[6] There is the further fact that in the cases where mature specimens of the so called Filaria perstans have been found, they have been situated not in the subcutaneous tissue in any part of the body but, as Dr. G. C Low says,[7] within the abdomen and "in the connective tissues of the mesentery." Without much difficulty we may imagine some of the young worms, taken into the stomach with food, boring their way through the intestinal canal after the fashion of embryo trichinæ and then, instead of wandering far, settling in the mesentery or in adjacent parts and there undergoing development. From such a situation it would be very easy for the young worms to pass into the lymph stream and thence into the blood.

I have thought it well to direct attention to the possible mode of infection and to the real nature of the organism hitherto known as Filaria perstans in order that those who have the opportunity may search for worms in connexion with the banana having the characters of Tylenchus, may ascertain whether *they are to be found in the fæces, and may* also look to the characters of the œsophagus and pharynx in any of the adult specimens of the so-called Filaria perstans that may be found in the mesentery.

My observations, as well as those of others, on the free nematoids have made it perfectly clear that a parasitic stage *forms no necessary* part of their life-history, though many of the forms may and do become parasitic in a more or less accidental manner—partly infecting various portions of plants and partly different tissues or organs of various animals. As facultative parasites, whether in animals or in plants, they commonly attain a very much larger size than that which characterises them in the free state, and instead of producing a small number of ova or embryos they commonly give birth to these in prodigious quantities. The most notable example of both these peculiarities is to be found in the guinea-worm.

Manchester-square, W.

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[2] Article: Filaria Sanguinis Hominis.

[3] This is described by me (loc. cit., p. 125) as "an exertile spear with a trilobed base."

[4] Transactions of the Linnæan Society, vol. xxiv., 1864, pp. 102 and 106.

[5] *Brit* Med Jour., vol. i., 1899, p. 146.

[6] Of course, leaves of young plants or leaves proceeding from the stem at no great distance from the root would be most likely to be [illegible] The chance of infection in the [illegible] pp. 613-619).

[7] Reports of the Sleeping Sickness Commission, No. 2. p. 69.

NEW WORKHOUSE INFIRMARY.—The new workhouse infirmary for Swansea was formally opened on Jan. 18th in the presence of a large gathering. The building, which has taken about two years in construction, has been erected at a cost of £17,730.

THE OSIRIS PRIZE.—The *Electrical Engineer* of Jan. 22nd states that this valuable prize has just been divided between Madame Curie (in recognition of her part in the discovery of radium) and Professor Branly (inventor of the system of wireless telegraphy which bears his name). The prize is worth £4000 and was offered by M. Osiris in 1900 for any work which should be deemed useful for mankind by the members of the Syndicate of the Paris Press. The prize remained undistributed until it was recently suggested by the founder that the claims of the Curie family should be considered. It was then decided that Madame Curie should receive £2400 and that the remaining £1600 should go to Professor Branly.

A CONTRIBUTION TO THE AFTER-HISTORY OF GASTRIC ULCER.

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THE majority of the histories recorded in this paper were collected a few years ago with the object of obtaining some definite information as to the ultimate ending of cases of gastric ulcer treated on medical lines—using the term "gastric ulcer" to include the various painful sequelæ as well as the actual continuance of ulceration. The inquiry was made in the hope that its results would be of service in pointing out the cases suitable for surgical interference and the stage, if any, at which it is fair to assume that medical treatment has finally failed to bring about a cure of the condition. I happened at the time to have under my care in the out-patient room an unusual number of cases of long standing and of very intractable nature, in which medical treatment both in the wards and outside had served only to procure temporary relief; and I was much impressed with the miserable mental and physical condition of the patients. On the other hand, the mortality of the operation of gastro-jejunostomy—at any rate at that time—was very considerable and it seemed to me to be a serious step to recommend so grave an operation unless the condition which it was intended to remedy either was one with a material death-rate of its own or involved permanent crippling of the life of the patient. I therefore tried to obtain some answer to the following questions: 1. What proportion of cases of gastric ulcer treated medically end ultimately in death apart from those which terminate fatally in the first attack? 2. What proportion end sooner or later in complete recovery? 3. What becomes of those cases which end neither in death, from the complaint nor in complete recovery? 4. At what point of the case may medical treatment be considered as having failed and what is the bearing of relapse on this question?

As I could not succeed in obtaining from medical literature any satisfactory answer to these questions, I gained the permission of my senior colleagues at the Birmingham General Hospital to follow up the after-history of the cases of gastric ulcer which had been treated in the medical wards of that hospital from the beginning of 1892 to the middle of 1899 and it is by their kindness that I am enabled to publish the results of the inquiry. My questions were sent out some three years ago and the near limit was fixed so as to give a minimum after-history of about two years. Any attempt to go further back than 1892 was found to be useless owing to the shifting character of the poorer population of this town. I have recently endeavoured to bring the inquiry up to date but have only succeeded in obtaining further particulars in 16 of the cases. Only female cases have been inquired into on account of the greater certainty of the diagnosis obtaining in women. Moreover, only those cases have been accepted in which there has been a definite history of hæmatemesis and, with one exception, the date of the first hæmorrhage has been taken as that of the onset of the disorder. I am, of course, aware that the mere occurrence of hæmatemesis, even when accompanied with gastric pain and vomiting, is not conclusive proof of the existence of an ulcer, and it is, moreover, highly probable that in many of the cases ulceration had taken place some time before the occurrence of hæmorrhage. But worse fallacies would probably have been involved in any other method of selection.

During the seven and a half years covered by my first inquiry there were admitted into the medical wards of the hospital 89 women with hæmatemesis diagnosed as due to gastric ulcer, excluding the cases ending fatally in the first attack—the indications for surgical treatment in the latter being already well established. Of these 89 cases I succeeded in tracing the after-history of 47 and of 16 I have recently obtained further particulars. The length of time over which the histories extend varies within wide limits and the value of the results necessarily diminishes with the shortening of the period covered. Starting from the first hæmatemesis the length of the cases has been as follows: from two to three years, 12 cases; three to four years, five cases; four to five years, nine cases; five to six years, seven cases; six to seven years, three cases; seven to eight years, two cases; eight to nine years, one case; nine to 10 years, three cases; 10 to 11 years, two cases; and 12 to 13 years, three cases.

1. *Mortality* (Cases 1 and 2).—At the time at which the main inquiry was made two deaths only had occurred, though a third patient died in hospital from ruptured pyosalpinx a few months after answering my questions and was found post mortem to have an extreme hour-glass contraction of the stomach. Of the two former deaths, one only was directly due to the gastric ulcer—whether from perforation or not I cannot say, the note merely stating that the patient had died from "a return of her former complaint." The second patient died from acute tuberculosis four and a half years after her hæmatemesis, but I have no information as to the continuance of gastric symptoms in the interval. No further death was recorded in the 16 cases of which I have obtained recent particulars. The direct mortality from gastric ulcer has therefore, as far as my information extends, amounted to only 2 1 per cent. But it would of course be altogether *inaccurate to represent this as the final mortality of the* series, for the length of history in a large number of the cases is insufficient to warrant any conclusion as to their ultimate ending. Moreover, the fact of death may quite possibly be one element in causing the disappearance of the untraced cases, and the mortality in these may therefore not improbably amount to a considerably larger figure. It occurred to me, however, that if any material proportion of these untraced cases had died directly from the effects of their disease a record of some, at least, would probably be found in the registers of the other hospitals of the town. But no such record was forthcoming. By the courtesy of the staff of the Queen's Hospital I was permitted to examine the in-patient register of that hospital, with the result that I did not find the names of any of the 42 untraced patients amongst either the admissions for, or the deaths from, gastric ulcer. I have also searched the surgical register of the General Hospital and have been allowed to examine the record of deaths occurring in the Birmingham Workhouse Infirmary, with the same result. Yet the disasters of gastric ulcer are of so urgent a nature as to lead to admission into hospital to an extent probably out of proportion to their actual frequency and I cannot but think that if death were a common result some at least of the untraced patients would have died in one or other of the public hospitals of the town. It must, however, be remembered that I am dealing exclusively with patients of the female sex and that marriage, with its consequent change of name, is one possible cause for loss of identity. It is further worth noting that out of 6040 deaths occurring in the workhouse infirmary from 1892 to 1901 only two were attributed to gastric ulcer. There were, of course, other deaths from "peritonitis," and it is possible or probable that some of these may have been due to the perforation of a gastric ulcer, especially as post-mortem examinations had not, I believe, been made in all the cases. But it seems clear at all events that gastric ulcer is not a frequent cause of death in the institution and the net result of my inquiries is to show that, apart from first attacks, the disorder is one with but a small mortality.

2. *Recovery* (Cases 3 to 15).—13, or 27·7 per cent, of the patients, reported themselves as having had no return of their complaint. One, however, remarked that she was still liable to indigestion if she took improper food and another is seldom able to take meat without discomfort. The period of immunity has been as follows: from two to three years, two cases; three to four years, two cases; four to five years, four cases; five to six years, three cases; six to seven years, one case; and seven to eight years, one case. Seven other patients, or 14 9 per cent., suffered from stomach symptoms of some severity or from definite relapses for periods after their first attack varying from a few months to six years, but had remained in good health when the last report was obtained for a sufficient length of time to justify their inclusion in the class of recoveries. The histories of these patients are of especial interest from their bearing on the question of recovery after relapse. I therefore give their reports in detail.

Duration[1] *five to six years.*—Case 16. Admitted for hæmatemesis, October, 1898. "Always in pain" (December,

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[1] From first hæmatemesis to last report.

1900). "No further attack and am now in good health" (December, 1903). Case 17. Hæmatemesis, April, 1898. Admitted for pain and vomiting, October, 1898. "Three slight attacks in autumn of 1899, spring of 1900, and October, 1900." No further return (December, 1903).

Duration six to seven years.—Case 18. Admitted for hæmatemesis, May, 1897. "One attack, February, 1898. Since in good health" (December, 1903). Case 19. Admitted for hæmatemesis, October, 1897. "Several attacks of sickness for three months after leaving hospital. No further return" (December, 1903).

Duration nine to ten years.—Case 20. First hæmatemesis, 1891; second, July, 1894. Out-patient for pain and vomiting, November, 1897, and May, 1898. "Now in good health" (December, 1900).

Duration 10 to 11 years.—Case 21. Hæmatemesis, 1890. Admitted with pain but no hæmorrhage, January, 1892. No further return (December, 1900).

Duration 12 to 13 years.—Case 22. First hæmatemesis, 1891. Admitted with relapse and hæmorrhage, July, 1893. "Three further attacks in next two and a half years. Since in good health" (December, 1903).

One other patient (Case 23) technically comes under this heading inasmuch as she is now free from all stomach symptoms though suffering for several years after her discharge from the hospital. But her inclusion is inadmissible owing to the performance of an operation—possibly gastro-jejunostomy—four or five years ago. She was admitted into hospital for hæmatemesis in October, 1894. In December, 1900, she reported that she had "suffered severely with her stomach since," that an operation had been performed in 1899, but that she was "now suffering and unable to work and could not digest any solid food." In December, 1903, however, her medical attendant informed me that she had completely recovered and was now free from all gastric symptoms. In this case the connexion between the operation and recovery is by no means established but it is only fair to add that I have not been able to satisfy myself from the hospital records that the operation of gastro jejunostomy was certainly that which was performed. Omitting this case from the calculation it will be seen that in the other seven the periods of immunity have amounted at the time of the last report to from two to three years in two cases, from three to four years in one case, and from five to six and six to seven years in two cases each. Accepting these cases as cured there is therefore a total of 20 recoveries, or 42·6 per cent.

3. *Doubtful cases.*—Three cases, or 6·4 per cent., are difficult to classify. The patients have all suffered from stomach symptoms since their discharge with periods of more or less complete immunity, but either the interval since the last attack has not been of sufficient length to afford ground for any definite conclusion as to the ultimate results or the evidence of recovery given is unsatisfactory. The reports are as follows:—

Duration two to three years.—Case 24. First hæmatemesis, 1898. Admitted with relapse and hæmorrhage, June, 1899. No further return but still gets occasional attacks of "bile" (December, 1900).

Duration five to six years.—Case 25. Admitted for hæmatemesis, January, 1895. Readmitted for relapse without hæmorrhage, March, 1898. "Very sharp attack, April, 1899, which left her very weak for some time and slight attacks in between. Now fairly well" (December, 1900).

Duration 10 to 11 years.—Case 26. Hæmatemesis, 1889. Admitted with relapse and slight hæmorrhage, December, 1894. "Very ill in 1896 and slight attacks since, but at present time feeling stronger" (December, 1900).

4. *Non-recovery.*—The remaining 21 patients, or 44·7 per cent., reported themselves as still suffering from their complaint. In the first seven cases there were repeated attacks of pain and vomiting, with or without hæmatemesis, but with intervals of comparative immunity.

Duration two to three years.—Case 27. Admitted for hæmatemesis, September, 1898; remained well for six months. Then readmission for severe hæmorrhage. Second relapse, but without hæmorrhage, October, 1900. This patient died from ruptured pyosalpinx and was found to have hour-glass contraction of the stomach. Case 28. Admitted for hæmatemesis, November, 1898. Remained fairly well till beginning of 1900. Readmitted March, 1900. Frequent attacks since August (December, 1900).

Duration four to five years.—Case 29. Admitted for hæmatemesis, May, 1899. Readmitted with relapse and hæmorrhage, March, 1901. Two or three attacks since (December, 1903). Case 30. Admitted with hæmatemesis, April, 1899. Three slight attacks in latter part of 1900 and beginning of 1901. Two "bad attacks" in July, 1901, and October, 1903. Case 31. Admitted with hæmatemesis, March, 1896. In workhouse infirmary with hæmorrhage, 1897, and remained there for 17 months. Out-patient with relapse, January, 1900.

Duration seven to eight years.—Case 32. First hæmatemesis, 1896. Admitted with relapse and slight hæmorrhage, March, 1898. Three subsequent attacks, three weeks after leaving hospital, November, 1898, and March, 1900. Now in good health (December, 1900). "Complaint returns every winter. At hospital with same complaint last November" (December, 1903).

Duration nine to ten years.—Case 33. First hæmatemesis end of 1894. Admitted February, 1895. Readmitted for hæmorrhage, July, 1898. "Still suffering from pains in stomach" (December, 1900). Third hæmatemesis, 1901, and "still gets occasional attacks of vomiting with intense pain" (December, 1903).

The remaining 14 patients were suffering more or less continuously.

Duration two to three years.—Case 34. Admitted for hæmatemesis, April, 1898. "Never lost the pain since, but no more hæmorrhage." Last seen October, 1900, with bad attack of pain and vomiting. Case 35. Admitted for hæmatemesis, October, 1898. "Continuously bad since leaving hospital. Sickness every day except for first six weeks" (December, 1900). Case 36. Admitted for hæmatemesis, October, 1898. Pain and vomiting at intervals for next year, with readmission for second hæmatemesis. "Several attacks since leaving hospital and never well for long." Out-patient with recurrence of pain, November, 1900, and again in April, 1901. Case 37. Admitted for hæmatemesis, November, 1898. "Two attacks since leaving hospital and just out of Homœopathic Hospital. Has suffered a great deal of late and is unable to follow her employment" (December, 1900). Case 38. Admitted for hæmatemesis, November, 1898. "Complaint returned a week after leaving hospital. The attacks have been so frequent that she could not say how many she has had" (December, 1900). Case 39. Admitted for hæmatemesis, January, 1899. Two attacks since leaving hospital in January and July, 1900. Has been under out-patient treatment "suffering great pain and does so now" (April, 1901). Case 40. Admitted for hæmatemesis, February, 1899. "The attacks are very frequent. Can only keep very small quantities of milk on her stomach" (April, 1901).

Duration three to four years.—Case 41. Admitted for hæmatemesis, February, 1897. "No return, but has been a great sufferer from indigestion and is now under treatment" (December, 1900).

Duration four to five years.—Case 42. Admitted for hæmatemesis, July, 1896. "Moderate pain on and off since leaving hospital. Last week or two, increase in pain" (December, 1900). Case 43. Admitted for hæmatemesis, March, 1899. "Fairly well for the first 12 months, but since has felt very bad and sick about every fortnight. Has had a turn lately" (April, 1901). "Still keeps very bad" (December, 1903).

Duration five to six years.—Case 44. Admitted for pain without hæmorrhage, 1895. "Continuously bad since." Readmitted for profuse hæmorrhage, January, 1900, and again admitted, December, 1900, with bad pain and doubtful slight hæmorrhage. "Life not worth living."

Duration eight to nine years.—Case 45. Admitted for hæmatemesis, February, 1895. Second hæmorrhage, July, 1896, and readmission with pain, November, 1896. Then

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last three years,

ment at the hospital" (December, 1903).

Duration 12 to 13 years.—Case 46. Probable slight hæmatemesis, 1891 or 1892. Admitted for severe pain, October, 1893. Readmitted, February, 1894, and October, 1896, the latter time for hæmatemesis. "A good many attacks since then" (December, 1900). "Still frequen pain and vomiting. More hæmorrhage three weeks ago" (December, 1903). Case 47. First hæmatemesis ab 1889. Further attacks, but without hæmorrhage, 1 and 1895. Admitted with pain and vomiting, Decem 1896. "Several attacks since leaving hospital. Bad a with hæmorrhage four months ago" (December, 1900). "Not been free from her complaint for any length of time. Now under treatment and is told that she is in danger of a relapse" (December, 1903).

To sum up, the result of the inquiry is as follows. The direct mortality from the disorder has amounted to 2·1 per cent. 4·3 per cent. of the patients have died from intercurrent disorders, one of them with serious organic disease of her stomach. 42·6 per cent. have ended in recovery—unless the subsequent history disproves the statement—27·7 per cent. having had but a single attack and 14·9 per cent. having recovered after one or more relapses. One patient recovered after operation but is not included in the calculation. 6·4 per cent. of the patients cannot as yet be classified; they appear to be on the border-line between recovery and continuance of the disorder and may eventually fall into either class. Finally, 44·7 per cent. were suffering from stomach symptoms of more or less severity at the time of the last report, 14·9 per cent. getting repeated and definite attacks with intervals of immunity and 29·8 per cent. suffering from almost continuous pain. It would be unwise to attempt to draw any definite conclusion as to the number of cases in the last group in which it would be advisable to recommend surgical interference. In all probability some of the patients will ultimately recover, whilst it is quite possible that a direct examination of others would show that their reports have erred on the side of exaggeration. In others, again, the amount of suffering appears to be comparatively small. But on the whole, I am inclined to think that the group affords some justification for the plea often made in favour of more frequent resort to operative interference in persistent cases of gastric ulcer, always providing that the mortality of the operation can be kept at a really low figure and that the results in the cases operated on can be shown to be permanently good. But at the present time further evidence on both these points seems to me to be needed.

5 *Bearing of relapse on recovery.*—It will be remembered that seven patients suffered from continuance of their symptoms for some time after leaving the hospital but had remained in good health for periods amounting to two or more years at the time of their last report. In two of these there was a second hæmorrhage; in the others it is either clear that no further hæmorrhage had taken place with the recurrence of symptoms or the report is indefinite on the point. Of the three border-line cases hæmorrhage recurred in two and in the third is uncertain. On the other hand, of the 21 cases of non-recovery a further hæmorrhage took place with certainty in nine whilst in a tenth case the history of the second hæmorrhage is not quite trustworthy. In two of the cases a third hæmorrhage is recorded. Of the 13 definite instances of recurrent hæmorrhage, therefore, only two are included in the list of recoveries. It thus appears that whilst a second hæmorrhage by no means precludes recovery it is a serious factor in prognosis, pointing at least to a considerable prolongation of the period of active symptoms.

The following list gives the intervals between the first and second hæmorrhages Recoveries: from one to two years, one case; and from two to three years, one case. Non-recoveries: under one year, two cases; from one to two years, five cases; and from three to four years, two cases. Finally, the period over which symptoms continued to recur in the seven cases of ultimate recovery has been as follows: three months, one case; nine months, one case; from one to two years, one case; from two to three years, two cases; from four to five years, one case; and from seven to eight years, one case.

Birmingham.

Queen Charlotte's Lying-in Hospital, Marylebone Road, N.W.—Madame Melba has promised to sing at a concert in aid of Queen Charlotte's Hospital to be held at Queen's Hall on the afternoon of Thursday, May 5th.

Education of Town Children in Village Schools.—Mr O. C. Lempriere of the Red House, Marston Moor, York, has sent us a pamphlet in which he suggests that children of the poorer classes at present educated in the schools of the large towns should be sent to the country for 10½ months of every year Mr. Lempriere thinks that physical, mental, and moral advantages would result to the child if this scheme were adopted, while the consequent building up of the national health, physique, intelligence, and *morale* would be an advantage to the State.

NOTES ON A CASE OF OTITIC CEREBELLAR ABSCESS; EXTRADURAL ABSCESS; TREPHINING MIDDLE AND POSTERIOR FOSSÆ; RECOVERY.

By PERCY JAKINS, M.D. Durh.,

SURGEON TO THE CENTRAL LONDON THROAT AND EAR HOSPITAL

A girl, aged 12 years, attended the out-patient clinic of the Central London Throat and Ear Hospital on June 15th, 1903, complaining of offensive purulent discharge from the left ear, accompanied by severe pain over the left mastoid and in the posterior triangle, nausea, vomiting, and vertigo of four days' duration. The patient was admitted at once as an urgent case and the following history was elicited. The discharge had followed scarlet fever nine months previously. There had been no decided pain till four days previously. The left meatal canal was found to be filled with a yellowish-green offensive discharge which when removed revealed granulations. There were partial right facial paralysis, slight want of grip in the right hand (the patient was right-handed), both knee-jerks were exaggerated, the left pupil was dilated, there were left optic neuritis and drowsiness, the tongue was foul, the temperature was subnormal (97·2° F.), and the pulse was 72. There was a distinct tuberculous history but no specific treatment had been adopted. On the following day (the 16th) the patient was placed under chloroform and the part having been shaved and rendered aseptic a semilunar incision was made over the left mastoid from the lower border of the temporal muscle to the apex of the mastoid; the periosteum was then reflected and the cartilaginous part of the meatus was separated from the osseous. The ear having been drawn forward the antrum was explored and was found to contain granulation tissue; this was curetted and a purulent discharge was seen issuing from a small aperture in the upper and posterior part of the antrum. This wound was enlarged and about a teaspoonful of very offensive pus was liberated; the bone around, which was very soft and carious, was freely curetted. During the next five days the patient improved considerably, the nausea, vomiting, and vertigo partially subsiding and the morning temperature falling to normal and the evening to subnormal. On the 22nd the discharge from the mastoid became very offensive, the patient getting drowsy; her head was retracted, the lips were parted, the pupils were dilated, especially the left, the grip in the right hand was feeble, cerebration was very slow, the tongue was very foul, the temperature was 98°, the pulse was 60 and intermittent, and the respirations were 24 On the next day the symptoms were more defined; the patient could not speak, was unconscious except when pinched, and could not understand what was said; the right hand was absolutely helpless, the hands were cold, and the head was hanging over the edge of the pillow. On the 24th the former mastoid incision was reopened and more carious bone was removed from the roof of the antrum, but no pus was found coming from the former situation. The skin incision was then carried upwards, the temporal muscle was divided, the periosteum was reflected, and a piece of bone was removed by the trephine, these procedures causing rather severe bleeding. On removing the disc of bone the dura mater was found to be very tense, bulging into the trephine opening, but there was no pulsation; the dura mater was divided and a long thin knife was passed into the cerebral tissues. No pus was found and serous fluid escaped freely The bulging of the cerebral tissue into the trephine opening resisted all efforts at replacement. It was now decided to explore the posterior fossa. A curved incision was made through the scalp down to the bone, one and a half inches behind and a quarter of an inch below the centre of the external auditory meatus. A disc of bone was removed by the trephine exposing the dura mater; this had a healthy appearance; it did not protrude but pulsated distinctly. The dura mater was divided and a long thin knife was passed inwards and upwards in the direction of the original opening in the posterior antral wall with the result that pus of a very fœtid kind flowed over the knife. A Horsley's pus seeker was next used and the abscess cavity was entirely emptied of its contents to the extent of about 12 drachms of pus. The point to be here noticed is that as soon as the pus was evacuated the protrusion of the brain substance into the opening of the middle fossa subsided and pulsation reappeared. Fine catgut sutures were used to stitch the dura mater in the temporo-sphenoidal opening, three medium-sized drainage-tubes were inserted into the opening into the posterior fossa, and the superficial tissues were all stitched up. On the next day the patient was quite conscious, talking and answering questions at once, the grip in the right hand improved, there was no nausea or vertigo, and the paralysis of the limb was gone. The pupils were still dilated, the temperature was normal, the pulse was 88, the respirations were 22, and she wished to eat and to read. The discharge being abundant the patient was advised to lie on the affected side so as to aid drainage. On July 1st the stitches were all removed and the opening of the temporo-sphenoidal region was perfectly healed. On the 15th exuberant [illegible] ring with free drainage; this [illegible] ([illegible] an anæsthetic) and the tubes were re-inserted; this secured better drainage and for the next ten days the patient was very well; there was no paralysis, nausea, vomiting, or vertigo; she ate and slept [illegible] was absolutely [illegible] was regular, [illegible] patient complained of slight headache and nausea; the temperature was subnormal and the pulse was 98, but on regulation of diet and attention to the primæ viæ these symptoms disappeared and she was sent to the Royal Free Hospital as the wards of the hospital were closed for the annual cleaning. She was discharged from the Royal Free Hospital the following week, all symptoms having disappeared except the facial paralysis and slight discharge from the external meatus. On August 13th a slight fluctuating swelling was noticed over the posterior fossa opening, which on being incised let free a little pus which appeared superficial. On Sept. 6th the patient for the last three weeks had had slight oozings from the opening that was made on August 13th. She seemed to be quite well but was not gaining flesh; the temperature was subnormal and the pulse was slow. She was readmitted into the Central London Throat and Ear Hospital and on Sept. 8th it was decided to explore the posterior fossa and on re-opening the wound and incising the thickened dura mater about one ounce of purulent pus was evacuated. One large drainage-tube was inserted and removed and cleansed every day. The drainage-tube was gradually shortened and on Nov. 2nd it was left out altogether. On the 13th the patient was discharged cured, facial paralysis being the only symptom left.

This case shows the advisability, in cases of suppuration of the middle ear which do not yield rapidly to treatment, of the radical operation being seriously considered, not only with a view of arresting the discharge from which the patient suffers but to prevent deeper mischief, such as cerebral abscess. During the last few years I have operated upon four cases of cerebral abscess caused by extension of mischief from the middle ear. For the full notes of the foregoing and for the necessary after attention upon the patient I am indebted to my colleague Dr. A. Wylie.

Harley-street, W.

THE EFFICIENT TREATMENT OF CARDIAC FAILURE.[1]

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IT has been told of a late distinguished physician that having met a practitioner in consultation on one occasion who had failed to discover a pericarditis, and who was somewhat chagrined thereat, he told him he might console himself as, had he discovered it, he might have attempted to treat it. Had this great physician's praise of therapeutic inactivity ceased with this narrative it would have been well, but he exalted the wisdom of doing nothing in the presence of imperfect knowledge to such a pitch of virtue that the profession of medicine as distinct from surgery was largely reduced within the sphere of his influence to rational attempts at diagnosis and prognosis, the inculcation of a moderate life, and the supervision of esculents, all doubtless very important considerations in their own place, as everyone knows. It is true that in many departments of medicine our knowledge is still so imperfect, and must probably for long remain so, that we have still to step in the house of life with gentle tread in these regions, but there are also many contingencies with which we have to grapple in which life is lost by the baneful influence of a timidity in therapeutics begotten of a pessimistic *non possumus* emanating from some authoritative source and paralysing for a time at least the therapeutic activity of considerable sections of the profession. Masterly inactivity has its place, but so also has fighting to a finish, be it in victory or in defeat.

There is no department of medicine over which the physician has more control than that which holds diseases and disorders of the heart, and it is in this sphere that I wish to preach a greater, yet always circumspect, boldness of treatment than at times obtains. By heart disease in this connexion I mean all conditions of the central organ of circulation which directly or indirectly, immediately or remotely, sometimes or often, threaten the extinction of human life. It follows from this definition that the emergencies we have to contend with may be (1) of an acute, rapidly arising, and sudden character; and (2) of a chronic nature and acquiring, as we may term it, an ingravescent urgency. Both kinds must necessarily be associated with cardiac failure, threatened or accomplished, which may or may not end in death—an event only too commonly observed in these circumstances. The scope of our subject and the limits of time will preclude its detailed consideration, but I shall, I trust, be able to lay before you a sufficiently comprehensive survey of the whole matter.

It is not my intention to burden the text of this paper by narrating cases but to emphasise the value of boldness as a principle or line of conduct in the treatment of heart disease, in certain typical circumstances, all precautions being taken to render a bold initiative likely to succeed and not to be more disastrous than the grave and respectful witnessing by the expectant physician of the practically unaided attempts of life to escape from the grasp of death. Any occasion for a rational boldness of conduct implies some urgency in the situation to be contended with. In using the term in connexion with the treatment of heart disease it is, of course, not my intention to urge that we should declare ourselves foolish by rushing in with a multifarious armamentarium where the wise would fear to tread but to lay before you some considerations which I hope will be freely discussed and which have been borne in upon me by my own experience and a study of that of others—that is, by my own failures and successes and a consideration of those of others. This has impressed me with the belief that while it may often be our duty to change our methods, and even to retreat from a given line of attack, there are circumstances when such a strategic movement towards the rear may seem highly advisable, but in which, nevertheless, the only possibility of saving the patient consists in our going boldly forward with all the forces at our command and pressing the attack quite home; in which, in short, the cartridge has to be cast aside and the enemy's entrenchments cleared with the bayonet if possible. Indeed, to continue our military metaphor, when brought face to face with any case of heart disease we must of necessity in the first instance reconnoitre the threatened danger carefully and learn what we can of its nature. We must endeavour, in other words, to make a correct diagnosis and to estimate aright, so far as possible, the conditions of the neural, muscular, hæmic, and mechanical factors in the action of the heart and the relation of that constantly acting organ to surrounding parts. We may find on examination so little amiss that the enemy, instead of being boldly attacked, may merely require to be kept under observation, or even ignored. Before doing this, however, we must be certain, if possible, that a more serious, and it [illegible] trivial [illegible] resem- [illegible] matism bling those of [illegible] revealed their true nature by an which have suddenly [illegible] and it may be fatal angina onset of unmistakeable [illegible] pectoris. Such signs after middle age or in advanced life should never, especially in the presence of signs of organic lesion, be dismissed as trivial even though the ignorant may regard us as alarmists. On the other hand, even in the presence of gross disease, if we can satisfy ourselves that with all the signs of disease in the cardiac mechanism present the evidences are absent of any serious disturbance of the innervation, muscular force, or blood distribution of the case before us, it may be our duty to advise a continuance of even strenuous exertion, to avoid that mental dissolution of energy to which cardiac patients are peculiarly prone. In acting thus it is quite possible that the ignorant who at one time regarded us as alarmists may now consider us rash. But the force of criticism depends upon its source and those only who have smelt a good deal of powder can speak with weight of the conditions of battle. It may require some boldness in practice to lay a man by the heels in bed who imagines he is fit to run a race and to send another on a journey who imagines he ought to go to bed, but this is not the chief form of boldness in the treatment of heart disease with which we have to deal this evening, although these are considerations which must be mentioned in discussing the efficient treatment of cardiac failure.

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[1] A paper read [illegible] The portion dealing [illegible] West London Medi [illegible] title "On Boldness [illegible]

The danger which threatens life from heart disease may, as I have remarked, be of unexpected and sudden origin and may have to be met by the physician with the promptitude which characterises the surgeon's action in dealing, for example, with an obstructed trachea or a severed blood vessel. Or it may be more or less remote or ingravescent in its urgency, when the physician, like the surgeon contemplating an unavoidable but not immediate operation, has time to observe his patient and to prepare him for the ordeal. This similarity of the situation of the surgeon and physician in these circumstances is one which I desire to emphasise this evening. The surgeon knows his instruments and the anatomy of the patient and has confidence in his power in a large proportion of cases of coming to the rescue with beneficial effect. Let us also, as physicians, in dealing with accomplished or threatened cardiac failure imitate the precision and cautious boldness of his methods instead of preaching the doctrine of a depressing therapeutic pessimism and uttering platitudes concerning the inscrutability of natural processes, or by action inscribe ourselves on the roll of the disciples of that popular professor the late Mr. Micawber of expectant memory, and we shall find both the utility of our endeavours and the dignity of our office enhanced. No more than the surgeon can the physician be invariably successful; but let us, like him, by the forethought of our preparations and the skilful use of the powerful agents we, like him, possess, act when occasion arises with all the trenchancy, boldness, and hopefulness which the conditions involved permit and we may deserve the success we cannot always command. You will not expect me, for it would within the limits of our time be an impossible task, to deal fully with the etiology of cardiac failure and to set forth at length the factors which determine our action in particular instances, but there are some considerations which must, however cursorily, be mentioned in any rational consideration of so important a topic as the management of serious heart disease.

We are all aware that when the contractile efforts of the heart removed from the body—the eviscerated heart—begin to fail they may be urged to fresh vigour by stimulants applied to the organ. We also know that the rapidity with which the irritability of the cardiac muscle responds to such stimuli bears some relation not only to the state of the muscle fibre but also to the shock preceding the evisceration of the organ and conveyed to it through the nervous system or to the nature of some poison causing death which has reached it by the channel of the blood. I do not wish you to conclude that my knowledge of the effect of shock on the heart is based upon what the prejudiced and ignorant critics of scientific inquiry term ruthless vivisection for the satisfaction of scientific curiosity. For although the most precious possessions of mankind have come to them, with the sanction of an all-wise Creator, through the medium of one or other form of sacrifice or suffering justified by the greater good accruing, he libels us, at times fortunately to his very material cost, who accuses us of inflicting wanton suffering on dumb animals to wrest even a valuable secret from nature.

My own knowledge of the effect of shock on the eviscerated heart is based upon experience, not in what "our friends the enemy" term the shambles of the physiological laboratory, but in shambles where Gog and Magog prepare the Gargantuan feasts of which the antivivisectionist has doubtless on many occasions been a proud participant. However observed, it may be assumed as fact that, given a tolerably active muscle, the extinction of its irritability bears a direct relation to the shock of disease or injury which precedes cardiac failure. It is more easy, therefore, other things being equal, to revive the unshocked than the shocked heart which has failed, and for the same reason the sudden overthrow of a heart by, for example, the rupture of a valve is a more dangerous event than the gradual extinction of its power by slowly established and progressive disease. In proportion to such degree and urgency of failure must be the always circumspect and cautious but nevertheless necessary promptitude and boldness of our own endeavours to relieve or to save, provided the physical conditions involved admit of the display of boldness without aggravating the situation.

The object of these preliminary remarks is that in dealing with any case of cardiac failure we must bear in mind the predominance of the rôle which may be played by one or other, or by one or more, of the four factors in cardiac action already mentioned—namely, the neural, the muscular, the hæmic, and the more purely mechanical factors in such action, and by our estimate of the nature and gravity of their disorder be guided in the choice of bold action or alert observation. In the first place let us consider shortly the influence and management of disorder of the *neural* factor.

Cardiac failure to a profound degree may be observed without pain but not necessarily without shock. The profound syncope, for example, attending violent explosions of epilepsy cannot be dissociated from shock, although it is the shock which attends surgical operations under anæsthesia, for the cerebral cortex is placed out of action by the vascular mechanism which produces the fit before the actual convulsions occur. Again, in debilitated states slight exertion or excitement or a minimum of suffering may have the same effect, the resulting phenomena being to all intents, though for a time only when recovery takes place, those of death. During such a phase of cardiac failure, whatever other agents we may use such as nitrite of amyl, atropine, or strychnine, we must promptly endeavour to rescue the patient by the employment of artificial respiration with forcible expiratory compression, which succeeds in proportion to the resiliency of the thorax, or by this means in conjunction with firm but careful and rhythmical tongue traction. Experience alone can fully impress one with the value of these methods in these circumstances. But a still more dreaded expression of disorder of the neural factor in cardiac failure is that attending cardiac shock when the cortex is in full activity. The dead heart of angina pectoris is a flaccid diastolic heart, the failure of which may be progressively determined by auscultation during the agony. In such cases rescue, when possible, is only to be effected by the prompt use of the rapidly acting nitrites, and failing these by the sufficient employment of morphine and atropine, or by these combined if need be with volatile anæsthetics. The late Dr. George Balfour of Edinburgh, the keynote of whose methods in the treatment of cardiac failure was one of boldness and who would not have lived in vain had he done nothing more than preach this doctrine, used large doses of morphine and even induced complete anæsthesia by chloroform in these circumstances. It may be necessary here also to employ artificial respiration and tongue traction, but the anginous patient requiring this manœuvre is usually past remedy. The future probably holds some still bolder method as a last resource which professional opinion is not yet ripe to approve. Many of you must have read with interest the account published in THE LANCET[2] of Mr. Arbuthnot Lane's successful restoration of a heart to action which had failed during an operation for appendicitis by passing his hand through the wound and grasping it through the diaphragm and thus stimulating it into renewed action. Just as we find we can rouse the eviscerated heart to contraction by manipulation, so Mr. Lane in this case roused the heart which had recently ceased to beat into fresh life. Such an experience, rendered possible by the study of life in the lower animals, is a fact which the reasonable antivivisectionist might well ponder, if such a being is to be found. It is difficult even with a flaccid abdomen to reach the heart adequately through the epigastrium, but it is well to attempt it, and it is certainly likely to be quite as successful as any pin-prick of the organ by acupuncture through the chest wall and is less likely to do mischief. It would be well always to add this manœuvre to the other details of artificial respiration during the expiratory phase. What I have said as regards the treatment of the shock attending cardiac pain applies likewise to that attending rupture of the valves or the condition so often simulating this—namely, a sudden rupture of established compensation in chronic valvular disease.

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[2] THE LANCET, Nov. 22nd (p. 1397) and 29th (p. 1476), 1902.

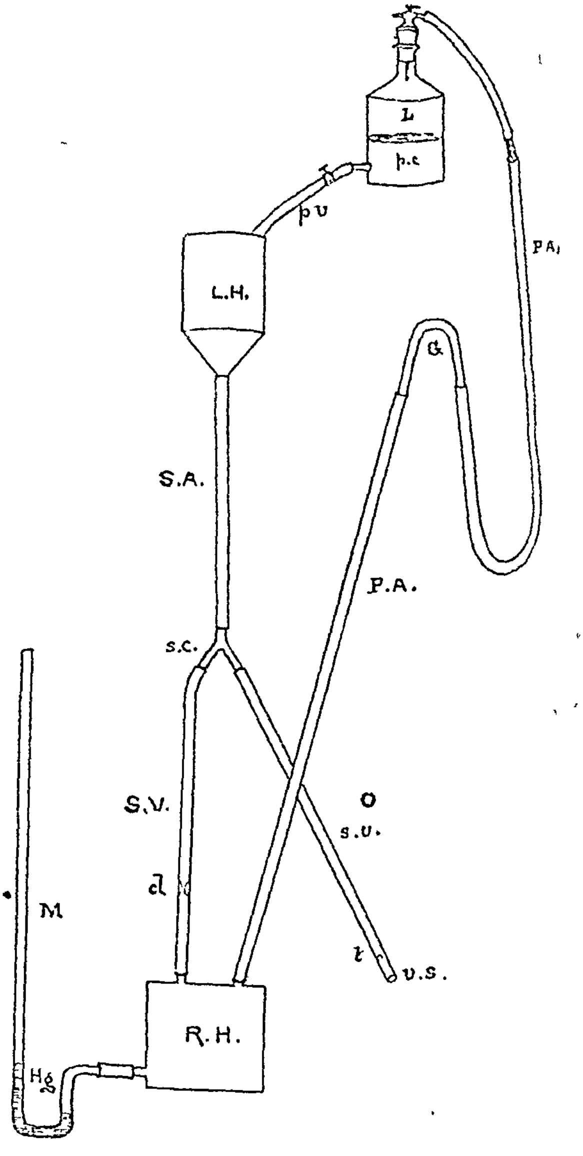
There are other neural accidents of a less urgent character which unchecked may lead to a fatal issue to which I might refer but the time at our disposal is short. I may, however, mention the tachycardia which may overtake a tolerably well-compensated heart affected with valvular disease. In such cases there are two agencies the value of which has been impressed on me by experience. The most important of these is opium in sufficient doses. The other is ice. This may be applied to the head, nucha, or præcordia with such continuousness as the state of the patient may permit. Dr. J. Barr of Liverpool appears to have found ice most useful as a vaso-motor stimulant (or sedative according as we may regard it) when applied to the abdomen. There are theoretical reasons which render the success of this procedure probable.

In considering the efficient treatment of the *muscular* factor in cardiac failure we have to deal with a subject of the greatest practical interest. By the muscular factor on this occasion I mean the cardiac muscle particularly and exclude from consideration the influence of the general musculature of the body upon the circulation, a detail which is of importance chiefly in less urgent phases of cardiac failure than those in which a judicious boldness in treatment is usually called for. A patient is before us with the evidences of progressive cardiac failure. He is dyspnœic in various degree, his cardiac area of percussion dulness is increased, he shows the evidences in the heart, and it may be in other organs, of the effects of a residual accumulation of blood within the chambers of the heart, right or left, or both right and left. We put him to bed, unload his primæ viæ, take into consideration his age and the general state of his vessels and other organs, as well as the particular condition of his heart endocardially, myocardially, and pericardially. Finding, as we unfortunately do in many cases, that rest, dietetics, and general care have, unaided, little effect on his state we try the influence of small doses of the infusion or tincture or powder of the well-known pharmacological antagonists to cardiac dilatation and imperfect systole, if the degree of failure and the anatomical conditions involved permit such tentative tactics; or combine these in certain circumstances with mercurials, neural stimulants, or more powerful vaso-motor agents such as the nitrites. Fortunately, in many instances these measures are soon successful. Not every abdominal case comes to laparotomy, nor does every cardiac case require a bolder method of control. But, on the other hand, many cases unfortunately *do* require such treatment if they are not to be allowed to drift into hopeless failure. The danger *then* lies, as in abdominal cases, in delay, with merely palliative treatment and the Micawber-like expectancy of something beneficial resulting from a timid use of agents and a plaintive hope in the recuperative powers of unaided nature. A large majority of the cases of which I speak are met with in people either young or in the prime of life. The vessels are pliant, the reserve force of the patient is commensurate with his development and age, but the golden bowl is broken and the silver cord is in imminent peril of being loosed unless we can effectively come to the aid of the labouring heart and surcharged venous system. How are we to do this? How is the patient to be prepared for the action of an agent which, held by the physician in a vial, is as powerful for good and for evil as the knife which the surgeon holds in *his* hand? The vascular system of the patient must be relieved of a certain quantity of blood if necessary, varying from four ounces to half a pint, by venesection which, for reasons we shall consider later, is more effective than leeching; his anasarcous limbs must be drained by Southey's tubes or by incision; fluid effusion hampering respiration in the chest or the abdomen must be removed so far as possible, and all this, not with any great expectation of these measures being successful in themselves, although this is not impossible, but to prepare the medical patient, as the surgeon prepares the surgical patient, for the use of the powerful agents which the physician has at his command. These are digitalis or its congeners in action, and of these, I think, we shall all agree that digitalis itself and strophanthus are the most useful, as they are also the most powerful, and that their tinctures, which contain all the active principles of the plant, are the most efficient as they are also the least irritating preparations of the drugs in cases suitable for the method I am about to describe. Small doses then in the majority of cases have previously been tried in vain; so far as we can determine the vessels in the case before us are sufficiently normal, and the heart itself is not tethered by firm extraneous adhesion so far as we can discover, or notably obstructed by aortic aneurysm, or occluded at its main arterial outlet by excessive obstructive disease of the aortic valves. These are important considerations in the use of digitalis, the employment of which in heart disease bears a certain analogy to the beneficial use of ergot in atony or fatigue of the uterus. I need not remind those with the obstetric experience of many of my present audience that the guide in the confident administration of sufficient doses of ergot is the presence or absence of a free uterine and pelvic outlet. So, too, from the bold use of digitalis we expect most benefit when the atonic heart lies behind an unobstructed aortic orifice and normal aorta. The fœtus in the one case and the blood in the other can then be shot out with least risk or distress to the propelling organ. Favourable conditions then being present, so far as we can determine, the drug may be given in ingravescent cardiac failure in 15, 20, 25, or 30 minim doses in the adult, at intervals of four hours, until a definite effect is produced upon the action, force, and capacity of the dilated and failing heart. This may require the continuous administration, in such doses, of the combined tinctures of strophanthus and digitalis, until [illegible] been taken. The patient may [illegible] he course but his labouring [illegible] oothly, and with increased [illegible] experience a relief to which he has been a stranger for weeks. This effect may be permanent or it may be transient. The physician is not always successful any more than the surgeon. But both may have worked for and merited a success which they cannot always command. In laying emphasis on this principle of boldness in the use of the digitalis group in appropriate circumstances I am quite aware that I am not inculcating a new doctrine, for it is as old as Withering who first used digitalis with success in certain dropsies, of the organic cause of which he was ignorant, and it has been taught with no uncertain voice by others, and notably in recent times by the late Dr. George Balfour. But I defy anyone to say that it is not a doctrine which has been preached in large measure to deaf ears and we still find physicians, whether specialists or generalists, employing from week to week doses and methods which are little calculated to affect the action of the heart which underlies the clinical state I have described. One reason for which this bolder method of treating ingravescent cardiac failure has met with less recognition from the profession than it is, in my opinion, certain, sooner or later to secure, is, I think, the want of precision in the instructions given by those who have used it, in the preparation of the patient, and his management during the period of treatment. It must be admitted that this method is more conveniently carried out in hospital than in private practice and for obvious reasons. The family physician, from the multifarious calls made upon his attention, time, and strength, may find it, for geographical and other reasons, difficult to supervise and to carry out all these manœuvres with the care and closeness of observation which they require. But if it be the right course to pursue, and experience has convinced me that it is, in the circumstances I have briefly sketched, is the patient to be accommodated to the convenience of the practitioner or must the latter accommodate himself to the needs of the patient? This question requires no answer. Let the practitioner, therefore, have a trustworthy assistant or send his patient, rich or poor, where the method can be efficiently and as safely as possible put into execution. But, as a matter of fact, it is quite within the power of the practitioner to supervise his case sufficiently if he be provided with good nurses.

In an age of baths and exercises and foreign travel, all of which are very suitable for minor degrees of cardiac failure or after established convalescence from it, I am aware that it will take some time to convince the public, and if I may say so, with all due deference, some sections of the profession also, of the necessity or desirability of such boldness in the treatment of heart disease as I have described. But I believe the days of the expectant physician's influence in this sphere are numbered, be he consultant or general practitioner, and that a few years will find these views generally accepted and acted upon. The task of testing the value of this bolder and as I believe more effectual method, however, and the education of the public to an admission of its necessity, which is commensurate with its gravity, lies largely in the hands of him who comes first in contact with these cases—namely, the general practitioner of medicine, who has already been the successful because convinced missionary of the necessity for boldness in the no more and no less important field of abdominal disease. But it may be asked, Is there not an element of unjustifiable risk in this rapid method of obtaining cardiac control? I answer no, provided such suitable cases as I have indicated be selected for submission to it and the effects of the drug be carefully watched, as is quite possible provided sufficient skilled supervison be exercised. I shall, however, answer the question also by asking another. Has the surgeon alone a prescriptive right to assume responsibility and to take risks in the attempt to save life? It may be contended that the cases are not parallel and that the surgeon operates when operation may not be free from danger to restore diseased parts to a normal condition or to a condition compatible with long life and that he has more control over the means he employs, whereas the physician is dealing with an already diseased organ which cannot be expected to be wholly restored to a normal state and lets loose forces which he cannot control so well. So much may be granted, but the physician's action if successful may restore comparative health, it may be for years or for a period, very beneficial to the patient and those dependent upon him, while the control of his agent merely requires skill and carefulness. The only alternative, moreover, is, in the majority of the cases in which the method is applicable, to stand aside and to watch the patient slowly or suddenly die or to play with remedies in an ineffective and irrational manner and in the fatuous hope that the *vis medicatrix naturæ* may in some inexplicable manner come to the rescue. Such a course, I submit, is neither fair to the patient nor becoming in the educated physician. But it is unnecessary to labour this point further, for the anæsthetist must, I presume, be regarded as a physician rather than a surgeon, and he daily administers an agent at considerable risk and sometimes with a fatal result, which is justified by his attempt to spare the patient pain and to shield him from shock under surgical procedures, at times still more dangerous, though justifiable, than the anæsthetic. The method of obtaining rapid control of the heart in cardiac failure is justified on the same grounds as the action of the surgeon—namely, the attempt to save life, while the risk the physician assumes in this matter is not greater than that assumed by the anæsthetist daily and indeed not so great. But the capable anæsthetist keeps a sharp eye on his patient's condition while submitting him to the drug and the physician who undertakes the rapid control of the failing heart must do so likewise.

The efficient treatment of the *hæmic* factor in cardiac failure takes into consideration the quality, quantity, and distribution of the blood. The influence of occlusion of the coronary vessels has, I think, been over-estimated. As Dr. S. West and Mr. J. Wickham Legg have shown, and as I also demonstrated in my lectures on Cardiac Pain,[3] the very free anastomosis between the right and left vessels secures an adequate blood-supply to the cardiac muscle even when one vessel is practically obliterated. It would be manifestly impossible to enter into a full discussion even of what we know of the quality of the blood in cardiac failure on the present occasion. The important bacteriological aspect of this question is still largely a matter of future knowledge although good work has already begun in this sphere. Nor is it necessary for me to insist on the importance of securing free aeration of the blood in acute cases, and if possible a normal percentage of hæmoglobin in the blood of chronic cases and in debilitated patients. Oxygen gas, so much used to-day, was also employed so long ago as in Hope's day in cyanosed conditions, although Hope probably never witnessed the installation of three or four cylinders of gas at the same time in the same bedroom, as has been suggested, to hiss health into the veins of ailing Crœsus. Like others, I have used Brin's cylinders, but confess that I have never convinced myself that in cardiac cases they had any advantage over an open window, except perhaps in a turgidly cyanotic phase of cardiac failure. *Inflammation of the heart* may be regarded as directly due to defective quality of blood in most cases, but as serum therapy is still largely a question for the future to develop and to apply we must at present content ourselves with treating as efficiently as possible not the cause but the effects of inflammation. The remedy or assuaging agent *par excellence* in this condition is opium. Its efficient use requires its administration in sufficient quantity. The adult probably has frequently sufficient doses administered to him. But the fear of over-action often stays our hand when dealing with children. I desire to state that personal experience has convinced me that children the subjects of carditis can profitably take much larger doses of opium with benefit than is usually supposed, and that either by the mouth or hypodermically.

As regards the regulation of the *quantity* of the blood in cardiac failure one would have supposed that there would now have existed a general consent as to the mechanics if not the utility of blood-letting. But a recent correspondence in the medical press reveals the fact that there are those who question the possibility of temporarily relieving the distension of an over replete right ventricle by this means. Were this scepticism limited to the question of the utility of *leeching* for this purpose I should feel disposed to agree with those who maintain that blood-letting in cardiac failure is of questionable use. But such consent



Scheme of the systemic and pulmonary circulation.

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[3] THE LANCET, Nov. 1st (p. 1173), 8th (p. 1246), 15th (p. 1306), and 29th (p. 1443), 1902.

would not apply to the efficacy of venesection in this condition. The difference is due, I believe, to the greater *rapidity* with which blood going to the right heart is withdrawn by venesection as compared with leeching. It is a point which might easily be determined by the experimental physiologist if the opinion of the clinician were called in question. But the mechanical possibility may be demonstrated on a simple schema of the circulation which I have been in the habit of employing for the purpose. L H. is a cistern containing water and representing the left heart; S.A. is the systemic arterial circulation; the Y-tube S C represents the systemic capillaries; while S.V. is the systemic venous system and *s v.* a vein capable of representing a venesected vessel *v s.*, and the perforation *l* at its distal end a leech bite. R H. is the right heart to which is attached a manometer M, containing a column of mercury Hg. From R.H. issues the pulmonary artery P.A., passing to the bottle L., capable of being exhausted of air by aspiration and representing the lungs. Water aspirated into it, *p c*, represents the pulmonary capillaries, the fluid in which may find issue by a neck at the bottom of the bottle and be returned by tubing representing the pulmonary veins *p v.* to the left heart. G is a glass U-tube which prevents collapse of the tubing if the lung bottle be placed at a lower level than the heart as it may be with equal effect. If when the apparatus is filled with water and the mercury stands at a certain level the vein *s v.* be left open at its lower end *v.s.* (venesection) the mercury rapidly falls in the manometer. If the end of *s v.* be held, but water be allowed to escape from the small hole *l* (leeching), the fall in the manometer is slow and slight. If with *s.v.* closed and the aspirated bottle in action the continuity of S V. be momentarily interrupted at *cl.* the mercury at once rapidly falls in the manometer just as it does when venesection is represented. If S V. be left uninterrupted the full aspiration of the lung L. has only small effect upon the mercurial manometer. The conclusion I draw from this simple experiment is that venesection is equivalent to interrupted inflow and that both enable the right ventricle and lungs to act more easily than when the former is over-distended, while the slow reduction of the total quantity of blood by leeching effects this purpose in a proportionately small degree. There is, indeed, a certain analogy between the processes for filling and emptying the venous system. Intracellular transfusion may be compared with leeching and intravenous transfusion with venesection. But intracellular transfusion is, on the whole, more potent in accomplishing the object for which it is undertaken than is leeching in that at which it aims to effect. Venesection is a temporary measure calculated *to relieve the over-distended right heart*, just as catheterism relieves an over-distended bladder. The quantity of blood, I need scarcely add, may also be reduced and regulated by a reduction and regulation of the quantity of food and drink and by the posture of the body as regards its accumulation in the *right side of the heart. Graduated feeding* is as important as graduated exercises when the latter are indicated. But this general truth does not impair the value of venesection as a temporary expedient.

By the *mechanical* factor in the action of the heart in this connexion I mean the *valves* of the organ. The influence of these structures when defective on cardiac failure and upon methods of treatment is proportionate to their degree of imperfection, whether the defect be obstructive or permit regurgitation. There are also important differences in the manner in which they manifest their influence according as the defective structure is in the left or the right side of the heart. While all the valves are naturally of prime importance for the due circulation of the blood, the aortic valve is probably the most important mechanical factor in the left and the tricuspid in the right heart. *The brunt of systemic* arterial pressure is spent on the valve at the aortic orifice, while dextro cardiac propulsion through the homologous pulmonary arterial opening is largely aided by the inspiratory action of the lungs. Consequently failure at the aortic valve alone exerts a more important dilative influence on the left ventricle than failure of the pulmonary arterial valve alone does upon the right ventricle, when these conditions are gradually established by disease and are not due to sudden rupture. So much importance did Dr. George Balfour[4] attribute to the influence of incompetency in the aortic cusps that he advised even orthopnœic aortic cases to be placed recumbent, if necessary by the aid of chloroform, and kept so by means of opiates. That the physics of the circulation indicate this position as very advantageous in the circumstances cannot be doubted when it is possible to secure it without adding unduly to the repletion of the right heart and pulmonary circuit. But it must be borne in mind that the orthopnœic position itself is one not only indicative of the need for more air by the lungs but also of the necessity for less blood in those organs. Both these objects are accomplished in a measure by that position of the body. The uprightness of the venous column impedes the rapid entrance of blood into the right heart and utilises the liver reservoir, while the upright thorax permits of fuller respiration. This being so, treatment on the lines already indicated, when dealing with the muscular factor which may render recumbency more gradually attainable, appears in some cases to be preferable to Dr. Balfour's still bolder procedure.

A degree of tricuspid reflux appears to be a normal condition and the anatomical details of that valve seem to be adapted to allow of a certain amount of regurgitation into the systemic veins by a form of safety-valve action. This point has been exhaustively studied by Dr. G. A. Gibson of Edinburgh[5] who is of opinion that physiological and clinical experience support this view. But as the last barrier between the heart and the systemic venous system, the tricuspid valve may be considered as on a par in importance with the first barrier against arterial reflux—namely, the aortic cusps. When in cardiac failure their overthrow is consentaneous the triumph of death over life is all but accomplished. Even then, however, the patient *may* be snatched from the jaws of death by an efficient use of the lancet and digitalis, but a favourable issue cannot be predicted with any assurance. Defects in the right heart alone, or cardiac failure from purely pulmonary causes, such as pneumonia and emphysema, tend to deplete the left heart. The left ventricle of a fatal pneumonia, if the muscle have any native vigour, is found post mortem to be a small and contracted ventricle. It is the left ventricle of asphyxia in which true cardiac failure plays only a secondary part unless the heart be otherwise degenerated or defective. For this reason the digitalis group requires to be used with great caution, if at all, in these circumstances. If these drugs tend to afford a more powerful right ventricular systole, they also lessen the absorptive power of the left ventricle by decreasing its capacity. The bold use of digitalis is, therefore, contra-indicated in theory and prejudical in practice in such cases.

In conclusion, I feel that I should offer some apology for any apparent dogmatism in the manner in which I have treated this important subject and for not having referred more copiously to the work of others. The scope of the subject, the necessity for brevity, and the fact that I have only related what I have also witnessed and drawn conclusions by weighing actual experience must form my excuse for any appearance of having disregarded the published views of others.

Upper Berkeley-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON THE TREATMENT OF TUBERCULOUS MENINGITIS.

By JAMES GILROY, M.B., C.M., L.F.P.S. GLASG.

ON Oct. 10th, 1902, I was called to attend a girl, aged four years. On examination I found that she had widely dilated pupils, a slight elevation of temperature, and a very marked tendency to somnolence, from which condition she woke up at intervals and cried. The mother told me that the child had formerly been bright and cheerful but that of late she had become peevish and fretful. She vomited a good deal and it was evident that the meninges were engorged and the presumption from the family history was strongly in favour of the disease being tuberculous. I attended this case daily, or almost so, until Dec. 22nd following and although for five weeks or more I was prepared for the worst, yet she eventually made an excellent recovery and is at the present moment quite well.

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[4] Clinical Lectures on Diseases of the Heart, p 103. Third edition.

[5] Diseases of the Heart and Aorta, p. 610.

The method of treatment adopted was one which I have found successful in similar cases and the drug to which I give the major part of the credit was the liquid extract of ergot. I administered it in a four-ounce mixture along with bromide of potassium, iodide of potassium, and syrup of orange, the dose being five minims every two hours. The scalp was also shaved and at first ice was applied at intervals as indicated, after which an ointment of iodoform and vaseline was gently spread on the bare scalp every day.

On Dec. 11th, 1902, I was called to a married woman, aged 50 years, who had somewhat suddenly become delirious. A few days previously she had complained of dyspeptic symptoms. When I saw her she was lifting the coverlet of the bed to throw out some foreign guests which she thought apparently were present in myriads. The symptoms suggested delirium tremens, but knowing the patient well I was convinced that some other explanation must be sought for, and I accordingly came to the conclusion that the case was one of Bell's mania as described by Osler. Here also, just as with the previous patient, a combination of liquid extract of ergot with bromide and iodide of potassium acted wonderfully. The patient made a good recovery in three weeks.

Waterbeck, Dumfriesshire.

NOTE ON THE VALUE OF ICHTHYOL IN TUBERCULOUS GLANDS.

By WALKER OVEREND, M.A., M.D. OXON.,

LATE SENIOR PHYSICIAN TO THE TOTTENHAM HOSPITAL.

ICHTHYOL has been administered with obvious benefit in many instances where suppuration has seemed imminent or has already taken place. I have prescribed it, in the form of two-grain pills, during the initial stages of erysipelas and have been much impressed by its power of inducing resolution of the disease. It has also been recommended in pulmonary phthisis when the cavities have become septic on account of the fact that it favours the process of desiccation. The above considerations led me to give it a trial in the treatment of the enlarged tuberculous glands of childhood. In a child, eight years of age, after an attack of influenza, a large mass which reached the size of a walnut formed on each side of the trapezius and appeared to be on the point of suppuration. There was some difficulty, however, in the exhibition of the drug. Even in solution with a large quantity of glycerine and peppermint the draught is particularly nauseous; in the liquid form ichthyol can hardly be taken. Made into a jelly with gelatine it is not much better and children, as a rule, will neither take pills nor capsules, but they will readily take tablets when made thin and rather smaller than the ordinary size. Tablets of ferrichthyol, each containing one and a half grains of ichthyol combined with iron, probably carbonate or reduced iron, were given three times a day after meals. After four days the glands began to diminish; in a fortnight the enlargements had vanished. The effect of each tablet was shown by a lowering of the temperature. In a boy, five years of age, sent to the seaside with a very large tuberculous lump beneath the jaw, perfect resolution was accomplished after a month's trial of the drug and the question of surgical interference was dismissed after the first fortnight. The treatment was supplemented by an open air life and an appropriate diet in which meat, milk, and eggs, with stimulant, were essentials. The effect, however, is much more marked if the glands have only recently become enlarged. But ichthyol should be given a trial in the chronic tuberculous glands of adults. At times these are liable to suppurate and to discharge for weeks together; ichthyol often checks the secretion and closes the sore.

Clacton-on-Sea.

A CASE OF ACUTE STRANGULATION OF THE INTESTINE BY AN INTRAPERITONEAL BAND.

By HAROLD A. EASTON, M.R.C.S. ENG., L.R.C.P. LOND.

THE patient, a man, aged 61 years, was admitted into the Croydon union infirmary on Dec. 5th, 1902, with abdominal pain (which he referred to the region of the umbilicus), vomiting, and absolute constipation. The onset had been quite sudden on Dec. 1st. The abdomen was moderately distended and tender; palpation revealed nothing in the shape of a tumour mass. There were an inguinal hernia upon the right side and a scrotal hernia upon the left side, both of which, however, were reducible. On his arrival he was in a state of collapse but improved considerably when morphia was administered hypodermically. I diagnosed volvulus and operated on the following morning. Upon opening the peritoneal cavity an offensive smell was perceived. That portion of the small intestine which came into view was deeply congested and hæmorrhagic in places. The hernial orifices were occupied by gut which was easily withdrawn. There was nothing abnormal in the left iliac fossa but the intestine was tied down in the right iliac fossa and on pulling the incision over to the right side the cause of the obstruction was found to be a band about a twelfth of an inch in diameter. This I divided, ligaturing the divided ends. The constricted portion was no more than congested. As the condition of the patient forbade it I made no search for the connexions of the band but proceeded with the suturing of the abdominal incision. I noticed that the mesentery was drawn-looking and evidently cicatricial. There was no recent peritonitis. The peritoneal cavity contained a small amount of a dark, offensive-smelling liquid. The patient died an hour later.

At the necropsy the divided band was identified by means of the ligatures about the cut ends and its attachments were traced to the right internal abdominal ring. Previously to division it formed a loop immediately above and behind the entrance to the inguinal canal, which contained a hernia, and it was surprising that strangulation had been deferred for so many years. The attached ends were about half an inch apart and the total length of the band was one and a half inches. The peritoneum in this situation in particular was cicatricial and just above the attachment of the fatal loop a knuckle of ileum was firmly and closely adherent to it. The patient was evidently the subject of old peritonitis of obscure origin since his appendix was high up and free.

Thornton Heath, Surrey.

THE VERMIFORM APPENDIX ADHERENT IN A HERNIAL SAC AND SIMULATING AN ENCYSTED HYDROCELE OF THE CORD.

By ARTHUR EVANS, M.S. LOND., F.R.C.S. ENG.,

ASSISTANT SURGEON, WESTMINSTER HOSPITAL; SURGEON TO OUT-PATIENTS, SEAMEN'S HOSPITAL, ROYAL ALBERT DOCK.

A BOY, aged three and a half years, was admitted into the Westminster Hospital on April 12th, 1902, with the following history. A swelling was first noticed in the right inguinal region when he was a year old; it was then about the size of a walnut. By the end of a year it had developed into a tubular swelling. The child had worn a truss from the time when the swelling was first noticed. The mother stated that the truss occasionally gave him so much pain that she was obliged to remove, it and this was sometimes the case even when the hernia was, so far as she knew, reduced. Nine months before I saw the boy he had been seen by another surgeon who made the note: "Swelling right inguinal region, probably encysted hydrocele of the cord, with a hernia, reducible." He recommended operation but the surgeon into whose wards the child was admitted did not deem an operation necessary, so the child was fitted with a truss and sent out. When I saw the patient there was a right inguinal hernia which was reducible, but on reduction an elongated swelling, which extended into the inguinal canal, could be felt lying above the testicle and separated from it by an interval; it was hard and rounded and felt like a very tense cyst; it could be reduced almost into the inguinal canal but not quite. It was considered to be a hydrocele of the cord and on account of the pain which the truss occasioned the child I decided to cure the hernia and the cyst of the cord at the same time.

On opening the hernial sac the appendix and the cæcum were found; the appendix was about four inches long, with its apex attached by a fibrous band to the lowest part of the sac. The appendix was amputated close to the cæcum, the gut was returned into the abdomen, and the hernial sac with the adherent appendix was dissected out and removed. Three sutures were put into the abdominal ring, the wound was sewn up and a collodion dressing applied; the stitches were removed on the ninth day. The child left the hospital on the nineteenth day after the operation and has remained quite well up to the present time (1903).

Queen Anne-street, W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

MILL ROAD INFIRMARY, LIVERPOOL.

TWO CASES OF TUBAL GESTATION; RUPTURE; ABDOMINAL SECTION; RECOVERY.

(Under the care of Dr. NATHAN RAW.)

FOR the notes of the cases we are indebted to Dr. E. N. Cunliffe, assistant medical officer.

CASE 1.—The patient was a woman, aged 26 years. Two previous pregnancies had occurred, one seven years before and the other two years. The former pregnancy was followed by some inflammation of the appendages with pain in the iliac regions. The second pregnancy was apparently quite normal. The patient continued to suckle her second child till two or three days before admission. The periods were regular till September, 1903, when sudden cessation occurred. Total amenorrhœa followed without any irregular hæmorrhages. No other signs of pregnancy were noticed and pain was entirely absent. On Nov. 21st the patient was suddenly seized with a violent "cramp-like" pain in the lower part of the abdomen and she vomited. There was also a discharge of blood per vaginam. The pain increased in severity and on the 24th she presented herself for admission to the hospital.

On admission the patient was extremely blanched and collapsed. The pulse was of poor volume, low tension and thready, and could not be counted at the wrist. The heart beats were feeble and averaged 130 per minute. There were excessive pain and tenderness over the lower part of the abdomen which was somewhat distended. On vaginal examination a soft, boggy mass was felt in Douglas's pouch, pushing forwards a slightly enlarged uterus. A diagnosis of ruptured ectopic gestation was made and the advisability of immediate operation was considered. The extreme collapse of the patient and the consideration that the rupture must have happened three days previously led to operation being deferred till next morning. In the interval stimulants were cautiously exhibited and a quarter of a grain of morphine was administered to relieve the obvious anxiety.

Dr. Raw performed the operation. The condition of the patient had somewhat improved, the pulse being palpable at the wrist and averaging 126 beats per minute. Ether was chosen as the anæsthetic and was excellently borne. A median incision about three inches long was employed and on opening the abdomen there was an immediate outrush of a very large quantity of recent blood containing numerous clots. The blood was rapidly evacuated and the uterus and its appendages were explored. The left tube was apparently normal but the right tube was dilated and had evidently been the site of a tubal pregnancy. Its pedicle was defined and secured by double interlocking silk ligatures. The distal portion of the tube was then excised, together with the ovary. The abdominal cavity was irrigated with large quantities of hot normal saline solution. Bleeding had now ceased and the abdominal wound was stitched up in the usual way, a Keith's glass drainage-tube being left in the lower end of the wound. The condition of the patient materially improved during the operation, the pulse-rate falling to 112 beats per minute with improvement of its volume and tension. No fœtus was discovered although careful search was made in the blood clots evacuated. Examination of the diseased tube showed a mass of membranes containing an amniotic sac protruding apparently through the ostium abdominale so that the case was probably one of tubal abortion rather than tubal rupture. The further progress calls for little comment except to remark that the rectal administration of normal saline solution to the amount of a pint five or six times a day was of great service in alleviating a distressing thirst. The Keith's tube was left in for four days and caused a little local suppuration and the production of a sinus that healed with some difficulty. The patient was discharged cured on Jan. 9th.

CASE 2.—The patient was a woman, aged 28 years. She had had two previous pregnancies. The first, 11 years ago, terminated in the delivery at the sixth month of a still born child. The second confinement took place 15 months later, a normal, healthy child being delivered. There was no history of any pelvic trouble and during the following nine years the periods were quite regular. Two months before admission amenorrhœa established itself but this was the only sign of pregnancy observed by the patient. No breast changes were noted and morning sickness was absent. No vaginal hæmorrhages occurred and no pain was felt. On Nov. 26th she was suddenly seized with a violent pain in the lower part of the abdomen more marked on the left side. It was accompanied by vomiting and a discharge of blood per vaginam. The pain became more severe and on the 28th she walked to the receiving room of the hospital and was admitted.

On admission the patient was anæmic but no marked collapse was present though she complained of severe pain. The pulse averaged 72 beats per minute and was of low tension though of fair volume and regular rhythm. On examination there was tenderness over the lower zone of the abdomen on the left side and bimanual examination showed a well-marked, tender swelling of small size present in the left vaginal fornix. The uterus was slightly enlarged, the external os being occluded. In the absence of any signs of a persisting hæmorrhage it was decided to adopt an expectant line of treatment. A one grain opium pill was administered to allay pain and next day her condition was materially improved, little pain being complained of. The pain disappeared entirely in the course of two or three days and abdominal palpation was readily borne and showed no definite swelling though bimanually thickening to the left side of the uterus was still felt. On the night of Dec. 7th without any apparent cause the patient was suddenly seized with a recurrence of severe pain in the left iliac region. She became blanched and collapsed and vomited and the pulse, though never exceeding 70 beats per minute, became thin and thready. It was decided to operate and she was taken to the theatre without delay.

Dr. Raw performed the operation. The same incision and procedures were adopted as in Case 1. The abdomen appeared to contain even more blood than in the preceding case. The left tube was found to be the site of a ruptured ectopic gestation and was removed, together with the ovary, after securely ligaturing the pedicle. Numerous adhesions, evidently formed at the time of the first rupture, were necessarily broken down in the removal of the tube and considerable oozing took place. One or two large vessels were secured and tied and all further bleeding ceased on pressure. Normal saline solution was again used to irrigate freely the lower abdominal cavity and a Keith's tube was inserted in the lower end of the wound. The fœtus was found free in the abdominal cavity. It was apparently about two months old, measuring 2 2 centimetres in length. The limbs were developed and the first rudiments of sex were observable. The Keith's tube was removed after the second day with the result that no sinus formation ensued as in the previous case. A small superficial stitch abscess formed at the upper end of the wound which otherwise healed by first intention. The patient was discharged cured on Jan. 14th.

Remarks by Dr. CUNLIFFE.—There has lately been a revival of interest concerning the symptomatology and treatment of ectopic gestation. The above two cases present symptoms of some interest and illustrate in a striking manner the advantage of early operation. Many authors have laid stress on the fact that ectopic gestations usually follow at a long interval of time a previous pregnancy and frequently there is a history of tubal or tubo-ovarian inflammation. The present two cases bear out these points. In the first case there was a history of previous pelvic trouble and the first pregnancy was succeeded by an interval of five years. Another uterine pregnancy then occurred to be followed after two years by an ectopic gestation; it is [illegible] of this is that in one case the [illegible] by a healthy tube; in the other it was arrested [illegible] d tube. In the second case no history suggestive of inflammatory mischief in the tubes was obtained, but nine years elapsed between the uterine and the ectopic gestations. Sir J. Halliday Croom[1] has recently laid stress on the occurrence of irregular hæmorrhages and pain in these cases, with aggravation of the early signs of pregnancy, such as breast changes and morning sickness. Neither of these patients exhibited any of these symptoms. The successful issue in these two cases shows the importance of abdominal exploration. The second case is particularly instructive as showing that even if hæmorrhage may cease for a time, yet in the absence of radical treatment recurrence may take place and operation have still to be performed, though under less favourable conditions.

The points of interest in the after-treatment were the successful employment of copious rectal injections of normal saline solution to relieve thirst and the importance of not retaining Keith's drainage tube more than two days in the abdomen.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Hour-glass Stomach.

A MEETING of this society was held on Jan. 26th, Mr. ALFRED WILLETT, the President, being in the chair.

Mr. B. G. A. MOYNIHAN read a paper on Hour glass Stomach. He said that by hour-glass stomach was understood that condition in which the stomach was divided into two portions by a constriction at any point between the cardiac and pyloric orifices. In one rare, in fact unique, case under his care the stomach was trilocular. In another there were three points of narrowing, one in the body of the stomach, one at or near the pylorus, and one about one and a half inches beyond the pylorus, in the duodenum. In this case there were four sacs. As a rule the cardiac complement was larger and had thicker walls than the pyloric. It dilated and became hypertrophied by reason of the great obstruction met with at the scarred and narrow isthmus which connected it with the distal portion of the stomach. The forms of hour-glass stomach were many. As a rule the constriction was near the middle of the organ or near the pyloric end. The isthmus might be very much indurated or it might be tubular with very little or no induration but with some thickening. In most instances the greater curvature seemed to be pulled upwards to the lesser, but in one case he had seen the lesser tucked down to the greater. The cause of hour-glass stomach was next dealt with. Mr. Moynihan stated that two forms were usually described—a "congenital" form and an acquired form. An examination of several specimens and an earnest search through the literature had convinced him that there was no proof whatever of the existence of an hour-glass stomach which was due to a congenital deformity. The absence of any observation of hour-glass stomachs in the fœtus or the young child was very striking. When those who had been describing their specimens used the word "congenital" they seemed to do so without thought or hesitation, accepting, it would appear, the mere existence of the deformity as unquestioned evidence of its congenital origin. So far as he was aware there was not a single specimen or an accurate record in existence which could be accepted as evidence of the congenital origin of this disease. The causes of acquired hour-glass stomach were (1) perigastric adhesions, (2) chronic ulcer, and (3) malignant disease. 1. Perigastric adhesions might arise from many causes. Most commonly they were due either to ulcer of the stomach or to gall-stone disease. 2. Chronic ulcer might cause hour-glass stomach in one of two ways. In the first there was a gradual deepening of the ulcer. As the ulcer approached the serous coat of the stomach a few adhesions formed binding the viscus to the anterior abdominal wall, preventing the bursting of the ulcer into the general peritoneal cavity. If the ulcer was on the posterior surface a soldering to the pancreas might result. When the stomach was anchored in its middle, the pouches on each side, but more especially on the cardiac side, showed a tendency to sagging, and this, with the cicatricial contraction taking place in the ulcer, resulted in hour glass form of the stomach. In one of Mr. Moynihan's cases a malignant mass in the anterior wall had formed an extensive adhesion to the body wall. Another important factor in determining the narrowing of the stomach was spasm and recurring attacks of this nature led to hypertrophy of the circular muscular fibres, and this thickening, together with cicatricial contraction, was responsible for the narrowing found in hour-glass stomach. The symptoms and the signs of hour-glass stomach enabled a positive diagnosis to be made in the great majority of cases. First, if the stomach-tube was passed and the stomach was washed out with a known quantity of fluid, the loss of a certain quantity would be observed when the return fluid was measured. This was Wölfler's "first sign." Secondly, if the stomach was washed out until the fluid returned clear, a sudden rush of foul, evil-smelling fluid might occur, or if the stomach was washed clean and the tube withdrawn and passed again in a few minutes several ounces of dirty offensive fluid might escape. The fluid had regurgitated through the connecting channel between the pyloric and cardiac pouches. This was Wölfler's "second sign." If the stomach was palpated and a succussion splash was obtained, the stomach-tube passed, and the stomach apparently emptied, palpation would still elicit a distinct splashing sound. This was due to the fact that only the cardiac pouch was drained; the contents of the pyloric pouch remained undisturbed and caused the splashing sound on palpation. For this phenomenon Jaworski had suggested the appropriate name of "paradoxical dilatation." Von Eiselsberg had observed in one case that on distending the stomach a bulging of the left side of the epigastrium was produced; after a few moments this gradually subsided and concomitantly there were a gradual filling up and bulging of the right side. Von Eiselsberg also called attention to the bubbling, forcing, "sizzling" sound which could be heard when the stethoscope was applied over the stomach after distension with carbon dioxide. If the two halves of a seidlitz powder were separately given and the stomach was normal or dilated, no loud sound was heard anywhere except at the pylorus; if a constriction was present in the stomach a loud, forcible, gushing sound could be easily distinguished at a point two or three inches to the left of the middle line. The abdomen was carefully examined and the stomach resonance was percussed. A seidlitz powder in two halves was then administered. On percussing, after about 20 or 30 seconds, an enormous increase in the resonance of the upper part of the stomach could be found, while the lower part remained unaltered. If the pyloric pouch could be felt or seen to be clearly demarcated the diagnosis was inevitable, for the increase in resonance must be in a distended cardiac segment. If the abdomen was watched for a few minutes the pyloric pouch might sometimes be seen gradually to fill and to become prominent. Schmidt-Monard and Eichhorst had both seen a distinct sulcus between the two pouches inflated with carbon dioxide. Ewald had called attention to two signs which he considered of value in establishing a diagnosis. When the stomach was filled with water and examined by gastro-diaphany the transillumination was seen only in the cardiac pouch; the pyloric pouch remained dark. The deglutable indiarubber bag of Turck and Hemmeter was passed and distended. The bulging caused thereby was limited to the cardiac pouch which lay to the left of the middle line. The two aids to diagnosis of greatest value were, it will be seen, the washing out of the stomach and its inflation with gas by the administration of a seidlitz powder in two portions. The fluid used for the washing must be carefully measured before use; the tube was then passed and the stomach emptied, the contents were set aside in a separate dish, and the washing was commenced. All the fluid now returning was collected in a separate vessel and carefully measured. The two signs of Ewald were of little importance; a correct diagnosis could always be made without them. With regard to treatment, Mr. Moynihan said that in many cases of hour-glass stomach there was a narrowing not only in the body of the stomach but also at the pylorus. This illustrated the undoubted fact that gastric ulcer was often multiple. The result, so far as the treatment of the condition was concerned, was that in many of the cases no single operation would suffice to fulfil all the requirements. If gastro-enterostomy was performed from the cardiac pouch the pyloric pouch remained undrained. Symptoms of stasis were then observed, as in a case recorded by Terrier, and a second operation was necessary. An anastomosis from the second pouch was obviously futile. A gastroplasty which relieved the obstruction in the body of the stomach did not deal with the pyloric narrowing. In many cases it was necessary to perform a double operation, gastro enterostomy from both pouches, gastroplasty combined with gastro enterostomy from the pyloric pouch, gastro-gastrostomy with gastro-enterostomy, or gastroplasty and pyloroplasty.

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[1] Practitioner, November, 1903.

Mr. STEPHEN PAGET asked if any sort of bobbin had been used in performing the gastro-gastrostomies.

The PRESIDENT, after congratulating Mr. Moynihan on his paper, said that the observations on the so-called congenital hour glass stomach were of special interest and it seemed probable that it did not exist since no authentic instance of such a condition could be found. He thought that a good many instances of hour-glass stomach must be overlooked. He referred to the fact that the disease was more common in women than in men, 11 of the cases recorded being in women and seven in men. He asked if there was anything in the mode of living, occupation, or diet which gave rise to the greater frequency of hour glass stomach in the north of England than in London.

Dr. G. B. FERGUSON (Cheltenham) asked whether antiseptics had been used or whether the operation had been done with only aseptic precautions.

Mr. H. J. PATERSON referred to the somewhat high mortality in the series of cases. He related a case in which perforation of an ulcer had taken place near the pylorus in which an hour-glass stomach was found to be present and suggested that had an operation been performed on the hour-glass stomach at an earlier date the pyloric ulcer would have been relieved.

Mr. MOYNIHAN, in reply, said that he could not account for the greater prevalence of the hour-glass stomach in the north of England. The taking of large quantities of tea and dry bread was the only marked difference of diet. He had noticed that duodenal ulcers nearly always occurred in those who drank beer to excess. He thought the mortality was higher than it ought to be, but that was probably in part due to the ill health of the patient produced by the prolonged disturbance of nutrition while the contraction of the stomach was taking place. The accumulation of fluid in the distal portion of the stomach which could not be washed out might also account for the increased risk of the operation. He only used a needle and thread in making his anastomoses and never used any antiseptic within the abdomen. He was of opinion that hour-glass stomach was much more common than was generally believed.

CLINICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Jan. 22nd, Dr. FREDERICK TAYLOR, the President, being in the chair.

Dr. F. PARKES WEBER showed two cases of Diffuse Lipomatosis. The first case was that of a single woman, aged 34 years, who presented typical diffuse lipomata below the lower jaw, on the upper arms, and on each side of the front of the thorax. She had always enjoyed good health. The condition had been noticed for about two years and was unassociated with pain. She had been treated by thyroid tabloids. The second case was that of a man, aged 52 years, who was formerly a carman. There were huge lipomatous masses affecting the neck, arms, and pubic regions. They had first appeared in 1868, after an injury. There had been slight general wasting, in connexion with which it was suggested that there might be some cirrhotic change in the liver. The

o difference between

ged ten years, with in August, 1903, he

a year and to have had pain and swelling in the left side. The liver was then much enlarged and reached below the umbilicus. It was firm and not tender. One large and several smaller swellings were felt on the surface of the right lobe near the costal margin, which were hard and yielded no fluctuation. The lymphatic glands in the neck were enlarged. There were double dacryocystitis, conjunctivitis, and interstitial keratitis more marked in the left eye. There were no changes in the fundi. The teeth were badly formed but were not characteristic of congenital syphilis. He had taken iodide of potassium almost continuously and the liver had diminished in size. It was thought that the tumour was probably of a gummatous nature but the diagnosis of hydatid had also been advanced. No blood changes had been observed.—Dr. G. A. SUTHERLAND thought that the hardness of the mass as well as the presence of old keratitis strongly suggested gummata. He suggested that mercury should be employed in the treatment.—The PRESIDENT asked if there had been pyrexia at any time and referred to a similar case recorded by the late Dr. J. S. Bristowe in the transactions of the society.

Mr. W. H. B. BROOK (Lincoln) showed a case of Total Paraplegia due to caries of the mid-dorsal vertebræ, for which the operation of costo-transversectomy had been performed with complete recovery. The patient was a youth, aged 18 years, the notes of whose case had been read before the society in March, 1903. The fact that the patient had undertaken a railway journey of over 100 miles was in itself sufficient evidence of the completeness of his recovery.—Mr. LAWRIE H. MCGAVIN considered that the thanks of the society were due to Mr. Brook for bringing the case before its notice and congratulated him upon such a successful issue.

Mr. J. R. LUNN showed: 1. A case of Chronic Periostitis (syphilitic) in a man, aged 28 years, affecting the lower ends of both femora. A skiagram was shown to illustrate the condition. 2 A case of Ununited Fracture of the Radius and the Ulna in a man, aged 74 years, which had existed for a period of 38 years. The accident was a compound one and when first seen he was advised amputation but he refused. 3. A boy, aged 13 years, with symmetrical swellings on the lower jaw. He was also the subject of congenital syphilis.

Mr. WALTER G. SPENCER exhibited a boy, aged ten years, with Bilateral Enlargement of the Testicles. Both testes were swollen to about adult size and were firmly elastic but not tender; the right was enlarged and the left was less so. A sinus existed over the front of each testis which had ceased to discharge pus and appeared to be healing. The patient did not present any further signs of past or present disease. An indefinite family history suggested both tubercle and syphilis. He had been under observation for three weeks and was treated with mercury internally and locally with a little iodide.—Mr. A. A. BOWLBY and Mr. RAYMOND JOHNSON agreed that the case was one of tubercle.

Dr. FREDERICK E. BATTEN showed a girl, aged five years, the subject of Complete Ophthalmoplegia Externa with Blindness of acute onset. 13 weeks before admission to hospital the child had whooping-cough, from which she recovered in about six weeks. One week before admission the mother noticed that the child could not see. At the same time it was noticed that the pupils were very large and she could not move the eyeballs. There was no loss of consciousness and there were no convulsions. On admission there was no ptosis but complete ophthalmoplegia was present, with a slight divergent strabismus. The pupils were widely dilated and did not react to light. There was complete blindness. There was slight optic neuritis, which was more marked in the right eye than in the left. There was no weakness of the muscles of the face, tongue, palate, or limbs. All the deep reflexes were abolished. 14 days after admission the movements of the eyes had become normal, the pupils were no longer so dilated, and the optic neuritis was much less. There was no return of vision and the knee jerks still remained absent. It was suggested that the case was one of polio-encephalitis inferior affecting the oculo-motor nuclei and the lower visual centres.

Mr. MCGAVIN showed a married woman with Complete Absence of the Phalanges of the Left Hand. The patient, who was the sole member of her family affected by any bodily deformity, was healthy in other respects. The skiagram showed that the whole of the phalanges had been suppressed.

Mr. JOHNSON showed a man, aged 28 years, with a Translucent Cystic Swelling of the Root of the Nose. The condition was first noticed about three years ago. No cause could be assigned and it had slowly increased without pain. The cyst gave a well-marked sense of fluctuation and its tension appeared to be quite constant. It was possible that it was of parasitic origin. Its extreme translucency rather pointed to the presence of a dermoid.

Mr. JOHNSON also showed a man, aged 47 years, the subject of Multiple Aneurysms, in whom an aneurysm of the right brachial artery was removed by operation in July, was to take out the appendix at the very first—namely, on the first or second day, introducing one or two fingers through a small incision. In this way there was no risk of ventral hernia. If, however, the case were only seen on the third day it was better to wait for the interval. If suppuration had taken place a much larger opening was necessary in the abdominal wall. American surgeons hardly ever had a case of either suppurating or burst appendicitis because they invariably operated early. He thought that the leucocyte count was of the greatest value.

Mr. F. M. Caird said that he regarded cases of acute appendicitis as beginning with a rapid onset and terminating in resolution, operation, or death within 10 or 14 days. In fulminant cases the gravity of the situation was usually at once recognised and operation followed immediately. But when the onset was less acute he believed it was justifiable to temporise. He generally applied an ice-bag, washed out the rectum, and waited for a day or two. If when under observation the patient did not improve, or if he became worse, or if after a temporary lull symptoms again—within ten days—became exacerbated, operation was indicated. Under this treatment many cases got well and surgical interference could be carried out during a quiet interval. Others, again, derived benefit from the limiting peritonitis established during this short probationary period. During the last three years 22 cases of acute peritonitis had been subjected to operation in the wards under his care Two died. They were usually admitted in the third or seventh day of the attack The two fatal cases seemed hopeless from the beginning but two apparently equally so had recovered.

Dr. J. O. Affleck said that acute appendicitis was easily confounded with typhoid fever. There was great risk in giving patients purgatives and enemata; he had seen two cases in which an appendicular abscess was ruptured by an enema. As regarded treatment he had seen great benefit from the application of ice bags to the part—in fact, they seemed to remove the inflammation entirely and he had known of such cases not having a return of the symptoms during the next 20 years. His rule was that after a second of two well-marked attacks occurring within a year the operation ought to be performed after the end of the second attack.

Dr. W. Haldane (Bridge of Allan), Dr. T. M. Burn-Murdoch, Dr. James Ritchie, Mr. H J. Stiles, Mr. C. W. MacGillivray, and Dr. G. Lovell Gulland also took part in the discussion.

Aberdeen University Medical Society.—A meeting of this society was held on Jan. 15th.—Mr. P. B. Roth read a paper on the Treatment of Scoliosis. He first discussed the etiology of the condition, pointing out that it occurred in girls and boys in the proportion of 6 to 1 and between the ages of five and 17 years as a rule. Scoliosis might be either osseous or postural. In osseous scoliosis there was bone disease and the condition was to that extent incurable. In postural scoliosis the curve in about one-half of the cases was a reversed C in the dorsal region, the position assumed when writing with one arm on the table. One-third of the cases exhibited a reversed S curve, the upper concavity facing the left, and the lower one facing the right. The curves were occasionally reversed in these two subdivisions. Before describing the rational treatment Mr. Roth discussed the objections to such apparatus as those of Sayre, Noble Smith, Howard Marsh, and Adams. Shoulder straps, he said, caused sores in front and also an abnormal development of the pectoral muscles, while the muscles attaching the scapula to the spine became wasted. The result was that when the straps were removed the forward stooping was increased. Shoulder straps were useful only in dress to remind the patient that she was expected to brace back her shoulders; they should be made, however, so that they would break on too much pressure being applied. In addition to curvature the other symptoms of scoliosis were stooping at the shoulders and forward projection of the head, a flattened anterior thorax, and a bulging abdomen. It was essential to have the clothing removed in order to obtain a sufficient view of the spine and it was wise to take the position of the spine (1) with regard to the middle of lines extending between the inferior angles of the scapulæ (the shoulders being braced back and any inequality in the length of the two legs corrected by placing a block under the foot of the shorter leg) and (2) between the mid points of lines extending from the subcostal plane to the top of the iliac crests respectively. The patient should then be induced to assume the "best position"—i.e., one which made the spine most nearly approach normal. All subsequent treatment aimed at keeping this position during exercise of all sorts. Exercise was strongly advocated such as breathing movements when lying flat on the back or face in the "best position." This, combined with good food and plenty of fresh air, resulted in the development of those muscles which normally kept the spine in position. The muscular sense was markedly absent in the wasted muscles, as was seen by the grotesque attitude assumed by many patients when asked to put themselves in what they considered the normal position.—Mr. F. L. Keith read a paper on Eclampsia and Status Epilepticus.——At a meeting held on Jan. 22nd, Mr. James Clark presiding, Dr. George Stoddart read a paper on Opportunities of Study in Foreign Schools. Among the various subjects discussed reference was made to the treatment of syphilis by from 12 to 16 hypodermic injections of perchloride of mercury spread over a period of six weeks and to the use of alcohol for disinfection of the hands and for uterine douches. The hands should be scrubbed for five minutes with soap and water and then steeped in alcohol of 60 per cent. strength for other three to five minutes. This method gave better results bacteriologically than other methods in ordinary use.—Mr. Fife Slater read a paper on the Dieting of Infants. He said that the mother ought, if at all possible, to suckle her infant for the first six or nine months and the periods of feeding should be regular: every two hours during the day and every four hours during the night for the first month, every two and a half hours during the day and every four hours during the night for the second month, and so on. "Humanised" milk was the best to use where the mother could not give milk. If it was necessary to change from breast to cow's milk the change should be gradually effected, using whey or peptonised milk before beginning with cow's milk, which ought to be boiled before using. Bread jelly was preferable to artificial foods, but where it was found necessary to use artificial foods they were to be given only as subsidiary to milk diet and not as a substitute for it. Prolonged use of peptonised or sterilised milk was a frequent cause of scurvy and rickets.

Laryngological Society of London.—A meeting of this society was held on Jan. 15th, Dr. P. McBride, the President, being in the chair.—Dr. W. H Kelson showed (1) a case of Deformity of the Fauces in a Woman; and (2) a case of Epithelioma in the Cricoid Plate Region in a woman, aged 30 years.—Dr. A. Logan Turner showed a case of Affection of the Palate and Larynx in a man. The patient suffered from œdema and infiltration of the uvula, the left half of the soft palate, and the left lateral wall of the pharynx. There was infiltration of the epiglottis and both arytenoid regions Dr. Turner considered the condition analogous to certain cases which Sir Felix Semon had shown at the previous meeting.—The case was discussed by the President, Sir Felix Semon, and Dr. J. Dundas Grant.—Dr. Atwood Thorne showed a case of Malignant Disease of the Nose in a man, aged 70 years.—Mr. H. B. Robinson showed: (1) a case of Syphilitic Necrosis of the Sphenoid Bone; (2) a case of Left Abductor Paralysis in a male, aged 31 years; and (3) a case of Syphilis of the Posterior Part of the Tongue and Posterior Pharyngeal Wall.—Dr. L H Pegler showed a case of Crumpled Septum in which he had excised the hard structures four years ago and in which the intact muco-perichondrium remained unstiffened.—Mr. P. R. W. de Santi showed: (1) a case of Laryngeal Vertigo; (2) a man with Tertiary Syphilis of the Larynx causing stenosis, on whom thyrotomy had been performed four years ago with satisfactory results.—Dr. StClair Thomson showed: (1) a case of Complete Paralysis of the Left Vocal Cord in a woman, aged 36 years; and (2) cases of Bleeding Polypus of the Septum.—Mr. H. T. Butlin showed a specimen of Epithelioma of the Cricoid Plate and of the Œsophagus removed by operation The patient was a man, 44 years of age, with a large smooth red tumour at the back of the larynx almost confined to the left side and involving the whole of the ary-epiglottic fold but not encroaching to any extent on the interior of the larynx There was a very large mass of glands on the left side of the neck so intimately associated with the sterno mastoid that their removal could only be carried out by removing almost the whole of the muscle. The disease had started ten months previously as a curious catch in speaking. For four months there was a difficulty in swallowing and when first seen by Mr. Butlin the patient could only swallow with pain and the voice had just become husky. The age and immense strength of the patient and the fact of Professor Gluck's successful operations for what would have appeared to be hopeless conditions of malignant disease of the throat and neck induced him to put the matter before the patient who decided in favour of operation. An extremely extensive operation had to be performed, necessitating removal of the whole internal jugular vein, the glands of the neck, and the whole of the sterno-mastoid muscle on that side. The patient made an excellent recovery but within two months the disease had recurred. He had operated on another case of the same sort but within a week the patient died suddenly from profuse hæmorrhage, probably from the carotid. The case was discussed by the President, Sir Felix Semon, and Dr. P. Watson Williams.—Mr. F. C. Shrubsall (for Dr. Percy Kidd) showed a patient suffering from a Tuberculous Outgrowth from the Anterior End of the Left Vocal Cord.—Dr. Dundas Grant showed: (1) A case of Sessile Fibromata at the anterior extremity of the left vocal cord partially removed by means of forceps and completely extirpated by the galvano cautery; (2) a case of Atrophy and Collapse of the Alæ Nasi treated by means of a Subcutaneous Injection of Paraffin; and (3) Photographs of a case of Flat and Sunken Nose treated by Injections of paraffin. A note of warning was sounded by some speakers as to the dangers that might accrue after the injection of Paraffin.—Mr. Hunter F. Tod showed: (1) A case of Soft Fibroma of the Left Vocal Cord in a woman, aged 31 years; and (2) a case of Sarcoma of the Post nasal Space probably involving the Ethmoidal Region with Enlargement of the Cervical Glands on the Right Side in a man, aged 51 years.—The general expression of opinion was that operation was impracticable.—Dr. Williams showed a man, 42 years of age, with an Intralaryngeal New Growth.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 14th, Dr. Peyton Beale being in the chair.—A discussion on Recent Methods of inducing Anæsthesia was opened by Dr. J. F. Silk who referred to the three stages in the use of anæsthetics, beginning with the elementary stage which lasted until 1890, when the patient dreaded the anæsthetist more than the surgeon; the second stage, during which anæsthetists were divided into the two rival camps of chloroform and ether; and the present stage, when they had recognised definitely that these were not the only anæsthetics and that the true art of the anæsthetist did not lie in pinning his faith to any one anæsthetic but in adapting it to the particular patient. More than this, he could with advantage change the anæsthetic to [illegible] ie same operation. [illegible] modern methods [illegible] as and oxygen he [illegible] very highly of the [illegible] face-piece, especially in the case of young children. Gas and air had the disadvantage that so much gas was used, but Dr. Silk recommended the combination for plethoric patients. In the use of ether he referred to Dr. Probyn Williams's improvement of the small Clover inhaler by increasing the air way and showed the inhaler thus modified. For the administration of chloroform the Junker apparatus with glass inhaler was recommended, although Dr. Silk said that he himself always used a simple drop-bottle and an ordinary mask. He used less and less chloroform; when he could not give ether he fell back on a mixture of one part of chloroform and two parts of ether with which he was very pleased. He then passed on to the newer forms of anæsthetics having chloride of ethyl as their basis. As regarded methods of administration Dr. Silk did not believe any new instrument to be necessary. He used chloride of ethyl as a preliminary to other anæsthetics, as a substitute for gas, and for adenoids (alone), but not for dental cases because the period of anæsthesia could not well be continued should this be necessary. The methods of administration were demonstrated. The great advantages of chloride of ethyl were that it was very rapid, not unpleasant, produced no asphyxia, and needed no big apparatus for its use.—Mr. H. E. G. Boyle, resident anæsthetist at St. Bartholomew's Hospital, deprecated all forms of complicated apparatus as these were incumbrances rather than helps to all except very skilled anæsthetists. A mixture of chloroform and ether he considered very useful, especially in cases that were doing badly with either when given alone. Mr. Boyle then referred to somnoform which he had administered between 600 and 700 times. It was an exceedingly useful anæsthetic but it needed familiarity in order to get good results. The use of 2 5 to 3 cubic centimetres, instead of larger doses, was recommended, being given in a closed bag with a face-piece; in this way from 35 to 40 minutes' quiet anæsthesia was obtained. The time to begin operating was when the conjunctival reflex was lost and the breathing was slightly stertorous. The great thing to avoid was admixture with air; if this occurred there was often vomiting, not unless.—Dr. H. H. Rubra, anæsthetist to the Great Northern Central Hospital, concurred with most of Mr. Boyle's remarks concerning somnoform. He had found it very useful in cases where gas could not be taken He also considered it a better anæsthetic than ethyl chloride, giving less spasm and more perfect analgesia. It had the advantage of not being unpleasant.—Several other members took part in the discussion.

MEDICAL SOCIETY OF LONDON.—A meeting of this society was held on Jan. 25th, Dr. F. de Havilland Hall, the President, being in the chair.—Dr. M. Handfield-Jones opened a discussion on Pelvic Lesions in Relation to Abdominal Diagnosis. The subject, he remarked, was beset with difficulties because the connexion between uterine disease and abdominal inflammations was not always clear. Cases were referred to in which severe nausea and vomiting were dependent on metritis and disappeared on the cure of the latter. Three cases were then narrated in which perforating gastric ulcer had been diagnosed but in which the symptoms really depended on hæmorrhage from rupture of a tubal gestation. The menstrual history in such cases was of little value, nor did pelvic examination lend much aid; the pain might be very diffuse and the effect on the temperature and pulse might be the same in both conditions. Exploratory laparotomy was the only proper course. Cases were next mentioned to illustrate the difficulty of diagnosis of abdominal inflammations and other conditions from those depending on dermoid cyst of the ovary, suppurating cysts of the ovary, and fibro-myoma of the uterus. The pelvic organs should always be examined in suspected abdominal disease. Cases illustrating the part played by pelvic adhesions in producing abdominal symptoms were narrated. Constipation and nausea might be due to adhesions or to bands which might be very easily overlooked, and a case was mentioned which had been operated on by different highly skilled surgeons on six occasions without obtaining relief.—Mr. Alban H. G Doran dwelt on the necessity of following up the after-history of operation cases because reported recoveries were not always real recoveries. He referred to a case of severe dysmenorrhœa in which it was proposed to remove the ovaries but the symptoms were relieved by the patient wearing spectacles suitable for the correction of her hypermetropia.—Dr. Heywood Smith, referring to the diagnosis between ruptured tubal pregnancy and perforated gastric ulcer, remarked that the mammary symptoms were very valuable.—Dr. J. Vincent Bell (Rochester) narrated a case of parovarian cyst which resembled a tumour of abdominal origin.—Mr. Edmund Owen remarked on the value of exploratory operations and said that it was a very remarkable fact that patients recovered after mere opening of the abdomen. He referred to the value of a discharge of blackish blood from the vagina as a diagnostic feature of tubal pregnancy.—The President mentioned the case of a girl aged 12 years whose symptoms suggested appendicitis but were found to be due to a strangulated ovarian cyst.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—The annual meeting of this society was held at the Owens College, Manchester, on Jan. 15th.—Dr. W. J. Sinclair (Manchester) was unanimously elected president of the society for 1904. At the conclusion of the annual business Dr. A. Stookes (Liverpool) read notes of a case of Eclampsia with fatal result.—A discussion followed in which the President, Dr. H. Briggs, Dr. Martin, Dr. Croft, Dr. Nesfield, and Dr. J. E Garner took part.—Dr. A. Donald (Manchester) read a paper on Chronic Endometritis and Chronic Metritis in Virgins. He dealt with affections of the endometrium and mesometrium occurring apart from the usual infective causes (sepsis, gonorrhœa, &c). The paper was based on a series of 40 cases which had been carefully observed. Attention was specially directed to one group of cases which were characterised by the association of these three conditions: (1) small or infantile cervix; (2) acute flexion, forwards or backwards; and (3) enlargement of the uterine body. The symptoms in these cases were in the order of frequency: (1) pain or dragging sensation in one or both iliac regions, or pain generally in the lower zone of the abdomen (in 36 out of 40 cases); (2) dysmenorrhœa (in 33 out of 40 cases); (3) leucorrhœa (in 31 out of 40 cases); (4) menorrhagia or metrorrhagia (in 16 out of 40 cases); and (5) remote or nervous symptoms. In a large proportion of the cases the uterine mucosa was much thickened. The uterine cavity showed an increase in length of from a quarter of an inch to one and three-quarter inches and the mesometrium was sometimes considerably thickened. Microscopic examination of the mucous membrane removed showed great increase in glands or in interglandular stroma or both. Remarks were made as to the etiology and treatment of the condition.—The paper was discussed by Dr. D. Lloyd Roberts, Dr. Arnold W. W. Lea, Dr. W. E. Fothergill, Dr. Stookes, Dr. Richardson, and the President.—Dr. Donald replied.

Aberdeen Medico-Chirurgical Society.—A meeting of this society was held on Jan. 14th, Dr. J. Theodore Cash, the President, being in the chair.—The following clinical cases were shown: Dr. H. M. W. Gray (for Dr. J. Mackenzie Booth): A case of Double Undescended Testes in which reposition had been effected by Annandale's method.—Dr. J. F. Christie: A woman suffering from a Chronic Diffuse Infiltration of the Skin of the whole Body with Formation of "Tubercles" on the Face. The case had been diagnosed two years before at the Dermatological Society of London as lymphodermia perniciosa.—Dr. G. M. Edmond: (1) A case of Disseminated Sclerosis; (2) a case of Functional Paraplegia; and (3) a case probably of Cerebellar Tumour.—Dr. Gray: A case of Tendon Transplantation for Musculo-spiral Paralysis. The flexor carpi ulnaris tendon was cut, brought through the interosseous membrane, and attached to the extensor tendons. Marked improvement in extension of fingers and in supination followed.—Dr. R. G. McKerron: A case of Leucocythæmia of the spleno-medullary type in a boy, aged 12 years. 48 per cent. of myelocytes were present.—Dr. J. Marnoch: (1) A case in which Suprapubic Prostatectomy had been performed with complete success for prostatic hypertrophy; (2) a case of Non-malignant Pyloric Stenosis with a considerable tumour at the pyloric region in which posterior gastroenterostomy had given complete relief to the symptoms; (3) a case of Perforated Gastric Ulcer in which operation had been performed within five hours of the perforation; and (4) a child, aged three years, operated on ten months before for Tuberculous Peritonitis; the abdomen had been simply opened, not drained. The child now appeared quite well.—Dr. G. Rose: (1) Two cases after Disarticulation at the Hip-joint by McBurney's Method; and (2) a case after Excision of a Large Spina Bifida Tumour at the age of one month.

Clinical Society of Manchester.—The monthly meeting of this society was held on Jan. 19th, Dr. W. Milligan, the President, being in the chair. Dr. Eugene S. Yonge showed new Self-retaining Basins for Nasal and Aural Work; also a new apparatus for demonstrating the Laryngeal Image and Intralaryngeal Manipulations. By this apparatus (invented by Professor Meyer of Berlin) a beautiful image of the larynx could be obtained by five observers at a time, including, of course, the examiner. Also, intralaryngeal manipulations were as clearly observed by the bystanders as by the operator. It appeared, so far as Dr. Yonge knew, to be the best apparatus extant for the purposes indicated.—Dr. G. H. Lancashire read a paper on Some Specific and Tuberculous Affections of the Face. The various syphilitic manifestations commonly met with in this region were discussed and clinical features were described which served to differentiate them from other skin diseases. Tertiary syphilitic disease was dealt with at greater length and especial mention was made of those cases simulating lupus vulgaris and *vice versâ*. In all doubtful cases the adoption of a preliminary antisyphilitic treatment was urged and the danger of immediate surgical procedure in these cases was emphasised. Finally, attention was drawn to that small group of cases in which both syphilis and lupus were combined in the same lesions. Photographs, plates, and cases were shown illustrating the paper.

Royal Medical Society of Edinburgh.—A meeting of this society was held on Jan. 15th, Dr. O. J. Shaw being in the chair.—Dr. J. Murdoch Brown read a dissertation on Cyanosis.—Dr. A. C. Geddes read notes of the case of a boy admitted to hospital suffering from a peculiar linear burn, of the second degree, on the right side of the thorax. The burn was treated as usual with picric acid. During the night following admission the patient passed into a state of extreme collapse with a pulse of over 200 and marked Cheyne-Stokes respiration. The interest of the case lay in the fact that while in this condition a peculiar cyclical change was noticed in the boy's colour. Thus, beginning with deadly pallor, his face would gradually assume a more healthy hue, from which it passed on to flushing and then deep cyanosis, and back again to pallor. This cycle took about four minutes to pass through, while the Cheyne-Stokes respiratory cycle only occupied from 60 to 80 seconds. So far as was known this condition had not been previously described.—Dr. G. J. Farie read notes on a case of Submucous Fibroid of the Cervix Uteri. The tumour caused profuse hæmorrhage and was removed by panhysterectomy. In the specimen which Dr. Farie showed, there was a remarkable enlargement of the cervix by the tumour—the uterus, which was of normal size, being only about one-quarter the length of the cervix.

Plaistow and Canning Town Medical Society.—The fifth annual meeting of this society was held on Jan. 21st, Mr. Percy Rose being in the chair. The annual report was read and passed.—Mr. J. Jordan Harvey showed specimens of (1) Placenta Circumvallata; and (2) Placenta Succenturiata.—Dr. E. Hay exhibited a case of Dilatation of the Stomach.—The following gentlemen were elected office bearers for the year:—President: Dr. W. C Taylor. Vice-President: Mr. Harvey. Honorary treasurer: Dr. W. M. D. Gallie. Honorary secretaries: Dr. Hay and Dr. E. P. McLoughlin.—Mr. Rose opened a discussion on the Responsibilities that might be thrown on Medical Men under the Midwives Act and the Absence of any Provision for securing Payment. He was of opinion that the payment of those fees should be undertaken by the local supervising authority and concluded by submitting a scale of fees.—A discussion ensued in which the majority of those present joined and generally agreed with the scheme proposed. It was decided to approach the local supervising authority on the matter.

Pathological Society of Manchester.—A meeting of this society was held on Jan. 20th, Dr. E S Reynolds, the President, being in the chair.—Mr. J. Collier exhibited specimens of (1) Chondro-Sarcoma of the Os Calcis and (2) Pancreatic Cysts.—Dr. E. S Yonge made a communication on the Recurrence of Nasal Polypi, with special reference to the theory of bone disease.—Mr. Smith mentioned a case of Non-traumatic Rupture of the Bladder and showed the specimen.—Mr. John B. Wolstenholme exhibited the Cervical Vertebræ of an old male horse affected with osteomalacia associated with periostitis, in which spontaneous fracture of a process of the sixth and of the seventh had occurred. He also exhibited mounted specimens of the Sarcoptes Scabiei, variety Equinus, together with a section of skin showing galleries with acari, &c., therein.

Æsculapian Society.—A meeting of this society was held on Jan. 22nd, Dr. Leslie Durno, the President, being in the chair.—Mr. W. Campbell M'Donnell showed a man, aged 34 years, at whose Cardiac Apex was heard a Systolic Noise audible only during inspiration.—Dr Alexander Morison read a paper on the Efficient Treatment of Cardiac Failure, which will be found in full at p. 291 of our present issue. A general discussion followed to which Dr. Morison replied.

Society for Relief of Widows and Orphans of Medical Men.—A quarterly court of the directors of this society was held on Jan. 13th, Mr. Christopher Heath, the President, being in the chair. Three new members were elected and the death of a member was reported There were no fresh applications for grants. It was resolved to distribute £1513 among the 53 widows, 15 orphans, and four recipients from the Copeland Fund now in receipt of grants. A sum of £586 had been given at Christmas as a present, £10 each to 53 widows, £3 each to 12 orphans, and £5 each to the four orphans on the Copeland Fund. The expenses of the quarter were £77 12*s.* 6*d.*

Reviews and Notices of Books.

A Manual of Medicine. Edited by W. H. ALLCHIN, M.D., F.R.C.P. Lond., F.R.S. Edin., Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital, Examiner in Medicine, Naval Medical Service. Vol. V., Diseases of the Abdominal Organs London: Macmillan and Co., Limited. 1903. Pp. 687. Price 10*s*.

THIS volume is a comprehensive one and contains articles on diseases of the digestive system and of the liver; on diseases of the peritoneum and of the vessels of the abdomen; on diseases of the kidneys; and on diseases of the ductless glands.

The digestive organs are first discussed. The general anatomy and physiology of these organs are admirably described by Dr. Allchin and then follows a well-written disquisition on Food and Diet by Dr. R. Hutchison. His remarks on the digestibility and absorbability of foods are worthy of close attention. He shows that the physical form of a food has more influence upon the ease with which it is digested than any other consideration. Fineness of division greatly facilitates solution in the stomach. On the other hand, all tough and hard articles of diet are dissolved with difficulty, while the presence of much fat in the interstices of a food militates against rapid disintegration by preventing the ready ingress of gastric juice. The quantity of any article eaten has less influence on its digestibility than its consistence. Doubling the quantity, for instance, does not mean doubling the time required for digestion but only prolonging it by about one half. Dr. Hutchison further draws attention to the influence which certain accompaniments of meals have upon the rate of digestion. He states that water is almost devoid of any influence unless the amount taken is excessive; hot water even accelerates digestion. Tea and coffee delay it, both in the mouth and the stomach, but alcoholic drinks have "astonishingly little effect" and, so far as the stomach at least is concerned, may even accelerate the process by promoting a flow of gastric juice.

Equally interesting are the observations of Dr. W. S. Lazarus-Barlow on the Bacteria of the Alimentary Tract. He points out that the experiments of Schottelius tend to show that the enzymes are incapable of exerting their full power until aided by the bacteria which appear normally in the excreta in thirty-six hours after birth; therefore it would seem that the organisms found in the alimentary canal are of service to the economy of their host. Dr. Lazarus-Barlow considers that it is certain that the bacteria in many instances assist in the breaking down of proteid matter but whether the less complex substances produced in this way can be, and are, utilised by the body at large for its nutrition appears to be doubtful. It has, however, been shown that in life under completely aseptic conditions the fæces do not contain phenol, cresol, indol, skatol, or pyrocatechin, substances found in the fæces of animals living under ordinary conditions. Dr. Lazarus-Barlow sums up the whole question by saying that "at the present time there is a tendency to believe that although the bacteria in the alimentary tract play an extremely important part in inducing intestinal putrefaction, they only act in this direction and do not produce bodies which are utilised by the body to its advantage."

Diseases of the Mouth, Pharynx and Œsophagus are ably dealt with by Dr. Bertram L. Abrahams and this section contains much information with regard to the diseases which may affect those organs.

The portions of the volume which are devoted to a consideration of the Diseases of the Stomach and Intestines have been written by Dr. Allchin. The observations on etiology and pathology are full and complete, containing the most modern views on those subjects. Then follow some extended remarks on the general symptomatology of gastro intestinal disease which will well repay perusal. The symptomatology and treatment of the individual diseases affecting these organs are considered seriatim. We question whether it is a good plan to separate causation and pathology so entirely from the clinical aspect of disease as is entailed by the plan thus adopted. If, for instance, a reader wishes to obtain information on "gastric" or "peptic" ulcer he will have to search in three separate sections before he can attain his object. We are of opinion that the old method of considering the various aspects of each malady (etiology, pathology, symptoms, and treatment) under the heading of that particular disease is to be preferred. It is certainly more convenient for reference and less confusing to the student.

The article on the Physical Examination of the Stomach and Intestines and the Analysis of the Gastric Contents is by Dr. Bertrand Dawson and in it are described the modern methods which are employed as aids to diagnosis in gastric and intestinal affections.

The Diseases of the Liver are considered by Dr. R. G. Hebb and Dr. Alexander Crombie. The article on Hepatic Abscess is a particularly interesting one and the etiology is discussed in a most instructive manner. It is shown that although the maximum frequency of this disease corresponds to a zone comprised within the isotherms of 75° and 80° F., yet heat has probably only an accessory influence and the essential cause of the greater seasonal prevalence is the *relative prevalence of dysentery at the same seasons*, for all hot countries are not equally noted for the occurrence of hepatic abscess. Attention is also drawn to the influence of race. A comparison of the returns of the army of India shows that the mortality from this affection is thirty-two times as great among European as it is among native troops, and this notwithstanding the greater prevalence of dysentery among native soldiers. The influence of age, sex, length of residence in the affected district, alcohol, and chill, and the causal relationship of dysentery and other septic foci in the intestines are also duly commented on.

Dr. W. Hale White writes on Diseases of the Peritoneum. In considering the treatment of tuberculous peritonitis the question as to the performance of laparotomy naturally receives full attention. Dr. Hale White arrives at the conclusion which is now generally held—namely, that the best results are obtained in those cases in which there is a large amount of ascitic fluid free in the peritoneal cavity. It is true, as he points out, that these are just the cases which give the most favourable results when treated without the intervention of the surgeon but on the other hand they are the cases in which the operation is easiest and he therefore urges that as the mortality as a result of the operation is in all cases so low laparotomy should be performed on such cases if circumstances prevent fresh and abundant food from being satisfactorily made use of or if, these having been tried, the progress is slow. We quite agree with him that the cases in which operation is most valuable are those in which there are much ascites and some fibro-caseous change in the peritoneum but in which the adhesions are not numerous or dense enough to prevent the evacuation of the fluid.

Dr. J. H Bryant contributes a short article on Diseases of the Abdominal Vessels.

Diseases of the Kidneys are considered by Dr. J. Rose Bradford. His observations, though brief, are perhaps the most interesting in the volume. In dealing with the etiology of renal disease he draws attention to the fact that it has long been recognised that certain affections of the kidney, as for example some forms of Bright's disease, have in many instances a toxic origin, but it is only recently that the view has gained ground that all forms of so-called nephritis and probably every variety of Bright's disease have a similar origin. Dr. Bradford enters into a discussion as to the nature of these toxic substances and we can recommend to our readers a careful study of his remarks. He is a strong supporter of the value of milk in the treatment of chronic Bright's disease and recommends that when uræmic symptoms are present or when dropsy occurs the patient should be put to bed and kept on a rigid milk diet until the urgency of the symptoms has subsided.

The description of the Diseases of the Ductless Glands is divided between Dr. Sidney Coupland and Dr. Abrahams but, as the most important diseases in which these glands are involved have been already dealt with in the earlier volumes of this manual, this article is a short one. It contains, however, valuable information on diseases of the spleen, lymphadenitis, and tuberculosis of the lymphatic glands. Diseases of the thymus gland are also discussed.

Diseases of the Throat and Nose. By CHARLES HUNTOON KNIGHT, M.D., Professor of Laryngology, Cornell University Medical College; Surgeon, Manhattan Eye and Ear Hospital, Throat Department, &c. With 147 Illustrations. London: Rebman, Limited. 1903. Pp. 423. Price 13*s.*

AFTER a careful perusal of this work we have no hesitation in congratulating Dr. Knight on the results of his labours, for the book is one which commends itself equally to the specialist and to the general practitioner who wish to obtain sound information on the subjects of which it treats. The author's diction is easy and his style is simple and the various conditions which are matter of dispute have the current theories relative to them clearly and lucidly explained. The anatomy and physiology of the nose are briefly but sufficiently dwelt upon and—rightly we think—the physiology of the nose is curtailed and reduced to such statements as are necessary to guide the medical man in his attempts to restore the nasal passages to an approximately normal condition. Dr. Knight next deals with the methods of examination and the instruments necessary for this purpose. This section is, perhaps, too brief and the suggestion that sunlight should be utilised for examination clearly shows that the author has never been subjected to the inconvenience which results from the use of such a powerful illuminant.

The next chapter, which treats of Acute and Chronic Rhinitis, is especially good from the clinical point of view. The pathological histology, however, is not so minutely detailed as was to be expected in a book of this size and description. We next find an account of Atrophic, Membranous, Caseous, and Purulent Rhinitis. Atrophic rhinitis is described as a necessary corollary of pre existing inflammation, one of the few statements with which we are inclined to disagree. If Dr. Knight had perused the admirable paper by Professor Moure, read at the International Congress of Medicine held at Madrid last year, together with the other papers contributed on this subject, we think that he would have recognised that there exist developmental errors in the nasal cavities which are responsible for a proportion of cases of atrophic rhinitis. With this exception, and especially in the treatment of this disease, Dr. Knight's recommendations are most happy. In membranous rhinitis, which is very briefly considered, the impression given is that the pseudo-diphtheritic bacillus is almost invariably present. Caseous rhinitis has sufficient attention devoted to it, a point not usually observed in books of this description. Diseases of the accessory sinuses and their treatment are treated in a way to leave but little room for adverse criticism, though we should have liked to see some reference to the methods of operation adopted by Killian. Especially valuable are the remarks on the sources of error in transillumination. In septal operations Asche's method, where it is suitable, has Dr. Knight's approbation. In nasal polypi we find the pathological standpoint fully investigated. Neoplasms—benign and malignant—specific disorders, epistaxis, and nasal hydrorrhœa receive adequate treatment. In the description of hay fever we notice that Dr. Knight does not mention the serum treatment, which has within the last 12 months been prominently brought before the profession. In Diseases of the Pharynx the adenoid operation is very fully described. There is an excellent, though brief, description of Vincent's angina. The last section is devoted to the Larynx. In the chapter on Anatomy and Physiology, the character of the voice is said to be modified by the changes taking place in the vocal cords, the varying size of the glottis being left out of consideration. The methods of examination and the general therapeutics are again rather too briefly considered, for if instruction is needed that instruction should be full. In the account of acute laryngitis we are a little surprised to see that the influence of nasal obstruction is not touched upon. Chronic laryngitis in all its forms is grouped under one heading. Neoplasms, especially benign, receive a very excellent description and here we find that the influence of nasal obstruction used in its widest sense—that is to say, including post nasal adenoids—is fully recognised as an indirect cause in their development. Malignant disease of the larynx is very carefully described, the subject being brought fully up to date; and tuberculosis of the larynx receives an amount of consideration which is amply justified by the frequency and the importance of the disease. In his otherwise excellent account of the clinical appearances noted in this pathological condition Dr. Knight says that the surrounding parts of an ulcer are pale. This, however, is not usual. Under the heading of treatment it is recommended that the patient should be kept in a uniform temperature, a suggestion which is not entirely borne out by those experienced in the open-air treatment of consumption. In specific disease of the larynx, while all other conditions receive full recognition, stenosis is dealt with in one short sentence. Neuroses, laryngismus stridulus, paralyses, and the presence of foreign bodies receive attention.

This work, admirable in its production, will be of great value to students and practitioners of general medicine and in directing their attention to it we have confidence that they will find it most helpful and instructive.

A Narrative of Medicine in America. By JAMES GREGORY MUMFORD, M.D., Assistant Visiting Surgeon to the Massachusetts General Hospital and Instructor in Surgery in the Harvard Medical School. London and Philadelphia: J. B. Lippincott Company. 1903. Pp. 508.

THIS book, which is dedicated to Professor William Osler, is a narrative dealing with medicine and the medical profession. The author's object has been to take some of the conspicuous American physicians of each era in their proper sequence, to tell the story of their lives and their doings, and thus to illustrate the whole history of medicine in America by a series of pictures. He hopes that the story will show the reader something of the meaning of medicine and of the life of its votaries. The narrative practically ends with the Civil War or about the middle of the last century, as for obvious reasons it has seemed best not to bring it down to the present day. Chapters are, however, added on Ether, on the Founding of the American Medical Association, and on Some Tendencies in Modern Medicine. In the introduction the author briefly glances at the contemporary conditions, political and scientific, in Great Britain, which the early immigrants called "home," to see on what bases English and American medical men of the seventeenth and eighteenth centuries had to build. The age was not a great one for scientific progress, but progress there was, and our profession struggled out of an

Egyptian darkness towards the present light. For the purpose of the narrative the colonial days of America are divided into two eras which correspond roughly with two centuries: the seventeenth century, a time of colonisation, struggle, and privation; and the eighteenth century when towns were being built, when commerce was beginning to thrive, and schools and colleges were appearing in the land. The medical history of the one era is quite distinct from that of the other. To the first belongs the practice, remote and inadequate, of Elizabethan England; to the latter the wider knowledge of American-born men and the early attempts to combine the wisdom and teaching of the Old World with the changed experience of the New.

The book deals not only with the evolution of the medical man but with the inception and development of American hospitals, schools, and universities. In the early history of American science great names are lacking and great events as well, yet in so far as the men of those days stirred up the "Assembly" to pass laws regulating practice they were wise in their generation and did good service. The truth of what Dr. J. S. Billings has said of his country is demonstrated in these pages. In "A Century of American Medicine" he wrote: "We have had, and still have, a very few men who love science for its own sake, whose chief pleasure is in original investigations, and to whom the practice of their profession is mainly, or only, of interest as furnishing material for observation and comparison. ...... Of the highest grade of this class we have thus far produced no specimens: the John Hunter, or Virchow, of the United States has not yet given any sign of existence." Many of the stories told in Dr. Mumford's book are not new but the method of the telling is, we think, just and honest and the author's meaning is conveyed in a way which charms the reader.

Some 30 pages are devoted to the tale of the famous discovery of the anæsthetic properties of ether, America's greatest contribution to medical science in the last century. The words of the venerable Jacob Bigelow uttered at the "Semicentennial of Anæsthesia" bring this section of the book to a most fitting conclusion.

Before finishing this retrospect the author notes the gradual levelling up of the masses of the profession and remarks that the country districts are not being properly furnished with medical men; whereas, on the other hand, in the cities the supply of highly trained practitioners greatly exceeds the demand. The available statistics show that only about one-fifth of the men who have passed through the Harvard school during the years 1892–1901 are pure specialists and that in this conspicuous group of highly trained men there appears no increasing tendency to abandon "general practice." Among the "pleasures of the doctor's life" the author writes of the fascination of work and study, of the ever-present sense of something accomplished, of the stimulation of great responsibility, and of the study of the strength and weakness of humanity—the latter an inexhaustible, fascinating, pathetic, sometimes contemptible, and often terrible field, which makes its votaries either sneering sceptics or, more often we hope, great-hearted philosophers. The last chapter of the book is one which will bring pleasure to any member of the profession who peruses it. Dr. Mumford has given to us a solid contribution towards the history of the profession in the New World.

Milk: its Production and Uses. By EDWARD F. WILLOUGHBY, M.D., D.P.H. Lond. London: Charles Griffin and Co., Limited. 1903. Pp. 259. Price 6*s.*

THERE is no doubt that if every farmer and dairyman knew the ways and means by which milk may become a vehicle or a factor in the spread of disease greater care would be exercised in the clean production of milk and a purer supply would be the outcome. This book aims at being a manual by which information on the points concerning the relationship of milk and disease may be conveyed to the cowkeeper and dairyman. That is a very excellent object and the author has done well to emphasise his intentions. The chapters on breeding, on the management of the cow, and on the construction of cowsheds and dairies give evidence of the author's practical acquaintance with the subject but we think that the sections on milk analysis might have been well left out. It is quite a separate department and one which has little concern for the breeder or keeper. Besides there is a superabundance of handy books on the composition and analysis of milk, on the question of preserving milk, and on bacteriological methods of examination. Chemical analysis has nothing whatever to do with the supply of milk free from disease-producing entities. The author is the inspector of the farms of, and general scientific adviser to, a large dairy company supplying milk to the metropolis and certain suburbs, and the experience which he gains in this capacity must be valuable and should be helpful to those who are anxious to provide a really sanitary milk-supply.

LIBRARY TABLE.

The Causation and Prevention of Malarial Fevers: a Statement of the Results of Researches. Drawn up for the use of Assistant Surgeons, Hospital Assistants, and Students. By Captain S. P. JAMES, M.B. Lond., I.M.S. Issued under the authority of the Director-General of the Indian Medical Service. Second edition. Calcutta: Office of the Superintendent of Government Printing, India. 1903. Pp. 52. Price Re. 1, or 1*s.* 6*d.*—The first edition of 5000 copies of this pamphlet was, the Director-General of the Indian Medical Service tells us, soon exhausted. In preparing a second edition Captain James has enlarged the scope of the work so as to make it an easy introduction to the study of malaria. We have read this little publication, which is full of pertinent information and excellently illustrated, with both interest and profit and may congratulate Captain James on having performed a very useful work. It is quite what it pretends to be and gives a clear, well-arranged, and capital *résumé* of the subject and may be accepted and used as a scientific and practical guide by those for whom it was designed.

Lehrbuch und Atlas der Zahnheilkunde mit Einschluss der Mundkrankheiten. (*Manual and Atlas of Diseases of the Teeth and Mouth.*) By Dr. Med. GUSTAV PREISWERK. Munich: J. F. Lehmann. 1903. Pp. 352, with 152 Illustrations. Price 14 marks.—This volume includes those special sections of anatomy, physiology, and pathology which have a direct bearing on dental surgery and the author has within the comparatively small space at his disposal succeeded in producing a useful text book. In the early chapters the anatomy of the teeth and of associated parts is described, the text being accompanied by serviceable illustrations. In the following chapters the various affections of the buccal mucous membrane and the more common tumours affecting the jaws are considered and there is a short, even perhaps too meagre an account of the bacteriology of the mouth. The author might with advantage have extended the account given of abnormalities in position of the teeth and a recently published book might have been expected to contain more up-to-date methods of treatment. In dealing with the pathology of the pulp the classification of Arkövy and Rothmann is adopted. The different affections are clearly described and some excellent illustrations are given. Throughout the book the technique of operative measures is only briefly treated and in some instances the methods advocated are open to adverse criticism.

Précis d'Anatomie Dentaire. By J. CHOQUET. Paris:

F. R. de Rudeval, Éditeur. 1903. Pp. 496, with 195 Illustrations. Price 8 francs.—As a contributor to current dental literature M. J. Choquet is well known to English readers and anything from his able pen is always welcome. The present volume is a most happy effort and should prove useful to students and practitioners of medicine. The opening pages are devoted to a general consideration of the teeth of the animal kingdom and this is followed by the anatomy of the mandible and maxilla. The author brings clearly home to the reader the fact that these bones differ very much in shape in different races and he introduces on p. 32 a most instructive illustration showing the variation in the form of the mandible of individuals of the same age but of different races. Again, in the description of the maxillæ he describes and figures three types of arches—namely, hyperbolic, parabolic, and v-shaped. The importance of a thorough knowledge of the anatomy of the antrum is essential on account of its bearing on the treatment of antral suppuration and we should therefore expect to find a full account of this sinus. M. Choquet has, however, treated the description in barely two pages and only gives two illustrations—one in a human subject and the other in a gorilla. In future editions we hope to find this defect remedied. In the chapter "Rapports des deux Maxillaires" numerous examples of partially edentulous dentures are given and the student is enabled to learn the anatomy of such conditions. The superficial anatomy of the individual teeth is thoroughly described and numerous illustrations are given, but we fail to find a satisfactory account of the shape of the pulp chambers, more especially with regard to their relation to the contours of the teeth. It is true that figures are given showing the distance of the cornua of the pulp from the mesal and distal angles of the teeth at different ages but these are of little value. In the description of the enamel reference is made to the chemical composition, the analyses of von Bibra being followed. These give 3·59 per cent. of organic matter in the enamel of man and a larger quantity in that of woman. Mr. C. S. Tomes's researches on the point seem to have escaped the notice of the author. This investigator has shown that the enamel is practically devoid of organic matter and that the constituent usually taken as such is in reality water of crystallisation, while in the dentine a large part of the matter previously considered organic is also water of crystallisation. The chapter on the calcification of the teeth is good and descriptions are given of dentures in children of two, four, five, and seven years of age. The figures given of the dates of eruption are in accord with those usually considered as correct in this country but it is quite possible that different races may produce different data. The value of the book would be enhanced if the micrographic illustrations were better; the fault seems to lie in defective photography rather than in the production of the "process blocks."

A Pocket Dictionary of Hygiene. By C. T. KINGZETT, F.I.C., and D. HOMFRAY, B.Sc. Second edition. London: Baillière, Tindall, and Cox. 1904. Pp. 112. Price 2*s.* 6*d.*—This little book—it measures four and three-quarter inches by three inches—is certainly handy for the pocket, and the chemical and hygienic information is accurate and useful, but in places the medical information is, to put it mildly, misleading. Thus, under the word "Measles" we are told that the mortality is usually low, although occasionally there is an outbreak in which it runs up to 40 per cent. This statement is insufficient. Again, under the word "Hæmorrhage" the following passage occurs which to our minds is hopelessly confusing: "When an important blood vessel in the arm or leg has been ruptured the best way to prevent violent hæmorrhage ...... is to hold the limb up and bind it round as tightly as possible just above the rupture." No distinction is made here between arterial and venous hæmorrhage and the uninstructed person, we should say, on reading these directions would in the case of a wounded artery apply the bandage in exactly the wrong place. Again, under the word "Poisons" emetics are recommended in the case of alkalies, a course which might prove fatal in a patient who had taken a corrosive alkali. Before a third edition comes out we recommend the authors to have the medical portions of their dictionary revised.

The Insurance Blue-book and Guide, 1903–04. London: Dawbarn and Ward. 1903. Pp. 459. Price 2*s.* net.—This handy publication contains an immense amount of information concerning insurance. Amongst other items are a directory of insurance offices, tables of mortality and expectation of life, the accounts of nearly all insurance offices, a chapter on the legal aspects of insurance, and instructions for obtaining probate or letters of administration. The book is well arranged and clearly printed.

A Few Facts and Figures concerning Vaccination and the Fallacies of Antivaccinators. By J. HEDLEY MARSH, M.R.C.S. Eng., L.R.C.P. Lond. Macclesfield: Claye, Brown, and Claye. 1903. Pp. 56.—This pamphlet is a reprint of letters contributed to the columns of the *Macclesfield Courier* during October and November, 1903. They were written by Mr. Marsh to controvert the statements made by Mr. Harold Whiston, an antivaccinationist, in a lecture delivered in a dissenting chapel, and other statements made by other antivaccinationists in the columns of the *Courier.* The antivaccinationist, however, is like the deaf adder of scripture; he will not hear. Mr. Marsh's array of facts should convince anyone but they will not convince antivaccinationists.

New Inventions.

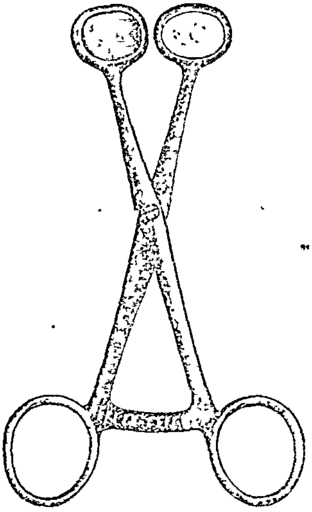
A TROPICAL CLINICAL THERMOMETER.

IT frequently happens that a surgeon in the Gambian Protectorate has to take the temperature of a patient when the atmospheric temperature is greater than that of the patient. For example, from May 1st to June 19th, 1902, out of the 50 days in 26 days (say 50 per cent.) the temperature in the shade from noon to 3 P.M. was above that of normal blood heat. During ten of those days it was over 100° F. and on three occasions it reached 105°. Now given an atmospheric temperature of, say, 104° and a patient with a temperature of, say, 101°, the question arises, How is one to record it with an ordinary clinical thermometer? which is of course registering 104°, the atmospheric temperature, and cannot be shaken down below that. For this purpose Mr. F. Darton, manufacturing optician, of 142, St. John-street, Clerkenwell, London, E.C., has made at my suggestion a tropical clinical thermometer having the following points: (1) a shaft six inches long; (2) an open scale; (3) non-prismatic; (4) no stricture or bend to prevent the mercury running down; (5) a large calibre tube; and (6) a vacuum bulb at the distal end to take up 4° or 5° of expansion. The advantages of this thermometer are: (1) it can be read in the patient's mouth or axilla without removal; (2) open scale for the same purpose; (3) non-prismatic so as to be read at any angle it may have turned towards you; (4) no stricture or bend (this practically makes it a minimum thermometer, so that when taken from an atmosphere standing at, say, 104° the mercury will drop to the cooler temperature of the patient at, say, 101°); (5) the large calibre of the tube facilitates this; and (6) the vacuum bulb at the distal end to take up 4° or 5° of expansion is to prevent bursting. Government travelling commissioners have reported to me that their ordinary clinical thermometers have sometimes burst, owing to (as occasionally happens) the temperature rising to 110° and over. This thermometer will be suitable to all high tropical temperatures. It will be equally suitable in temperate climates and as it requires no shaking down it would save time in a hospital ward, rising and falling to each patient's temperature. The six-inch shaft is more suitable for reading axillary temperatures *in situ* but a four inch shaft can also be had.

F. A. BALDWIN, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A.,
Protectorate Surgeon, McCarthy's Island, Gambia, West Africa.

ENTROPIUM FORCEPS.

AT my suggestion Messrs. Arnold and Sons have constructed a pair of entropium forceps as figured in the accompanying illustration. It will be noticed that they are larger than the old-fashioned instrument and that they are fixed by a rack instead of a screw. This facilitates their application and enables an assistant to hold them in position more easily. The fenestrated blade is made to fit into a groove round the flattened blade and the latter is made slightly convex so that it will force the tissues above



the scalpel cor
may be more
detachable jo
fenestrated blade is concave instead of angular. Anyone who has used the old-fashioned instrument must have experienced some of the difficulties I have indicated and as the removal of a tarsal cyst is an operation which many members of the profession undertake I hope that this modification may be of use.

I am indebted to Messrs. Arnold for the careful manner in which they have carried out my idea.

J. LIONEL STRETTON,
Senior Surgeon, Kidderminster Infirmary and Children's Hospital.

A HEALTH TENT.

Messrs. S. Wilson and Co., of Bedford-street, Belfast, have sent us an illustrated description of their "patent health tent," in which there are no poles visible when the tent is erected and an air space six inches wide is provided between the inner and outer layers of canvas for the purposes of reducing variations of temperature. A centre pole is not used. A special feature of the tent is stated to be the employment of stretchers and of cross-stays connecting the vertical poles together in such a manner as to be adjustable lengthwise. These stretchers are, in fact, strong spiral springs and in this way the canvas is firmly held both in wet weather and in dry. The makers believe that the tent will be found useful in the open air treatment of tuberculosis and in the isolation of cases of infectious disease.

ST. BARTHOLOMEW'S HOSPITAL.

A MEETING convened by the Lord Mayor was held at the Mansion House on Jan. 26th in furtherance of the appeal for funds for St. Bartholomew's Hospital for the erection of new buildings.

The LORD MAYOR, who presided, called upon Sir Trevor Lawrence, the treasurer of St. Bartholomew's Hospital, to make a statement to the meeting.

Sir TREVOR LAWRENCE said that he was authorised to state that the rebuilding appeal had the sanction and sympathy of the Prince of Wales, who was president of the hospital. The question of the site of the hospital had been dealt with by the Mansion House Committee and that committee had decided in favour of the retention of the hospital on its present site. One of the witnesses before the committee was the Chief of the City of London Police and he stated that of all the accidents and cases of sudden illness occurring in the City 65 per cent. were taken to St. Bartholomew's Hospital. Sir Trevor Lawrence then read the following passage from the *Times* of Jan. 16th:—

> The maintenance without shrinkage of the maternity department,
> strongly contrasting with
> King's College, shows that
> still contains a large resid
> perhaps excepting that of t
> fruitful of accidents than

In regard to the scheme involving partial removal of the hospital Sir Trevor Lawrence said that it seemed to him a most undesirable suggestion, because it would cause great difficulty in the treatment of patients and would destroy the medical school, the maintenance of which was a matter of the utmost importance. The value of the site in his opinion had been very largely and very seriously exaggerated. In the opinion of experienced valuers the price was much less than had been estimated by the advocates for the removal of the hospital. He contended that the mere question of the value of a site did not comprise the whole problem. Money considerations should not be put before the interests of a great institution carrying on a work of mercy and charity. It had further to be remembered that the majority of the patients were too poor to afford the money or time to go to a distant hospital in the suburbs. Referring to the population shown by the last census in the proximity of the hospital, he pointed out that the census was taken on a Sunday night and the great number of people who worked in the neighbourhood during the day-time were not taken into account. During the last 50 years no fewer than 7,000,000 patients had been treated at the hospital and in the out-patients' department during the first three weeks of this year the number of attendances had been 15,247. Dealing with the question of the proposed new buildings Sir Trevor Lawrence said that the wards were somewhat antiquated and immediate attention was required in certain departments, the most pressing need being first a new casualty and out patients' department with separate accommodation for ophthalmic, orthopædic, skin, throat, ear, electrical, dental, and gynæcological cases. A home for 240 nurses and 80 female servants was wanted. Sir Trevor Lawrence concluded by giving a list of the new buildings required for which a sum of £438,000 would have to be found.

The BISHOP of LONDON then moved the following:—

> That this meeting, having heard the statement of the treasurer of St. Bartholomew's Hospital, cordially approves of the decision of the governors to reconstruct the hospital on its ancient City site, extended as it has recently been by the addition of one and a half acres.

He said that the appeal made that day was made by the pioneer hospital of the whole country which had done splendid work in the cause of humanity for 800 years. In all parts of the world there were many men who ought to send a contribution to the rebuilding fund. What they wanted was the best hospital that could be turned out for the City of London and he pleaded earnestly that the generosity of the citizens of London should give St. Bartholomew's what was required.

Sir WILLIAM CHURCH, in seconding the motion, said he had spent 40 years at St. Bartholomew's Hospital and during that time many great improvements had been made by the governors of the hospital in the wards and in the service of the institution. Want of space had alone prevented structural changes being carried out adequate to the ever-growing importance of the work done in the casualty, out-patient, and other departments of the hospital. St. Bartholomew's Hospital had recently had the opportunity of extending its borders and could appeal with confidence to the City of London and to the public for the necessary help to improve the condition under which it had so long been labouring. They had heard certain objections raised in regard to the appeal being placed before the meeting without any detailed plans of the rebuilding having been furnished. In his opinion such objections could not be seriously advanced. Surely they could trust the governing body of the hospital and the medical staff to see that in providing for present wants nothing would be done that would in any way hamper the future reconstruction of the hospital. It had been argued that St. Bartholomew's Hospital should be moved because its site was a veritable gold mine, but the value of that site could not be known until it was put on the market for sale. There was the further consideration that towards that site every day there was an influx of from 30,000 to 40,000 workers to premises in the closest proximity to the hospital and they knew that accidents and sudden illnesses occurred during the working hours of the day more often than when people were sitting comfortably at home. They had been told that 65 per cent. of the accidents in cases of sudden illness in the City were sent to St. Bartholomew's Hospital and that number would be increased by the removal of King's College Hospital. Continuing, Sir William Church said that he particularly desired to remove an impression that had arisen from injurious and misinformed statements that the present wards were so out of date as to be prejudicial to the health of the patients. That, he assured them, might be dismissed from their minds entirely, for the results obtained by the medical staff were as favourable as those shown by the most up-to-date hospitals. He considered that the removal of the hospital to another site would destroy the medical school and he reminded them that if a medical school was not attached to a large hospital there must be a large increase in the expenses of the treatment of patients. There was the further point that the absence of the medical school would remove that beneficial rivalry with other schools of medicine in attaining the best possible treatment for the relief of suffering and pain. They were not ungrateful to the City of London for the help that had been afforded to the hospital when the present wards were erected some 150 years ago, and they confidently looked to the City of London and the public to come to their aid again so that St. Bartholomew's Hospital might remain in the future, as it had been in the past, one of the great centres of the kingdom for the relief of pain, for the acquirement of medical knowledge, and for the advancement of medicine and surgery.

Mr. JOHN TWEEDY, President of the Royal College of Surgeons of England, in supporting the motion, said that he was one of those who was disposed at first to consider favourably the proposal for the removal of the hospital to another site, but after reading the report of the Mansion House Committee he had altered his views. He pointed out that in addition to the arguments put forward there was much to be said for the maintenance of the historical tradition of the hospital and the satisfaction of historical sentiment. He asked them, What would New York not give to have within its boundaries an institution that for nearly 800 consecutive years had been carrying on one of the noblest works of charity? What would any city in any part of the civilised world not give to possess a site hallowed by its associations with Harvey and a hospital made memorable as a school in which John Hunter received his surgical education? He felt certain that the City of London would not allow these sentiments to pass by unheeded.

Dr. S. J. GEE, speaking on behalf of the medical staff, described the active growth which was taking place in all departments of the hospital and contrasted the number of the staff in 1868 with the number of the staff at the present day. He also urged that the removal of the hospital would be an unwise proceeding.

The LORD MAYOR then put the motion to the meeting when it was passed unanimously.

The next motion was proposed by Mr. ALBAN GIBBS, M.P., and was as follows:—

> That this meeting pledges itself to support the governors of St. Bartholomew's Hospital in their appeal for the funds necessary for the reconstruction of the hospital and earnestly commends to the generosity of the public this the first appeal which the hospital has made for 150 years.

This was seconded by the MASTER of the Mercers' Company who promised that the appeal would be considered in a liberal spirit by the court of his Company.

The CHIEF RABBI also supported the motion and described how in visiting his own poor in the wards of St. Bartholomew's he was greatly struck by the kindness and consideration with which they were treated.

Sir WILLIAM HART-DYKE, M.P., also supported the motion and was followed by Mr. A. A. BOWLBY, who said that he addressed the meeting in order to emphasise the fact that the staff of the hospital were absolutely unanimous in supporting the present proposal. Dr. Gee had spoken for the medical side and what he said was equally true for the surgical side. The difficulty was the want of space in which to do the work.

Upon this motion being put to the meeting by the LORD MAYOR it was declared carried with two dissentients.

After Sir WILLIAM TRELOAR had made the announcement that the sum of £40,000 had been received in cheques and promises towards the fund, a vote of thanks to the Lord Mayor for presiding was proposed by the MASTER of the Merchant Taylors' Company seconded by the Rev. R. J. CAMPBELL, supported by a speech from Mr. J. LANGTON and carried with acclamation.

The LORD MAYOR briefly responded and the proceedings then came to an end.

Looking Back.

FROM

THE LANCET, *SATURDAY*, JAN. 28, 1826.

Yellow Fever.

While the medical world continues to be disturbed by that irreconcileable subject—that *bugbear* to the profession—Contagion, it is with no little pleasure that we lay before our readers the Report of the French Academy of Sciences on this hacknied question. The cool and dispassionate manner in which it has been investigated does credit to the members, and is well calculated to conciliate the absurdities of the *Ayes* and the follies of *Noes*.

M. Dupuytren read a report on the memoir of MM. Lassis, Costa, and Lasserre, relative to yellow fever, and some new experiments on the contagious nature of the malady. He commenced by showing the opposite opinions entertained as to the way in which yellow fever, as an epidemic, is thought to be propagated.

"In the theory of contagion," observed M. Dupuytren, "it is allowed that the malady, carried to its height, is capable of giving rise to a *miasm*, a sickly principle, a true germ, which escapes from the bodies of the sick, and preserves the power of reproducing the malady, with all its concomitant symptoms."

"In the theory of infection, on the contrary, it is contended that the malady can never propagate itself but under the influence of causes which are capable of producing it primarily, as heat and moisture, impure air, putrid exhalations, in places where the air cannot renew itself easily; these are considered as causes always indispensable for the reproduction of yellow fever."

"If the germ, or *effluvium* of the contagionists," continued M. Dupuytren, "really exists, that man will be rendering an incalculable service to mankind who will, in a clear way, point out the mode by which we can assure ourselves of its presence."

"It is not necessary to say, that in accordance with the idea which they form of the malady, diametrically opposite measures are called for to prevent the propagation of its ravages; sequestration effected by every sort of means, sanitary cordons, and lazarettoes, are a consequence of the theory of contagion, whilst the dispersion of the sick ought to be directed by the exclusive partisans of infection."

M. Dupuytren concluded these general remarks by observing, that if the theory of infection appeared more simple and seducing, since it admits but of one cause, that of contagion seems better calculated for the explanation of detailed facts.

THE LANCET.

LONDON: SATURDAY, JANUARY 30, 1904.

New Facts concerning Malignant Growths.

EVERY new fact relating to the vital processes of malignant growths is sure of receiving a hearty welcome from all, even though at first sight there may seem to be no very close connexion between the new fact observed and the etiology and treatment of cancer. But the more we know of malignant growths the more likely are we to arrive at exact ideas as to their causation and a rational system of therapeutics. Within the last few weeks two papers of great value in the study of malignant growths have been read before the Royal Society of London, and, though opinions may differ as to the exact bearing of the facts communicated, there cannot be any doubt of the importance of the observations recorded. The first of these papers was read on Dec. 10th of last year and was written by Professor J. B. FARMER, F.R.S., Mr. J. E. S. MOORE, and Mr. C. E. WALKER. It was a record of a large number of careful observations on the intranuclear changes occurring in those cells of malignant growths which are undergoing multiplication. It was entitled "Resemblances exhibited between the Cells of Malignant Growths in Man and those of Normal Reproductive Tissues." It is unnecessary to go with more detail into the paper in question, as a full abstract was published in our columns,[1] while a discussion of the mitotic changes which occur in the division of a nucleus of an ordinary somatic cell would be quite outside the scope of this article. Suffice it to say that the phenomena in all somatic cells are alike, but that in the cells which are developing into ovaries or testes the mitotic changes are strikingly different, forming the so-called "heterotype mitosis." Now Professor FARMER and his collaborators—and the work was genuine collaboration—showed that in malignant growths the mode in which division of the nucleus is effected differs from that exhibited by somatic cells and resembles very closely that found in developing reproductive tissue. That is to say, there is heterotype-mitosis in malignant growths. Benign growths show homotype mitosis, as is found in ordinary somatic cells, and the difference, now scientifically recorded, may obviously be of value in diagnosing between a simple and a malignant growth. It is curious to find that an approach to the idea that there was some relation between the activity of malignant growths and "germinal epithelium" was made several years ago. In 1896 Dr. G. T. BEATSON read a paper before the Edinburgh Medico-Chirurgical Society in which he suggested that "cancer consists in the epithelium of the part affected taking on the active proliferation which is a marked characteristic of the germinal epithelium" and that "there seems a reasonable ground for thinking that the active processes seen in a cancerous tumour are best explained by regarding the epithelium of the part as having taken on the properties and the powers of the germinal epithelium." As the outcome of this theory Dr. BEATSON performed on several patients with inoperable malignant disease the operation of double oöphorectomy. In a certain proportion of the cases great improvement followed, and in some apparent recovery. Varying results have been obtained by different operators who have applied this method of treatment in such desperate cases, and on the whole the opinion exists that in some cases of cancer the removal of the ovaries does exert a favourable influence. Without pressing unduly the similarity between the views of Dr. BEATSON and those set forth in the paper read at the Royal Society we draw attention to the resemblance as interesting and noteworthy. Dr. BEATSON'S letter on this subject will be found in our issue of Jan. 2nd and the reply of Professor FARMER and his colleagues appeared a fortnight later.

A second paper of equal importance to medical readers on the pathology of cancer was read at the Royal Society on Jan. 21st for the authors, Dr. E. F. BASHFORD and Dr. J. A. MURRAY. Dr. BASHFORD is the general superintendent and director of the central laboratory of the Cancer Research Fund of the Royal College of Physicians of London and the Royal College of Surgeons of England, and this paper, among the first-fruits of that research, will shortly appear at full length in our columns. Upon several important points in this paper we may dwell in a few preliminary words. In dealing with the significance of the zoological distribution of cancer and the nature of the mitoses Dr. BASHFORD and Dr. MURRAY apply to the new growths met with among the lower animals the rule laid down by Professor FARMER, Mr. MOORE, and Mr. WALKER with regard to man. A large number of malignant tumours have been examined and tumours from the trout, the mouse, and the dog all showed the character in the mitoses seen in reproductive cells. Thus a complicated sequence of cell changes has been found to be characteristic of carcinoma and sarcoma alike, and this sequence is the same as that which initiates the origin of the sexual generation in plants from the asexual, and is terminal in the history of the sexual cells in animals. Dr. BASHFORD and Dr. MURRAY have found that the malignant growths occurring in domesticated animals and other vertebrates are identical with those found in man, clinically, pathologically, anatomically, and microscopically. Moreover, since the malignant new growths occur in animals under the greatest diversity of habitat, food, and general conditions of life, Dr. BASHFORD and Dr. MURRAY hold that such external conditions can have but a subsidiary rôle in determining the incidence of the disease, and from this it is concluded that the essential factors must be sought in the potentialities which reside in the cells constituting the living body. A third point brought out in this highly valuable and suggestive contribution to pathological study dealt with the histological changes seen after an attempt to transfer a malignant tumour from one animal to another of the same species. It was found that the new tumour, which arises from the implantation of a portion of a tumour from another animal, springs from the actual cells introduced and not from the part into which the portion of tumour was implanted. Dr. Bashford and Dr. Murray conclude from their researches that "cancer is an irregular and localised manifestation of a process otherwise natural to the life-cycle of all organisms." We may be sure that the work of Dr. Bashford and Dr. Murray will receive the closest attention from all pathologists and biologists, for the significance of such a conclusion, as dictating the direction of future research work, is immense.

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[1] THE LANCET, Dec. 26th, 1903, p. 1830.

The public, who have read extracts in the daily press from the two papers under consideration, have imagined that we are now measurably nearer a knowledge of the etiology and treatment of malignant disease. Unfortunately this is not so. A direction, apparently of a most valuable kind, for future investigation has been provided. As to the importance of the observations there can be no question, but the conclusions that we may safely draw from the excellent work that has been done would seem to the lay mind rather meagre. Let us review what fresh data we have obtained. We have learnt, first, that the mode of nuclear division observed in most of the dividing cells of malignant growths resembles very closely, or is even identical with, that seen in the reproductive tissues and differs greatly from the mode of division in ordinary somatic cells; secondly, that this form of mitosis is found not only in malignant new growths occurring in human beings but also in all the malignant growths examined which occurred in lower vertebrates of many species. What conclusions may be drawn from these data? To say that because the mitotic changes in cancer resemble very closely the mitotic changes in reproductive tissue therefore there is necessarily an identity in the physiological processes of these two tissues is a faulty syllogism; for as we know nothing of the true meaning of the nuclear changes in cell division we are utterly unable to predicate anything as to the interpretation of the nuclear changes in malignant growths. Therefore any theory of etiology depending on this resemblance rests on a very frail support. And if we cannot see at present how these recent observations can serve to elucidate the difficult problem of cancer genesis so we are equally unable to draw any very hopeful inferences as to a treatment of cancer which may serve to control this widespread scourge. Nevertheless, every new fact, every new idea, every new aspect of facts already known helps forward the day when we shall understand fully the etiology and treatment, both preventive and curative, of malignant disease. We congratulate Dr. Bashford heartily on the issue from the central laboratory of the Cancer Research Fund of so important an addition to our exact knowledge. He has furnished the governing body, among whom may be found the name of His Majesty the King, with an admirable argument wherewith to charm money from the public pocket.

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The Illegal Detention of Lunatics.

A man named Avard was convicted under the Lunacy Act, 1890, at Bearsted in Kent on Jan. 18th and fined £15 with £10 costs for receiving lunatics in an unlicensed house. He had apparently done this for some time, as one of the inmates of this establishment, of whom there were seven, had been there since 1888. Dr. F. P. Davies, medical superintendent of the Kent County Asylum, who, instructed by the Lord Chancellor, had visited Avard's premises, informed the magistrates that he found the bedding used by some of the inmates in an indescribably filthy condition, that there was no provision for safety in the case of fire, that there were only two attendants of any kind, and that he could not ascertain that any medical man had attended any of the persons received. In the circumstances the penalty imposed may be regarded as a light one but the magistrates were evidently impressed with the length of time during which this very undesirable institution had existed without attracting attention. No doubt the Commissioners in Lunacy acted as soon as they were informed, but it is certainly a matter for surprise that no one should have thought it desirable to interfere sooner. The nature of the house and the outline of the provisions of the lunacy law are matters of which, it might be thought, the local police would have some cognisance and in which members of the public might also reasonably be expected to take an interest. Instances of the detention of the insane in unlicensed houses under the care of persons, not only unprovided with any legal title to practise medicine but not even conversant with nursing, are brought to light from time to time. Sometimes the persons so detained are found to have been treated with every care and those charged with detaining them have disputed their guilt on the ground that the mental condition of the patients was not such as to require certification. Two instances of this occurred in the metropolitan district in September, 1901, and in September, 1902, respectively, but in both of these cases the magistrates did not accept ignorance of the fact that a breach of the law was being committed as an excuse and fines were imposed larger than that inflicted upon Avard. Cases such as these present features which show the need for public supervision and inspection whenever the mentally weak have to be provided for.

In most instances the person charged is usually found to have had no medical training and no experience in the tending of the feeble minded. Unfortunate persons, harmless but imbecile, frequently suffering from senile dementia accompanied perhaps by chronic palsy of the limbs, become a burden to their relatives who desire to get rid of the charge of them and at the same time to secure their object with the minimum of expense and publicity. The poor creatures thus afflicted are consequently handed over to someone who is recommended to the relatives by a carefully worded advertisement and afterwards, so long as the small payment agreed upon is maintained, can be conveniently forgotten. When someone, who takes an interest in the welfare of his fellow creatures apart from any personal acquaintance which he may have with them, chances to call the attention of the Commissioners in Lunacy to what is going on it is found that the insane persons have been maintained alive, for that is necessary in order that their keepers may derive an income from them, but that beyond this they have been allowed to live in a state of filth, misery, and neglect, constituting cruelty of the grossest kind.

At the house of Avard it will be noticed there were no precautions against fire, and no doubt had a fire taken place a holocaust would have been the result with the probable consequence of an indictment for manslaughter against AVARD himself. It is not often, no doubt, that institutions so large as his go on for so long unobserved, but at the same time large premises give the idea that a home for the infirm is being maintained and thus act to some extent as a protection to the unlicensed masters of such establishments. The Commissioners in Lunacy must depend for their information upon the goodwill of the public, and members of the public, including medical men, who are not unlikely to be acquainted with the reputation of houses in their neighbourhood, no doubt do a good work in calling the Commissioners' attention to the desirability of inquiry where the treatment of persons helpless on their own behalf is concerned. The Commissioners do not themselves visit the unlicensed house, but the Lord Chancellor or the Home Secretary has power to make an order requiring a specified person or persons to visit a place where alleged lunatics are detained and to make a report. It was in pursuance of such an order that Dr. DAVIES visited the premises of AVARD in the case under discussion, with the result that the inmates are now, it is to be hoped, in institutions where proper care will be taken of them. Where two or three persons only are detained illegally, or only one, observation is less likely to be excited, but the law provides a remedy and the Commissioners in Lunacy are ready to enforce it wherever evidence is obtainable upon which they can act.

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The National Hospital for the Paralysed and Epileptic and Organised Scientific Research.

THE appeal in aid of a research fund, which has just been issued by the authorities of the National Hospital for the Paralysed and Epileptic in Queen-square, is one that deserves the earnest consideration of all who are in a position to promote the attainment of the end desired. The hospital in question from its very foundation has occupied a unique position as one in which the advancement of science has been recognised as a primary object of its existence. Originally founded by two ladies, who had witnessed the prolonged sufferings from paralysis of a beloved relative and who desired to prevent the occurrence of similar suffering in others, the hospital received the stamp of its future character from the first appointments made to its medical staff, appointments which included the names of BROWN-SÉQUARD, of LOCKHART CLARKE, and of CHARLES BLAND RADCLIFFE. Besides affording material for their investigations it was the first hospital in London, or probably in Great Britain, to possess the means for adequately conducting and testing various forms of electrical treatment, and it has always been conspicuous for its promptitude in recognising and in rendering available every ray of light which could be thrown upon its proper work by those engaged in other departments of medical inquiry. Ophthalmic surgeons, an aural surgeon, a laryngologist, were from time to time added to the staff, not so much because the departments thus represented would otherwise have been neglected by the physicians and surgeons as in order to provide that nothing should be lost which it was possible for them to supply. It has been long conspicuous as one of the chief centres of cranial and spinal surgery in the metropolis and a pathologist occupies an important position among its officers. With these advantages, it can be no matter for surprise that it has been much frequented by visitors from the continent and from America, or that its out-patient rooms have often been so thronged by post-graduate students as to remind those frequenting them that, just as shoemakers' wives are said to be the worst shod, so the conditions of atmosphere tolerated by medical audiences are often such as could not be conscientiously approved in places of even temporary sojourn for their patients. Nor is it the least among the merits of the institution as now existing that it was lately the arena of a conflict between the lay committee and the medical staff who were determined to recover a position of influence in its management of which they had been gradually and quietly deprived. We need not dwell upon the details of a dispute which will be fresh in the recollection of our readers and it is enough to say that the staff, after enduring all things at the hands of the committee and of its executive officer, were at last completely successful in an appeal to the general body of the governors. The committee was reconstituted with members of the staff forming an integral part of it and with the complete abolition of the sway previously exercised by a non-medical official.

A hospital with these antecedents and abundantly supplied with clinical material of the most varied description would be untrue to its traditions if any slackness concerning research were displayed by the members of its staff, and hence it is not surprising that the pages of *Brain*, the official journal of the Neurological Society, have been largely occupied with accounts of the work done within its walls. To one portion of this work the appeal before us might properly call attention—namely, to the paper on Landry's Paralysis contributed by Dr. E. FARQUHAR BUZZARD to the spring number, and containing an account of a micrococcus which he obtained from a patient dying from the disease in the hospital and from cultures of which he produced an analogous form of paralysis in a rabbit. We possibly do not exaggerate in assigning to this discovery a place equal in importance to that of the discovery of the trypanosoma of sleeping sickness, for the former disease was previously quite as mysterious as the latter and, although not frequent, it has of late years been increasingly observed both in this country and in America. One of the earliest cases recorded in London was communicated to the Clinical Society in 1875 by the late Dr. ANSTIE who attended it in conjunction with the late Sir ANDREW CLARK and who, like him, was not only quite unprepared for the rapidly fatal issue but did not at first recognise that he was dealing with a condition involving danger. Dr. ANSTIE'S paper opened ground so completely new that it elicited no other remark than an expression of sympathy with the father of the patient who was himself a member of the society. No one had a word of suggestion either as to the actual condition or the possibilities of treatment. In contrast with this Dr. BUZZARD is able to draw upon a chronicle of several recently recorded cases, and although he cannot as yet offer any suggestion as to the mode by which the micrococcus obtains entrance into the human body the whole history of science teaches us to expect that the knowledge of causation will be the first step towards the attainment of control. In many other directions the abundant material of the hospital will no doubt admit of being utilised for the benefit of mankind, and the appeal is one which will, we trust, meet with a prompt and sufficient response. It was a saying of FARADAY that new knowledge is frequently passing unrecognised before our eyes, and those who are eager to be on the watch for its appearance and its applications are certainly entitled to have all unnecessary difficulties removed from their path. Of these, so far as research is concerned, one of the most important is its costliness. We have the men, we have the opportunities, and what we chiefly want is to have "the money too."

Annotations.

"Ne quid nimis."

THE HOUSING QUESTION.

IN THE LANCET of Jan. 23rd, p. 248, attention was called to the evidence given at an inquest as to the enormous rent commanded by those who let rooms to the poor in the East-end of London. The difficulties which beset the question of providing the working classes and the poor in London with sufficient and sanitary living accommodation at a price which they can afford to pay are not diminished by the class of tenant which has to be provided for in many instances. The following case, which recently occupied the attention of the Lord Mayor and aldermen at the Mansion House police-court on two successive days, well illustrates this and at the same time shows the high rental exacted by landlords for the rooms in which they allow their tenants to huddle themselves regardless of decency and health. The danger, both physical and moral, to children brought up in such circumstances and the fact that cases of apparently genuine distress are carefully investigated in the City will also be observed. On the first day of inquiry the charge was against a woman named Nowell of exposing her two boys, aged nine years and five years, by causing them to beg in the streets. When arrested she had nine pennies upon her and she pitifully entreated the presiding alderman not to take her children from her and to send them to an industrial school, saying that they went to school regularly already. The police stated that as far as they had then been able to ascertain the husband was a hard-working man who had been out of employment as a dock labourer and who during the past week had only been able to get half a day's work. They added that he and his wife, a daughter aged 19 years, a son aged 17 years, and three children, aged respectively nine years, five years, and two years, lived in a single room in Spitalfields, where they slept on the bare boards and that for this shelter they paid 7*s.* a week rent. With respect to the children, the alderman, who no doubt had experience of such cases, remained obdurate, but while they were remanded for further inquiries and for a school to be found for them, the parents were not forgotten and the Mansion House Unemployed Committee was able to send a police constable at once to the father with the address of a firm where employment would be given to him. On the following day evidence was given that the constable intrusted with the matter called several times at the address of the working man but found no one there, and that the man took no notice of a message left for him informing him of what would be done on his behalf and recommending him to call at the police station. Finally, the constable went to the room in question between 10 and 11 at night when he found the husband drunk and quarrelling with his wife. He gave his message but the man refused to listen to it or to take the address of the firm which would have given him work. At the same time he was abusive, declared that he would drink every halfpenny he had got, and with regard to the proffered employment said that he did not want "any of your —— twopenny-halfpenny jobs." It will easily be understood that while parents of this class can live upon their children's mendicancy, and while those who give alms indiscriminately will assist them to do so, it is difficult to prevent children from being brought up in the midst of disease, starvation, and crime. The housing question is also rendered more complicated where people of this class exist in considerable numbers. They will not go into quarters where decency and reasonably good behaviour with the regular payment of rent are insisted upon and as long as they can find buildings of any kind where they will be tolerated they are content to live there under conditions dangerous to their own health, that of their children, and that of the public. To enforce universal conditions of sanitary life in the case of a huge population, leaving as the only alternative prison or the streets, seems hardly possible, but short of such compulsion it is not easy to see how a healthy and decently behaved people can be obtained or how matters can be prevented from going from bad to worse. Any measures not universally applied tend to increase the congestion in the districts where cleanliness and sanitation are already most needed.

THE POSITION OF WORKHOUSE MEDICAL OFFICERS.

WHILE as the result of concerted action on the part of members of the profession the status of medical men in the navy, army, and Indian services has been improved, the apathy exhibited by Poor-law medical officers has prevented any improvement in their circumstances and has even in some cases been productive of changes for the worse. Triumphant democracy has reversed the old social order and the workhouse medical officer, who has probably some claim to be regarded as a man of culture and education, holds his post at the will of persons with whom he would not in a private capacity care to associate. In a similar way the Local Government Board still insists on including the control of the medical officer among the functions of a master and a matron who are often enough a promoted gate porter and his wife. Our attention has been called to a case in which the right of a medical officer to admit a visitor to a ward nominally in his charge is disputed by the master and matron and however absurd such a condition of affairs may seem it is clear from the orders of the Local Government Board that the right can only be exercised by permission of the officials mentioned. Thus it was laid down, in 1847 be it noted, that one of the duties of that dignified and potent officer the porter is "to keep the gate and to prevent any person not being an officer of the workhouse or of the union, an assistant Poor-law commissioner or any person authorised by law or by the commissioners or guardians from entering into or going out of the house without the leave of the master or matron." The attitude of the Local Government Board towards the hierarchy of the casual ward is shown by a circular letter issued in January, 1895, which runs thus: "The improvement that is taking place in the character of workhouse nursing from the employment of trained nurses occasionally leads to objections being raised to the legitimate exercise of the authority of the master and matron in the arrangements connected with the sick wards. The Board consider that so long as these establishments are constituted as at present the nurses should be responsible to the medical officer for the treatment of the patient, but should clearly understand that in other matters they must defer to the authority of the master and matron" From the views expressed by the recent Departmental Committee on Nursing it would appear that the Board is not now quite so sure of the advisability of leaving a free hand to the master and matron as regards nurses. Perhaps in course of time it may recognise that the medical officer, too, has feelings worthy of consideration.

SCIENCE IN BOYS' SCHOOLS AND MEDICAL EDUCATION.

AT no time probably since the introduction into this country of compulsory school attendance has more general interest been taken in the question of the subjects and methods of education than at the present moment. We have left behind us, we hope for ever, the controversy as to the practical utility and absolute necessity of some form of education for every one of our fellow subjects. We are now entering upon what bids to be even a more prolonged controversy as to the matter and manner of education which shall prove most efficacious in fitting our race to perform its allotted functions. Now that it is recognised that education is for all it is being questioned whether the methods of instruction in the past may not be improved upon. Doubt as to the perfection of our methods extends through every department of learning from the board school to the university. To our shame, but also perhaps to our advantage at the present time, other countries have recognised the need of reform before us and have made experiments in various directions from which if we are wise we may profit. As in medicine so in education, the empirical method is not always the best means of testing efficiency. It is not easy to estimate the influence of all the factors in the environment and because good men are turned out from our public schools it does not follow that the character of the education in those institutions does not need improvement. It is not only by watching the result of different forms of education that we can tell which is the most desirable. Thoughtful consideration of the objects to be attained by education and of the probable results of different measures may often lead to practical reforms, just as researches in the laboratory and the contemplations of philosophical pathologists have often given the clue to effective methods of treating cases which have baffled practical physicians. In trying to ascertain the particular scheme of school education most suitable for an intending student of medicine it is not sufficient even if it were possible to contrast the respective merits of medical practitioners submitted to rival methods of scholastic treatment. Statistics could be put to no more futile use than to estimate the percentage of successes in final medical examinations achieved by candidates educated on the classical and modern sides respectively of our chief public schools. Nevertheless, those who are engaged in medical education must necessarily take the keenest interest in the preliminary instruction of their pupils and they are generally supposed to hold strong views upon the much-vexed question of the rôle of science in school education. The belief that teachers of medicine would naturally desire that their pupils should have studied science at school arises from a false assumption as to the chief objects of a boy's education against which a strong current of opinion is now setting. The tyranny of the examination system is causing a revolt against the view that the acquirement of knowledge is the main object of education. Systems of education dominated by examinations tend to become little else than methods of storing facts in students' brains, since it is the success of this process which is most readily estimated by the examiner. If a teacher of medicine desired his pupil to be handed over to him with his brain well stored with facts upon which subsequent knowledge could be built there is no doubt preference would be given to one who had been instructed in a school in which natural science was fully taught. But teachers of medicine, in common with all those whose duty it is to impart instruction to youths who have completed their school curriculum, find that their best material is characterised not by knowledge but by brain power. The facts which a boy has acquired at school are of little importance compared with the effect that the school training has had upon his intellect and his morals. A boy of high moral sense, well trained to observe and capable of logical reasoning, will make a better medical student though he has never had the least smattering of so-called scientific education than an unobservant boy with an illogical brain stuffed with facts connected with elementary chemistry, physics, and biology. Recognising this fact the medical profession should use its influence to secure that the course of study in preparatory and public schools should be that best suited to develop a boy's senses and intellectual faculties regardless of the subsequent uses to which the facts acquired may be put. Schoolmasters are already too much harried by those whose sole idea of education is that it shall provide useful knowledge. Science is more or less on its trial as a subject of education in schools and it is believed by some to be a very unsuitable subject. It would be unfortunate if the supposed needs of the medical student led to the retention in the school curriculum of a subject which failed to promote intellectual development, inasmuch as the pure science which a medical student requires can easily be provided after school is over. There are some who are disposed to give great credit to the medical profession for such share as it has had in encouraging the establishment of science laboratories in secondary schools. It is a question requiring the most thoughtful and careful consideration whether such laboratories are of real value and in helping to solve this problem the medical profession must not regard the matter from a selfish or utilitarian point of view.

ALBUMINURIA IN THE NEWLY BORN.

IT is well known that the urine passed shortly after birth differs in several details from that passed later, notably in being of low specific gravity, turbid from uric acid and epithelial cells, and of darker colour. Dr. Ssesenowski of St. Petersburg has investigated the urine of infants in the first few days after birth with especial reference to the presence of proteid substances and has recorded his observations in the *Wratschebneja Gazette*, No. 21, 1903. He finds that in the first six days after birth traces of albumin can be detected in 22 per cent. of the cases and traces of mucin in nearly every case. On the first day after birth albumin can be demonstrated in as many as 30 per cent. It is found more frequently where labour has been protracted and is thus more common in first-born children. The less the absolute body-weight of the infant, and the greater the relative diminution of this in the first days of life, the more frequent is the presence of albumin; moreover, its presence appears to depend to some extent upon the temperature of the infant. The presence of mucin is most constant on the first day after birth, when it can be demonstrated in 96 per cent. of the cases. It gradually lessens, so that on the sixth day it can only be found in 50 per cent. Traces of uric acid are found in 60 per cent. and both this substance and albumin are more frequently found when the urine is acid and deeply coloured. Dr. Ssesenowski regards it as incorrect to speak of a "physiological albuminuria" in infants and considers that previous observers have not sufficiently differentiated between albumin and mucin in their investigations. These observations if confirmed are of interest in reference to the frequency of some degree of albuminuria in apparently healthy children and youths, which is estimated by Dr. Clement Dukes to be at least 22 per cent. No explanation is given of this albuminuria in newly born infants, although it is probable that the altered condition of the circulation at birth may be one factor and the altered relations of the skin may possibly be another.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND: LECTURES FOR 1904.

THE Hunterian lectures will be delivered on Feb. 15th, 17th, and 19th, by Mr. T. Crisp English on the After-effects of Head Injuries; on Feb. 22nd, 24th, and 26th, by Dr. Arthur Keith on the Structure and Evolution of the Auricles of the Heart and of a Competent Valvular Mechanism round their great Venous Orifices; on Feb. 29th and March 2nd and 4th, by Mr. L. B. Rawling on Fractures of the Skull, including Mechanism, Pathology, Complications Immediate and Remote, and Treatment; and on March 7th, 9th, and 11th, by Mr. A. W. Mayo Robson on the Surgery of the Pancreas. The Arris and Gale lectures will be delivered on March 14th, by Dr. Percy J. Cammidge on the Physiology and Chemistry of the Pancreas; and on March 16th and 18th, by Mr. J. Herbert Parsons on the Neurology of Vision. The Erasmus Wilson lectures will be delivered on March 21st, 23rd, and 25th, by Mr. E. M. Corner on Acute Infective Gangrenous Processes (Necroses) in the Alimentary Tract. Each of these lectures will be delivered on the respective days at 5 P.M. precisely.

PUBLIC HEALTH IN THE PHILIPPINE ISLANDS.

THE reports of the Board of Health for the Philippine Islands and city of Manila for the months of July and August, 1903, occupy 40 closely printed pages, the introductory portions of each being signed by Dr. E. L. Munson, captain and assistant surgeon in the United States Army, acting commissioner of public health. The first question that is discussed is the number to be assigned as representing the population of Manila. According to a count made by the Board of Health in May, 1901, the number was then 244,732, but according to the first official census under the American occupation, made during 1903, it was 219,941. The decrease in the population of the city since 1901 is attributed to the return to the provinces of persons who had sought security in Manila during and after the late insurrection. This population of 219,941 is classified according to nationality as follows: Americans, 4389; Filipinos, 189,782; Spaniards, 2528; other Europeans, 1117; Chinese, 21,230; and all others, 895. During July there were 346 births and 620 deaths in Manila, giving a general birth-rate and death-rate of 18·52 and 33·21 per 1000 respectively. For the three predominant nationalities the death-rates per 1000 were as follows: Americans, 10·74; Filipinos, 35·32; and Chinese, 22·75. During July there were seven deaths from plague and 38 from cholera. Cholera also became prevalent in three towns lying along the Mariquina river above the intake of the Manila water-supply. The Board of Health therefore sent a corps of medical men, sanitary inspectors, and disinfectors to the Mariquina Valley from Manila, obtained a larger military guard than hitherto for the purpose of quarantining the river, established the pail conservancy system for the reception of human excreta, and organised a corps of scavengers for the collection and proper disposal of the same. By these measures the infection of the Manila water-supply, which at first appeared almost inevitable, was avoided and the disease was stamped out in 30 days. During August the new sea-going steam scavenger barge of the Board of Health was received from the builders. It is of 285 tons burden and is capable of efficiently removing and of dumping at sea the entire excremental waste of the city.

THE EARLY DIAGNOSIS OF ARTERIO-SCLEROSIS.

IN the processes of involution which occur with advancing years the most important and widespread by far is the loss of elasticity of the blood-vessels due to arterio-sclerosis. Accompanying this morbid process there appears a train of symptoms of varying character, generally grave and lasting throughout life. In *American Medicine* of Jan. 2nd Professor Alfred Stengel of the University of Pennsylvania deals with the early symptoms, diagnosis, and treatment of this important affection. Attention has been drawn recently, especially by Clifford Allbutt and von Basch, to the factors which produce premature arterio-sclerosis in many persons. An early recognition of the development of this condition, says Professor Stengel, and a proper regulation of life and habits "may defer the more advanced stages of this malady, if they cannot cause a restitution of previous conditions." When marked arterio-sclerosis of the aorta and large vessels is present the smaller vessels and capillaries have long been affected. From the point of view of diagnosis, therefore, it is important to recognise the involvement of the smaller blood-vessels rather than that of the main trunks. Von Basch, who has given much attention to the subject, suggests that the term "angio-sclerosis" should be used for the widespread and universal affection of the vascular system, while the term "arterio-sclerosis" should be used in a more restricted sense for affection of the peripheral arterial system, and in this opinion Professor Stengel concurs. Starting from the view of Gull and Sutton that, with rare exceptions, the disease begins as a diffuse and general disease of the blood-vessels it is stated by Professor Stengel that the intermediate and later stages show a special local advancement—thus in one instance we meet with a cerebral arterio-sclerosis, in a second with a cardiac affection, and in a third with a renal disorder. The causes that lead to arterio sclerosis have been more common in the United States during the last five decades, a view, adds Professor Stengel, almost uniformly held by physicians of experience. An analysis of the statistical evidence from the census reports of the United States leads to the same conclusion. Among the etiological factors are enumerated continued mental anxiety and exhausting mental work, while the toxic effect of typhoid fever is said to predispose to arterio-sclerosis in later years. Similarly excessive exercise and athletic indulgence may cause changes in the heart muscle and blood-vessels which during the period of robust manhood are of little consequence but which in later life may increase in degree and seriousness, as was pointed out in a leading article in THE LANCET four years ago.[1] Other important causes of arterio-sclerosis are alcoholic intemperance, overfeeding, chronic lead poisoning, and syphilis. "I have seen many cases of advanced arterio-sclerosis," continues Professor Stengel, "in persons who have lived the most correct lives in every respect except overfeeding." A tendency to arterio-sclerosis also exists in some families. In reviewing the early symptoms it is pointed out that the first effects of loss of elasticity in the blood-vessels are an impediment to the easy circulation of the blood and a consequent increase of the work of the heart, with accompanying heightened blood pressure which remains constantly high with occasional remissions. This elevation of blood pressure is found to be an invariable symptom; it is detected by the finger on the pulse or by the use of the manometer of Riva-Rocca or von Basch. Auscultatory prolongation of the first heart sound and a sharp accentuation of the second or aortic sound are present. The earliest subjective or other symptoms which lead the patient to seek medical aid are a failure of vigour, a general feeling of reduced vitality, anæmic pallor, and undue sweating on exertion. "It is active members of the better class, men who have achieved much and suffered much though outwardly successful, that fall early victims to this disease." The easy-going and indolent, adds Professor Stengel, may develop this disease but seldom early except as the result of excesses in eating and drinking. Slight and occasional albuminuria in the early stages of arterio-sclerosis shows that the disease has definitely affected the kidneys but casts are not found in the urine until the disease is considerably advanced. Early cardiac symptoms such as arhythmia, increased force of the cardiac impulse and apex beat, and occasional slight attacks of dyspnœa are frequently encountered. The abuse of tea, coffee, alcohol, and tobacco in such cases is a serious matter, tending to accelerate the progress of the disease. Finally, ophthalmoscopic examination may throw valuable light on the condition. Thus thickening of the retinal arteries and narrowing of the retinal veins have been observed early in the course of this affection in several cases by de Schweinitz.

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[1] THE LANCET, Jan. 20th, 1900, p 174.

CANCER RESEARCH AND TEACHING IN BIOLOGY.

Dr. E. F. Bashford, the superintendent of the Cancer Research Fund, has caused to be sent to all British biologists a letter from himself to Mr. A. E. Shipley of the Museums, Cambridge, together with a circular letter in reply from that teacher. Mr. Shipley says:—

> I am told it would very materially assist the work of the Cancer [illegible] f the nature of malignant [illegible] rtebrates, and if it exists, [illegible] caused by nematodes, [illegible] Cancer Resea [illegible] inquiry. Su [illegible] should be pla [illegible] Director, Can [illegible] ment, Londo [illegible] terial from the various [illegible] uld greatly assist the [illegible] ntry if similar supplies [illegible]

The subject of cancer is so important to the medical profession and to the public, while at the same time so little is known of its nature or etiology, that no means of possible information or of investigation should be left untried and we are sure that teachers of biology throughout the country, together with their pupils, will respond heartily to the above appeal.

THE REBUILDING OF ST. BARTHOLOMEW'S HOSPITAL.

ON Jan. 26th a largely attended meeting, of the proceedings at which we give a condensed report in another column, was held at the Mansion House, the Lord Mayor of London being in the chair. The treasurer of the hospital, the Lord Bishop of London, members of the medical and surgical staffs of the hospital, the Chief Rabbi, and representatives of the great mercantile houses of the City all spoke emphasising the necessity for an appeal to the public for funds wherewith to put the ancient foundation into a condition compatible with modern needs. Two motions were carried, the one unanimously and the other with two dissentients, while subscriptions paid or promised were announced to the amount of £40,000. We have already so fully set out in THE LANCET of Dec. 5th, 1903, p. 1587, the reasons why an appeal should be made that there is no need to recapitulate them here. We hope, however, that it will not be long before definite plans for reconstruction are put before the public and that a special appeal will be made to every old St. Bartholomew's man throughout the empire. The sons of the great hospital are working in every quarter of the globe. All can give something, some perhaps only little, others much. Even the price of one brick or one stone will be a help, and if the sons of St. Bartholomew's Hospital do not send their aid others less connected with the foundation cannot be expected to do so. We are sure, however, that the money will be forthcoming and it only remains for all St. Bartholomew's men to remember Sir William Treloar's words that the appeal committee means to prosecute the appeal and it means to get the money.

THE PLURALITY OF DYSENTERY.

WRITING recently under this title in the *Archives de Médecine et de Pharmacie Militaires* Professor Vincent of Val de-Grâce gives a summary of the views which of late years have been advanced regarding the etiology of dysentery. The question, he says, is one of great importance to military medical officers not only from the point of view of treatment but also with regard to prophylaxis. Until the precise nature of an infecting agent is known preventive measures must always be of a more or less empirical description. Quincke and Roos, he continues, have succeeded in differentiating several kinds of amœbæ, some being innocuous or at all events capable of residence in the digestive tube of healthy people without giving rise to reaction, and others pathogenic, possessing the characteristic properties which cause dysentery. In addition to the non-pathogenic amœba intestinalis vulgaris these writers recognise an amœba coli mitis and an amœba dysenteriæ, the last named being smaller than the other as well as more mobile and also inclosing red globules. The amœba coli mitis contains only bacteria and is pathogenic in man alone. The amœba dysenteriæ is pathogenic in man and also in the cat and possibly in the dog. Summing up, Professor Vincent comes to the conclusion that dysentery is complex; it is the common expression of several infections of a different nature. As a matter of fact the human organism when in conflict with pathogenic agents is not in possession of an unlimited number of modes of reaction. If the lesions caused by the bacillus of Shiga and by the amœba of Loesch are sufficiently different the symptoms by means of which the mucous membrane of the large intestine makes known its suffering are identical in the two affections. It seems as though the etiological unity of dysentery dogma, which a few years ago no one would have dreamt of contesting, was about to vanish. There are various kinds of dysentery, just as there are various kinds of broncho-pneumonia. Each kind of dysentery has, it may be, its special capabilities for epidemic transmission. That is what future investigations will teach us. In connexion with the plurality or not of dysenteric poison attention may be drawn to a thesis entitled "Les Dysenteries, Étude Critique" by Mlle. Broïdo, a Parisian student who is now medical officer on board a passenger steamer belonging to one of the great French lines. In this work Mlle. Broïdo treats of the pathogenic complexity of dysentery and summarises the actual state of the question. She recognises an amœbic form of the disease and also a bacillary form. In a group still requiring investigation she includes (1) dysentery due to the balantidium coli; (2) dysentery due to the bacilli of Ogata; (3) dysentery due to the bacilli of Roger; (4) dysentery due to the cocco-bacillus of Lesage;

and (5) finally dysentery due to the various pseudo-dysenteric bacilli. Mlle. Breido does not think that true dysentery can be caused by non-specific microbes.

A PRAISEWORTHY FAD.

POPULAR crazes in matters of medicine and of hygiene are more often than not things to be deplored. If they are not actually harmful they are generally ridiculous, and if they are of no benefit to the general public assuredly they are, as a rule, of equally little advantage to the medical profession. The net result is most often a fine haul for a few quacks and loss and disappointment for a large number of "patients." It is with considerable complacency therefore that we may view what seems almost to amount to a "craze" at the present time. We allude to the prevalent exploitation of eating slowly and eating less. A more generally beneficial doctrine could hardly be chosen for the popular medical idol of the moment. A lay contemporary has recently devoted many paragraphs to the researches and experiences of an American gentleman, Mr. Horace Fletcher, who has made it the business of his life to demonstrate that most people eat too much and eat too fast. Incidentally he believes that a new throat reflex has been discovered insuring proper mastication for the "slow feeder." Mr. Fletcher's results have interested physiologists and many of his experiments were carried on at Cambridge in association with Sir Michael Foster and other physiologists at that place. As an enthusiast Mr. Fletcher sees in the reduction of the quantity of food necessary for the individual far-reaching results, amongst others the kernel of national military success by the simplification of the commissariat problem. Napoleon's dictum that an army "moves on its belly" is to be altered and the instructed army will hardly need a belly to move on. Whatever may be the wide effects of the adoption of such a system of feeding as Mr. Fletcher proposes, at any rate there can be no question of the individual advantage that would follow in most cases from such a course. A similar lesson, in a less convincing form, is, of course, the central point of the mysterious successes that attend Mr. Barrie's heroine in his play of *Little Mary*, and if when lay writers deal with medical subjects they were always to work in such directions the medical profession would welcome them as valuable coöperators, as, indeed, we do in the case of Mr. Horace Fletcher.

POOR-LAW MEDICAL OFFICERS IN THE HIGHLANDS AND ISLANDS OF SCOTLAND.

THE Scottish Poor Law Medical Officers' Association, which is a body formed for the purpose of looking after the interests of a hard worked and very poorly paid body of men, has just issued its report for 1903. To Mr. J. Cathcart Wason, Member of Parliament for Orkney and Shetland, was intrusted the responsible task of introducing in Parliament a Bill promoted by the association. He was, however, unable to do so during the last session. The report further states that owing to the advertisements of the association which have appeared in the medical press applicants for vacant Highland and island appointments have applied to the secretary of the association for information with the result that the inquirers ceased to be applicants for the posts. The committee hopes this year to advertise also in the *Scotsman* and the *Glasgow Herald*. Particulars are then given of various parishes which have been without medical officers during the greater part of the past year. The report ends with an appeal to all Poor-law medical officers in Scotland to join the association and this appeal we cordially endorse. We are always glad to do what lies in our power to assist a Scottish Poor-law medical officer to obtain the advantages for which we have always contended—namely, fixity of tenure, adequate salary, a free official residence, and a free annual holiday—i.e., with payment by the parish council of a locum-tenent. But we cannot help those who will not help themselves and we learn from the report that although there are 850 Poor-law medical officers in Scotland only 350 nominally belong to the association and of these many omit to pay their subscriptions. This, as the report goes on to say, is not fair.

THE PREVENTION OF LEPROSY.

OUR readers have probably read the correspondence which has occasionally appeared in the *Times* on the causation and prevention of leprosy. A long letter was recently published from Mr. Jonathan Hutchinson who once more explains in considerable detail his theory that leprosy is due in the main to the consumption as food of decomposing or imperfectly cured fish. This theory has received some support, editorially and otherwise, in the columns of our contemporary. Mr Hutchinson admits that the fish hypothesis has not as yet been openly endorsed by many of the leading members of the medical profession and we have throughout maintained that his theory has not yet been proved. His views, however, can only be received with respect and the hope expressed that further investigations will be forthcoming which will corroborate or otherwise the conclusions at which he has arrived after the most painstaking efforts to discover the truth. If he is correct in the etiology of the disease his remarks on its prevention should receive world-wide attention.

THE BRITISH DENTAL ASSOCIATION.

AN extraordinary general meeting of the British Dental Association was held on Jan. 23rd at the Examination Hall, Victoria Embankment, London, to consider the question of the expediency of a degree in dentistry. A motion was proposed by Mr. J. H. Badcock and seconded by Mr. L. Matheson :—

> That a memorial be presented to the Senate of the University of London praying for the institution, in the interests of dental science, the public, and the dental profession, of a degree in dental surgery in the Faculty of Medicine, but expressing the further opinion that it would be undesirable to make the possession of the M.B., B.S. degrees a necessary qualification for such a degree.

An amendment was proposed by Mr. David Hepburn and seconded by Mr. Montagu F. Hopson :—

> That the creation of d[illegible] desirable and that the opinion of this meeti[illegible] consider the expediency of a degree in [illegible] to the universit[illegible] of the United Kingdom.

A vigorous discussion ensued and the amendment was carried by a large majority.

RINGWORM AND THE METROPOLITAN ASYLUMS BOARD.

AT a meeting of the Metropolitan Asylums Board on Jan. 23rd the children's committee reported that at the Downs Ringworm Schools during the year ending Dec. 31st, 1903, 618 children were admitted, 208 were discharged, and one had died. Of the discharges, 153 were pronounced cured, 14 were transferred to the Bridge School or elsewhere, and 41 were sent for by the guardians. The committee stated that it regretted to observe that so large a number of children were removed from the schools before they were cured of the disease, thus tending to defeat one object for which these schools were intended. Although the committee was not prepared to indicate a remedy it thought that some action should be taken and therefore recommended that the facts should be reported to the Local Government Board and that it should be asked to favour the managers with an expression of its views thereon. The report and the recommendation were adopted.

THE DEATH OF WHITAKER WRIGHT.

When it was first learnt that Whitaker Wright, found guilty upon all counts of the indictment against him and sentenced to seven years' penal servitude, lay dead within the precincts of the court in which he had been tried, suicide seemed so probable and appropriate an ending to his career that it must at once have suggested itself to the minds of all. A story more or less circumstantial of sudden heart failure followed and seemed to the lay mind little less likely to be true when those who heard it considered the physical and mental strain to which the man had been subjected. Medical men, however, failed to recognise in the events of his last moments much probability of death having occurred either from heart failure or cerebral hæmorrhage. It is now known that it was by his own act that he obtained release from the sentence which his reckless pursuit of wealth *per fas atque per nefas* had brought upon him, and that the confidence with which he had vaunted his innocence had been accompanied by the doubt lest a jury of his fellow men might hold other views. Comment was recently made in THE LANCET upon a Home Office circular as to the prevention of suicide by prisoners admitted to bail, and it was pointed out how rarely suicide is attempted by men who have violated the law and have been brought to book for their misdeeds. Whitaker Wright, however, was an exceptional man, and apart from any misgiving which he may have felt latterly as to his position in the eye of the law it is doubtful whether at any time he acknowledged even to himself that he had committed any moral wrong. Such a man would never have been able to reconcile himself to enduring a sentence, the justice of which a weaker criminal would have inwardly admitted. He has preferred, on the other hand, to pay the penalty which the law of all civilised nations regards as the heaviest that can be imposed.

LECTURES AT THE HOSPITAL FOR CONSUMPTION, BROMPTON.

The lectures and demonstrations given by the members of the visiting staff of the Hospital for Consumption and Diseases of the Chest, Brompton, have now recommenced, the first lecture having been delivered by Sir R. Douglas Powell on Jan. 27th. These lectures are held on Wednesdays, at 4 P.M., and are free to all qualified medical practitioners and to students of medicine The attendances at the lectures which were given in the first part of the winter course fully prove the real value attached to them by those for whom they are intended. The wealth of clinical material available at the hospital is immense; numerous cases are demonstrated at each lecture, so that those who are present are enabled to obtain the benefits conferred by actual examination of the patients. The next lecture will be given by Dr. J. Kingston Fowler on Feb. 3rd, the subject being "The Treatment of Thoracic Aneurysm by Gelatin Injections." The course will be continued until March 16th

The medical officer of health of the Cape Colony reports that for the week ending Jan. 2nd only one case of plague was reported throughout the colony—namely, that of a native child at East London. Plague infected rats were found at Port Elizabeth and at East London, but of 205 rats examined during the week within the Cape Town and Harbour Board area none was affected with plague. As regards the Mauritius a telegram from the Acting Governor (received at the Colonial Office on Jan. 23rd) states that for the week ending Jan. 21st there were 16 cases of plague and 12 deaths from the disease.

The Swiney Prize, founded by Dr. Swiney, who died in 1844, for a work on jurisprudence, has just been awarded to Sir Frederick Pollock, Bart., LL.D., D.C.L., and Professor Frederic William Maitland, LL.D., D.C.L., for their book on "The History of English Law before Edward the First." The prize consists of a silver cup of the value of £100 and money to the same amount. The award is made jointly by the Society of Arts and the Royal College of Physicians of London and the prize, under the terms of Dr. Swiney's will, is given every fifth year on the anniversary of the testator's death.

The Lettsomian lectures of the Medical Society of London will be delivered by Mr. C. B. Lockwood at the rooms of the society, 11, Chandos street, Cavendish-square, W., on Thursday evenings, the 1st, the 15th, and the 29th of February, at 9 P.M. Mr. Lockwood has taken as his subject, Aseptic Surgery in Theory and Practice, and will deal among other things with the choice and use of antiseptics and with the comparative results of operations in private houses, nursing homes, and hospitals.

At the opening of the fourteenth session of the London School of Tropical Medicine, which commenced on Jan. 15th, 28 students entered for the three months' course. Of these two are women. Seven students belong to the Colonial Office service and three to missionary societies Four students entered for a period of study less than three months.

As our readers know, an important meeting of Oxford graduates was held early in the year to consider the appointment of a successor to Sir John Burdon-Sanderson, as Regius Professor of Medicine in the University. We understand that at present His Majesty's advisers have made no recommendation to the post.

We are informed that His Majesty the King has consented to open the new University buildings at Cambridge early in March.

Medical Prizes of the Paris Academy of Sciences.—The *Revue Scientifique* of Jan. 16th publishes a list of prizes, the award of which will be decided by the Paris Academy of Sciences during 1904 and several subsequent years up to 1913 The value of individual prizes varies from 200 francs (£8) to 100,000 francs (£4000). The following are those connected with medicine or the medical sciences and having a value of 2000 francs or upwards. Prix Montyon: three prizes of 2500 francs for discoveries in therapeutics and improvements in medicine and surgery. Prix Barbier: prize of 2000 francs for a valuable discovery in medicine, surgery, pharmacy, or medical botany. Prix Bréant: prize of 100,000 francs for a discovery relating to the cure, etiology, or prophylaxis of Asiatic cholera. Prix Mège. prize of 10,000 francs for the continuation and completion of the work (*essai*) of M. Mège on the causes which have hindered or promoted the progress of medicine. Prix Leconte. prize of 50,000 francs for new and important discoveries in mathematics, physics, chemistry, natural history, and medical sciences. Prix Serres: prize of 7500 francs for the best work on embryology, applied as much as possible to physiology and medicine. Prix Dusgate: prize of 2500 francs for the best work on the diagnostic signs of death and on the prevention of premature burial. Prix Parkin. prize of 3400 francs for researches on the curative effects of carbon in its various forms, and particularly in the gaseous form in the treatment of cholera, fevers, and other diseases. Prix Chaussier: prize of 10 000 francs for the best work on legal medicine or practical medicine which has appeared for four years. Prix Lacaze: prize of 10,000 francs for works or memoirs which have advanced physiology.

OSBORNE HOUSE CONVALESCENT HOME

FOR OFFICERS OF THE NAVY AND THE ARMY.

THE KING'S GIFT TO THE NATION.

(BY OUR SPECIAL SANITARY COMMISSIONER.)

THE fact that there was no convalescent home for the officers of the navy or the army is an omission that made itself keenly felt during the South African war. Even abroad, notably Costabelle on the French Riviera, hotel keepers were offering to receive as guests or on special terms convalescent British officers, but at home neither the Admiralty nor the War Office was able to give such facilities. The convalescents therefore came to London or went to stay with friends and many doubtless suffered owing to want of a home which, though not actually a hospital, nevertheless was capable of affording all the means of continuing whatever treatment might be required. There are, of course, many convalescent homes but these are for the most part either charitable or semi-charitable institutions, or else they are commercial undertakings where the charges made are often the reverse of moderate. It was therefore a difficult matter to know what to do with officers who were discharged from the military hospitals but who were not yet fully restored to health. The necessity of convalescent homes is so widely recognised that these are provided for all classes of the community. At Birmingham and in other towns the working classes levy among themselves several thousand pounds every year so as to maintain convalescent homes of their own in the country, at the seaside, or among the Welsh mountains. In spite of the help which it might be thought would be forthcoming from the War Office and the Admiralty, that which working men, without any State aid, have done for themselves had never been attempted on behalf of the officers of the navy and the army. In the midst of the trouble which this negligence occasioned Her Majesty Queen Victoria died and on succeeding to the throne King Edward VII. naturally felt desirous of commemorating his mother's memory by some notable deed. It then occurred to the King that this purpose would be achieved in a useful and practical manner if he gave the wherewithal to found the much-needed convalescent home for officers of the navy and the army. Such a home might have been provided at a comparatively small cost on any suitable site but then it would not be connected with the late Queen and the present sovereign in a sufficiently emphatic manner. Therefore His Majesty determined to make a present to the nation of Osborne House and the surrounding magnificent estate. For this purpose a special Act of Parliament was passed entitled "The Osborne Estate Act," or 2 Edward VII., c. 37. In this it is related that the Osborne estate was left by the late Queen to His Majesty for life, but that with the approval of the Prince of Wales the King had expressed his desire that on the occasion of his Coronation the Osborne estate should be made over and become a part of the public property of the Sovereign. Further, it was enacted that provision should be made so that the house and gardens might be used as a memorial to the late Queen. Only a certain small portion of the estate was reserved for the private use of members of the Royal family. Osborne House and the adjacent grounds were therefore placed under the management of the Commissioners of Works and the rest of the estate under the Commissioners of Woods. The Act further directs that :—

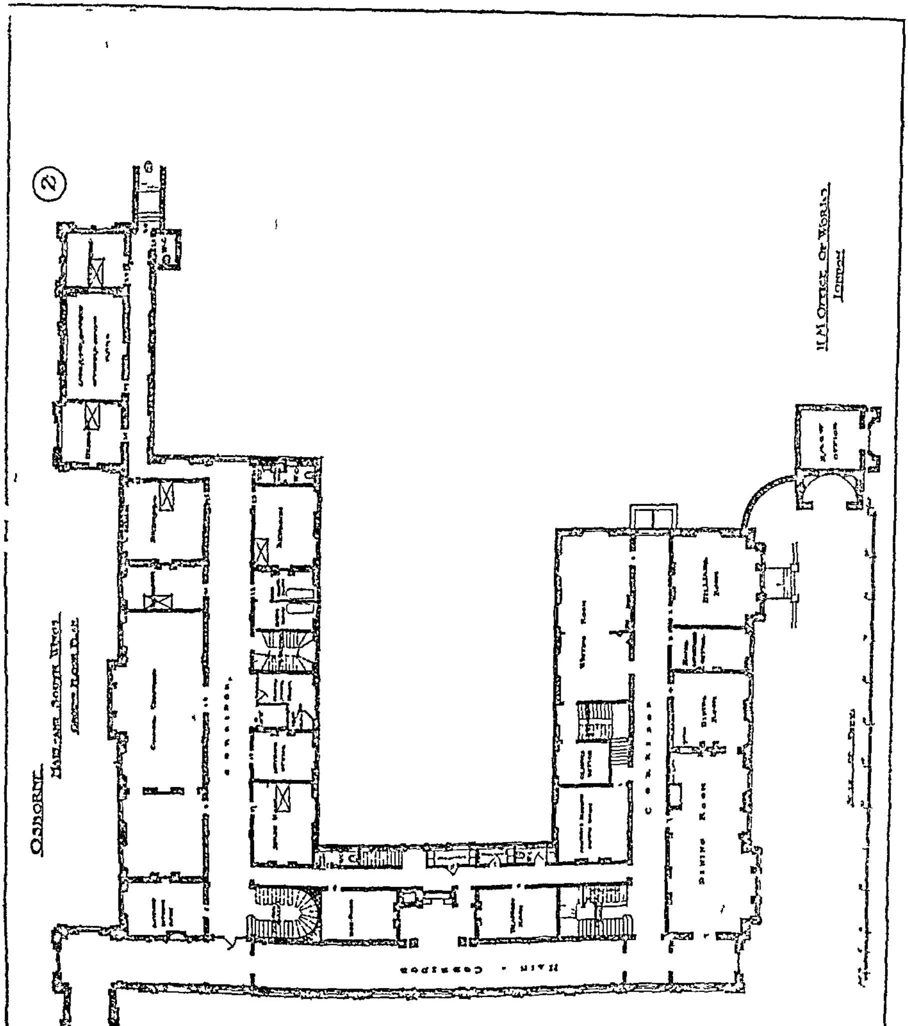
> As a memorial to Her late Majesty the Commissioners of Works—*(a)* shall, during His Majesty's pleasure, preserve, so far as may be in its present condition, and keep open to the public in such manner and on such terms as the Commissioners, with the approval of His Majesty, determine, such part of Osborne House as appears to have been in the personal occupation of Her late Majesty; and *(b)* shall devote the rest of Osborne House and the grounds under their management to be used for the benefit of officers of His Majesty's naval and military forces or their wives, widows, or family.

Here then were a vast building and estate placed at the disposal of the nation and the chief concern was that of making the best use of this Royal largess. A part of Osborne House could be preserved as a sort of museum where visitors might see the Victorian style of decoration. This consists of the council chamber, the dining room, drawing room, and the Durbar Room, together with other apartments which were constantly used by the late Queen. The greater part of the building, however, consisting of the rooms and apartments utilised for the Royal suite and visitors, would afford no special interest to the public and it was proposed that it should be so altered as to be available for the purposes of a convalescent home.

There still remained close at hand the stables and the cricket grounds and it was felt that others besides the convalescents should profit by this vast estate. It was therefore determined to create on this spot a naval college. With great promptitude a series of elegant pavilions have been constructed which already contain 198 cadets of the Royal Naval College and eventually there will be accommodation for a total of 375 cadets. These buildings have been erected by the Office of Works at the expense of the Admiralty. It will help to build up the health and strength of these young pupils to give them the run of this fine estate. The same, it is to be hoped, will be the effect of the situation on the convalescents who will live close by at Osborne House. The site of this building is admirable. It is on the highest elevation of the neighbourhood and is swept by the sea air from all sides. At Osborne House a commanding view of the sea can be obtained and the grounds extend to the shore where there are a beach and a sea wall within the estate. That the climate is exceptional is shown by the vegetation, for, among other trees, the cork oak flourishes here and in an extraordinary manner and early in January I found some Mediterranean heather in full bloom.

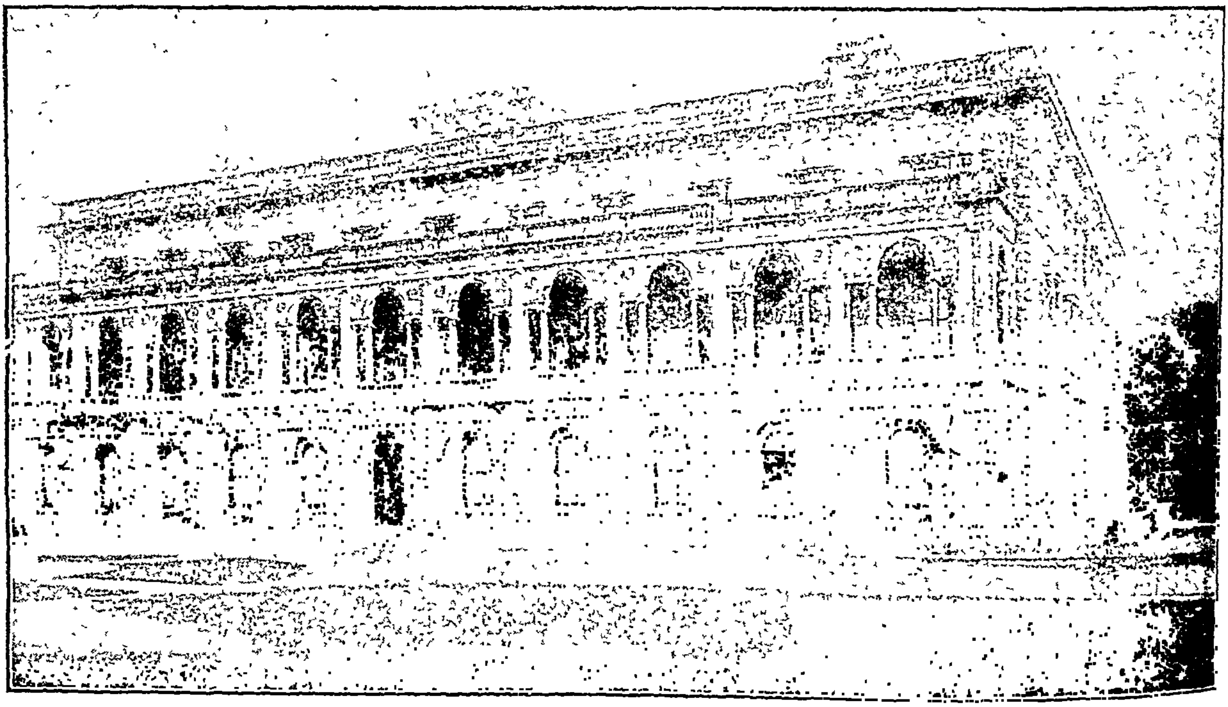
Those who know Osborne House will remember that the main building forms three sides of a square to which, however, several wings and out-buildings have been added from time to time (Fig. 1). Facing the main entrance there are on the left the apartments of the late Queen and the Durbar Room, which on certain days will be open to the public. These are sufficiently separated by a broad court from the right-hand side portion of the building where the convalescent home will be established. This part of the building is well suited for the purpose. There are three floors and two wings. The end of these wings communicates, on one side, with a passage and parallel with the passage is a terrace or colonnade that overlooks the main yard or court of the principal entrance to Osborne House. On the third floor these wings communicate with an open terrace formed by the roof of the sheltered colonnade which corresponds with the second floor. Thus without leaving the building or descending the stairs the patients can be wheeled out or can walk out into the open air. On the second floor the open air can be enjoyed when it is raining, for the colonnade is very broad and affords ample shelter (Fig. 2). This is a convenience that will not fail to be of special service to the patients. As for the rooms, it has been necessary to make very extensive alterations. Some rooms were too large and others were too small so that the position of the partition walls had to be changed. Then the paper from the walls had to be removed, together with some useless and dust absorbing ornamentation. The walls are now treated with velour paint that can be washed and kept thoroughly clean. Light pleasant colours have been selected: a soft green for the third floor, light blue for the second, and strawberry and cream for the first floor. While the walls and size of the rooms were thus modified, all the old-fashioned and extravagant smoke-producing and coal-wasting grates were removed and Tropican grates were substituted throughout. Moreover, all the closets had to be reconstructed, every soil-pipe removed and replaced, and the entire drainage system planned anew and re-laid. In connexion with this bathrooms had also to be provided and there are now four bathrooms on each floor. An iron staircase has been built at the extremity and outside each wing so as to provide a means of escape in case of fire. At the other extremity of the wings there are the terrace and the colonnade gallery. But over and above these precautions there is a huge tank at the top of the kitchen stairs provided with a fire hose and this will supply a full flow of water for 15 minutes. In that period of time the stationary steam fire engine can be made to work and would throw water over the whole building. Each room is provided with a telephone suspended near to the bed and a night emergency bell.

The furniture has been especially devised by Mr. Bailey of the Office of Works with the advice of Miss McCaul,


②
OSBORNE
Ground Floor Plan
H.M. Office of Works
London
Corridor
Main Corridor
Writing Room
Billiard Room
Dining Room
Corridor

R R.C., so as to be as aseptic as possible. Vare's enamel white paint is used throughout. This has been carefully analysed and contains no lead whatever. The furniture is enamelled inside, outside, and underneath so that the absorbent pores of the wood are closed everywhere and washable surfaces exist on all sides. No angles are allowed; all is rounded off inside the chests of drawers, the wardrobes, &c., as well as outside. For the night tables the back has only bars of wood, the door in front having an open space at the top so that the air passes through freely. This furniture is really remarkable. It is none the less elegant and cheerful in appearance because all these sanitary precautions have been taken in its construction. Something similar should be used in hotels and other much frequented places. The Victoria hall has been converted into a smoking and music room. There are here an organ and a library. There will also be a piano but the room is well away from the rest of the building so that the noise or music will not disturb the patients in their bedrooms. In summer the windows on the sunny side can be closed and shaded, while the door-windows on the other side open out on to the terraced gardens which will be preserved for the private use of the patients. These beautiful terraces constitute one of the most charming features of the estate and will be a great boon to the enfeebled who need some brightness, fresh air, and a little exercise within immediate proximity of their rooms. Near at hand there is a drawing room reserved especially for ladies. In the other wing there are a billiard room and a large and a small dining room. This wing does not overlook the sea or open on to the terraced gardens but it faces the south, receives the sun's rays, and gives access to the park with its splendid trees.

Fig. 2.



View of the building showing the verandah and the open promenade on the second floor.

The general impression is that of vastness—a large palatial building; lengthy, broad corridors; lofty rooms, many of them much larger than necessary. Then there is the grand stretch of park and sea, of lawn and shrubberies, with majestic trees that stand like an army round this Royal retreat to break the force of hostile winds and to provide friendly shade and protection. Among all this foliage and the numerous evergreens there is a great variety of birds, while below almost any plant will grow. Thus the naturalist will find much to interest him and this may help many to pass time agreeably in the open air. The one objection is due to the too frequent rains and the consequent dampness and mist. But here again there is the advantage that Osborne House was built with extraordinarily thick and solid walls, so that it can well cope with these climatic disadvantages. Also, being situated on an elevation the air is bracing, and for those who can take exercise further healthy relaxation may be obtained on the neighbouring golf course, while there are 28 miles of good road for cycling.

The accommodation which the convalescent home at Osborne will afford is to be divided as evenly as circumstances permit between the navy and the army. There will be 38 rooms for single convalescents and five sets of two rooms or room and dressing room for married couples. Further, there is a spare bedroom where a near relative of any of the patients might stay as a visitor in a case of emergency. For admission the officers must be recommended by the Director-General of the Medical Department of the Royal Navy, subject to the approval of the First Lord of the Admiralty, and by the Director-General of the Army Medical Service, subject to the approval of the Secretary of State for War. Commander Powell, R.N., has been appointed house governor and will reside on the estate. The inmates of Osborne House will be provided with fuel, light (electric), and attendance, food, and such stimulants as the medical officer may consider to be absolutely necessary for the treatment of the case and shall order. A stoppage of 2*s*. 6*d*. a day will be made for single men and 5*s*. for married couples. No children, officer's servants, or dogs will be allowed. Efficient service will be provided and there will be a staff of trained nurses. But there is a rule that no gratuity shall be given to any person employed at Osborne House under the penalty of dismissal, so that the only expense incurred will be the payment of 2*s* 6*d*. a day. Yet breakfast, lunch, afternoon tea, and late dinner will be provided, together with medical attendance, such special invalid food and medicaments as may be needed, baths, and ample opportunity for outdoor exercise and whatever relaxation may be pleasant provided that it is not injurious.

There can be no doubt that King Edward VII. has earned the gratitude of his subjects by his kind and timely action By establishing the Osborne Convalescent Home for officers of his navy and army he has also provided a monument in honour of his late beloved and gracious Mother which is in entire consonance with the traditions of her long and beneficent life and reign.

SOME POINTS CONCERNING NATURAL MINERAL WATERS IN GENERAL AND APOLLINARIS WATER IN PARTICULAR.

WE have before discussed the question of the therapeutic superiority of natural mineral waters compared with those artificially prepared. The results of quite recent investigations, the discovery of the fact that the Bath and Buxton thermal waters, for example, are radio active, may possibly lead to a more satisfactory explanation of the favourable action of natural mineral waters in hydrotherapy. In previous articles[1] upon the subject attention was drawn to the fact that the effects of the salts in natural mineral waters are such as cannot be obtained from any artificial imitation of them. Possibly the fact that a natural water containing certain salts in certain proportions acts more favourably than does a water to which salts in the same pro-p[illegible] be accounted for in s[illegible]perty, radio-activity, v[illegible]y all natural waters in a more or less degree. On the other hand, it has been surmised that natural waters contain mere traces of many salts which are not present at all in artificial waters and which may possibly exert important beneficial effects upon the body. There is, again, the question of the formation under immense pressure in natural waters of double salts which have a different effect from that of the salts taken separately, their absorption in the single condition being less certain than when in the coupled state. Thus it has been shown that when a natural water was given more mineral matter was absorbed in a definite time by the intestine of a dog than was the case when artificial water of the same composition was similarly exhibited. Whatever may be the correct explanation, the fact that natural mineral waters act more favourably than do the artificial preparations is of decided importance and the discovery of a means of differentiating the one from the other would be a gain to medical science.

For some time past sinister suggestions have been made as to the origin of certain so-called natural table mineral waters imported into this country and in particular in regard to one of the best known—viz., Apollinaris water. Laymen and medical men alike, if they have not shared the view, have often heard it expressed that the Apollinaris spring was a mythical entity and that the water sold in this country was a manufactured article. This suspicion developed until it culminated in a very definite action being taken by a certain section of the mineral water trade some months ago in the fo[illegible]ompany wi[illegible] selling its [illegible] and the proceedings were watched by many eager to know the truth about Apollinaris water. The false description which was complained of was said to be contained upon the label which appears upon the bottle describing the water as "Apollinaris natural mineral water," with a picture of the spring bubbling up, and the representation contained thereon that the water was a natural mineral water. Evidence was given purporting to show that so far from Apollinaris (in bottle) being a natural mineral water bottled as it comes from the spring it was, in fact, to all intents and purposes, an artificial manufactured article. In support of these statements the processes of manufacture necessary for the bottling of the water and its preparation for sale to the public were described. In the end the magistrate decided that the prosecution must fail and he thought that it would be wholly misleading to class this product among artificial mineral waters. The summons was therefore dismissed and the case was afterwards taken to the High Court of Justice, with the result that the Lord Chief Justice said that it was quite impossible to interfere with the judgment of the magistrate. "I understand," his lordship observed, "that the water and the [illegible] gas is the same [illegible], it is drawn up [illegible]

It is of interest to inquire into the facts upon which so important and definite a conclusion was based. The evidence purporting to show that, so far from Apollinaris water being a natural mineral water bottled as it comes from the spring, it is in fact to all intents and purposes an artificial manufactured article, was based on the following brief account given by counsel as to the processes adopted at the Apollinaris spring for the bottling of the water before its exportation and sale to the consumer: (1) the pumping of water into open tanks in which, after the addition of a small quantity of salt, it was left exposed to the air in order to precipitate the trifling quantity of iron in the water; (2) the addition subsequently of carbonic acid gas obtained in the neighbourhood of the spring; and (3) the bottling of the water under a pressure equal to three or four atmospheres of this carbonic acid gas.

That is a brief statement of the case which, however, necessarily omits certain important details that if not taken into consideration might lead to an erroneous inference. This statement omits certain particulars as to those important steps in regard to the preparation of the water for sale which have given rise to considerable contention—steps which if not observed would put an end altogether to the supply of bottled natural aerated mineral water to the public from any naturally effervescent spring. The actual position can, in a word, only be appreciated by making a personal inspection of the spring and of the processes of bottling, and by submitting samples taken at various points to perfectly independent analysis. We have considered it of interest, bearing in mind the scepticism which has existed, to institute such an independent inquiry ourselves. We therefore instructed one of our Special Commissioners to visit the spring (and it may at once be said that the spring is at all times open to the inspection of any medical man who cares to visit it himself; moreover, a public highway intersects the property), to describe all he saw, to take samples where and whenever he considered expedient and germane to the aim of the inquiry, and subsequently to submit these samples to analysis and to compare the results so obtained with the analyses of samples of the water purchased in the open market. It may be stated that the company not only gave our Commissioner permission to visit the springs and to enter the bottling sheds and every place connected therewith when he chose, but afforded also every facility in order that the inquiry might be made as complete as possible.

The Apollinaris spring is situated in the valley of the river Ahr which flows into the Rhine on the left bank about midway between Bonn and Coblentz. The Ahr valley bears signs of past volcanic disturbances and there are several springs in its vicinity which are not only gaseous but thermal. Neuenahr, close to the Apollinaris spring, is a rapidly rising health resort, with a very complete equipment of appliances available for modern balneological practice. There are also the usual provisions for the accommodation of visitors at a watering place—hotels, winter gardens, concert-room, pump-room, &c. The railway to Neuenahr leaves the main line on the left bank of the Rhine at Remagen, close by the Apollinaris Kirche. The distance is about six miles from Remagen. Beyond Neuenahr is a very beautiful valley up to Altenahr by way of Ahrweiler and Walporzheim, both the railway and road passing through a very fertile vine district and very good wine is produced there. The Apollinaris spring itself is situated in the midst of vines, and, indeed, its discovery in 1851 was due to the observation that in a certain spot of the vineyard the vines refused to grow and died, and a black patch resulted which proved to be due to the escape of large quantities of carbonic acid gas from the earth. Upon excavating the earth eventually a spring was found giving off gas and it is this spring which has yielded ever since a plentiful supply of gas and water both of entirely natural origin sufficient to keep pace with the enormous demand that the popularity of Apollinaris water has entailed.

It is a remarkable fact that in spite of the enormous drain to the extent of 30 million bottles per annum upon this spring it shows no signs of being exhausted. Our Commissioner was able to observe the effect of the level of the spring when very large volumes of the spring water were being bottled. Any perceptible lowering of the level by an excessive demand is rapidly compensated and the yield of gas is far in excess of the requirements. The spring cannot be approached without first thoroughly ventilating the space within the walls which surround it. As the steps to the spring are descended a curious sensation of warmth is experienced, first by the feet, then by the legs, until it is not wise to descend lower into the lake of heavy gas. The smoke from an extinguished match floats upon the gas, the depth of which is several feet. By slowly lowering a lighted match the exact level of the gas lying over the spring can be ascertained by the flame being suddenly extinguished. The actual source of the water is unknown and can only be a matter of speculation; suffice it to say that it is quite warm and in cold weather clouds of vapour arise from it. The actual temperature proved to be 20° C. Apollinaris water may thus be classed as a thermal water. The water is drawn at a depth of 50 feet from the surface and the gas is collected at the top in a large bell-jar on the same principle as that of a gas-holder at the gas-works but on a smaller scale. On its way to the tanks the water receives a slight addition of common salt. What this addition amounts to in practice will be found from a consideration of the results of analyses made in THE LANCET Laboratory of the water taken directly from the spring and of the water after it has received this addition.

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[1] THE LANCET, July 12th, 1902, p. 94; Dec. 5th, 1896, p. 1622; August 8th, 1891, p. 307.

The water, which is perceptibly warm, is next run into tanks of which there is a great number. Here it is allowed to be at rest for several days, generally a week. On its introduction into the tanks the water cools and by unavoidable contact with the air absorbs oxygen; a small portion of the iron normally present in the water is oxidised into hydrated oxide of iron which separates in the form of a fine rust-coloured sediment. At the same time a slight film of carbonate of lime forms on the surface. The tanks are covered with screens to keep out dust. At the end of seven days the water is ready for re-uniting with the gas from which, to a considerable extent, it parted company deep down in the spring. It is drawn off perfectly clear and bright and pumped into the carbonators which are heavily lined with the purest block tin. Pure block tin, it may be remarked, is the only metal with which Apollinaris is ever allowed to come into contact during the bottling process. In the carbonators the water and the gas are blended and the partnership which existed between them in the spring is thus re-established. The gas is pumped directly from the spring into vertical cylinders where it is kept at a pressure of about three or four atmospheres. The carbonators are provided with paddles which beat up the gas and water. After carbonation is complete the water with its three or four atmospheres of gas passes to the bottling machines. The gas is so pure in its natural state that it undergoes no treatment whatever; purification would be superfluous and this is borne out by the results given on analysis. At intervals the gas previously to being discharged into the carbonators is tested and a record is carefully kept of the results which show that the proportion of carbonic acid gas is on an average within a few tenths of 100 per cent. The composition of the gas is remarkably constant. Similarly the gas given off by a bottle of the water taken directly from the bottling machines is regularly tested as to the proportion of CO_2 Here again the percentage of pure carbonic acid gas is only short of 100 by a few tenths which consist in the main of air which it is impossible to eliminate entirely during the bottling process. Air adheres to the walls of the bottle in spite of the care taken to remove it by sweeping it out with gas before filling with water. Corking, wiring, capsuling, and labeling complete the process and there is little more to be described. The bottling sheds are very large and the bustle and noise within them at a busy time are considerable. There are some 700 hands employed there.

On several occasions when our Commissioner visited these sheds the quantity of water being bottled was equal to 90,000 bottles per diem. In the summer this daily quantity is doubled. The utmost care is taken to preserve the cleanliness of the water; the corks and bottles are scrupulously cleansed and submitted to several processes before they are consigned to the filler and every bottle is carefully examined in a very strong light before it is ready for labeling and packing. Similarly, care is taken with the stone jugs before being filled with Apollinaris water; the operation of filling and corking the stone jugs is slightly varied owing to the opaqueness of the stoneware. The jugs are completely filled with the water under pressure and then a wooden plug is inserted which displaces a volume of water sufficient to allow room for the cork and a little more besides for the expansion of the water. Necessarily some gas is lost during this process. As a rule the water keeps cooler in the stone jugs and is largely protected from the influence of light and heat.

So far the following important facts have been ascertained in regard to the bottling of Apollinaris water: (1) the water of the spring itself is bottled; (2) the gas is the natural gas of the spring; and (3) the supply both of gas and of water is abundant and in spite of the enormous number of bottles filled day by day there is no evidence of this supply diminishing. As a matter of fact, the natural supply of both water and gas is considerably in advance of present demands.

We may next consider the steps which are employed in connexion with the bottling of the water and which are deemed necessary in order that the water may reach the consumer in a satisfactory condition. The mineral ingredients of Apollinaris may be taken to be the same in nature and amount whether the water is drawn deep down or just below the surface. The amount of carbonic acid gas dissolved in the water, however, will obviously vary according to the depth from which it is taken, or, in other words, to the pressure. That there is a superabundance of gas in the spring is patent from the enormous volume that escapes at the surface. This disengagement of gas at the surface merely means release of pressure, so that while the water at the top would only contain its own volume of gas (the point of saturation at the atmospheric pressure) that down below would contain as many more volumes according to the increased depth. In fact, a pint of Apollinaris water drawn from near the surface contains, we found, barely a pint of gas, but the volume of dissolved gas increases as the columnal pressure is greater until about 50 feet down the pressure is equal to two and a half atmospheres. This has been ascertained by experiment in which a bottle was sunk to that depth and then closed by a mechanical device acting upon a metallic cork. The bottle was then brought to the surface. On releasing the cork the gas rushed out of the water with brisk effervescence, just as when a cork is withdrawn from a bottle of soda-water. It is clearly not practicable to bottle a natural mineral water on anything like the large scale occasioned by public demand in the manner described in this experiment and so water and gas must be temporarily separated and brought together again as nearly as possible at the same pressure. The water is drawn from a depth of 50 feet and subsequently it is re-united with gas at a pressure corresponding with that known to exist at this depth in the spring. So far as the relationship of gas and water is concerned, therefore, it is the same whether it is the water in bottle at a pressure of two and a half atmospheres or in the spring under a columnal pressure of water at 50 feet plus one atmosphere.

But, as has been indicated already, the water during storage develops a very slight sediment on exposure to air which is due to the oxidation of the salts of iron and subsequent separation of ferric hydroxide. If Apollinaris water direct from the spring were placed in a bottle and corked this change would be inappreciable, and in fact the system of storage has not so much for its object the separation of traces of iron as to provide a sufficient volume of the water for bottling purposes. Otherwise there is no reason why the water should not be put in the bottle straight from the spring. A few specks of iron would be found adhering to the bottle, the water itself would be quite clear, and, as a matter of fact, the composition of the water of the spring is not appreciably affected by this system of storage.

The bottling of Apollinaris water, however, entails a precautionary measure which alters, though only slightly, its composition in one respect. We refer to the addition of salt, the amount added over and above that normally present in the spring being one gramme per litre, as will appear from the difference between the results of our analysis, as regards salt, of the water direct from the spring and of the bottled water or the water as it leaves the tank. There is only one reason, and that a very good one, for adding this small quantity of salt to Apollinaris water prior to bottling. The addition of salt is found necessary in order to provide against the decomposition of the sulphate of sodium. In contact with a bad cork and in warm climates some reduction of the sulphate to sulphide is apt to be effected and the gas acting upon sulphide would set free sulphuretted hydrogen which would of course impart an objectionable taste to the water. By adding one gramme of salt per litre, or about nine grains to the pint, the water is preserved from undergoing this change. The salt used for this purpose, as our analysis shows, is of the purest description. The small quantity used does not affect the taste in the smallest degree; a difference in taste would be perceptible between pure distilled and distilled water containing a small quantity of common salt, but in a water containing carbonate of sodium, magnesium, lime, and already some com[illegible] the addition of salt in [illegible] all to the taste. The [illegible] though not the rule is an exception (occasioned perhaps by a defective cork or by warm weather, or most probably by both) which has to be provided against. Formerly the corks were salted but that only led to inconsistencies in the composition of the water and also the preservative effect *desired was not always gained, whereas by adding a perfectly* definite though quite small quantity of salt to the water a uniform result was obtained and according to a number of analyses which we have made of Apollinaris water purchased from different places the quantity of salt is remarkably constant. To sum up, Apollinaris reaches the public in a condition slightly different from the water at its source in two unessential respects which refer not to the water and the gas, which are both absolutely the natural products of the spring but to the mineral constituents. One constituent is partly eliminated during storage and another is put in which slightly augments the amount already normally present. The other constituents remain perfectly intact. Before bottling iron is deposited and salt is added to the extent that the amount normally present in the water direct from the spring—namely, 0·4212 gramme per litre—is increased to 1·4212 grammes per litre (or from three and a half grains to 12½ grains per pint). The exact way in which a small addition of salt thus effectually prevents the reduction of sulphates to sulphides is not known but the decomposition does not occur in mineral waters containing sulphates in which the amount of salt naturally present is over one gramme per litre. The Apollinaris Company has always published this simple means of protecting Apollinaris water from this risk.

Analysis of a sample taken directly from the spring at Neuenahr *by our Commissioner gave the following results*:—

ANALYSIS NO. 1.

Silica	0·080	grammes per 10 litres.
Iron	0·090	,, ,,
Sodium chloride	4·212	,, ,,
Sodium carbonate	12·213	,, ,,
Sodium sulphate	2 800	,, ,,
Calcium carbonate... ...	2 450	,, ,,
Magnesium carbonate ...	4 875	,, ,,
Total saline constituents	26 720	

To these results may be added the following as exemplifying the excellent sanitary state of the water;—

Free ammonia	0·0224	grains per gallon.
Albuminoid ammonia	0 0028	,, ,,

The water taken directly from the spring is absolutely sterile, yielding no growth whatever when sown on suitable nutrient media. The residue gives no sign of containing objectionable organic matter and on ignition does not carbonise in the slightest degree.

The opportunity was taken whilst our Commissioner was at Neuenahr of committing to evaporation on the spot 20 litres of the wa[illegible] Apollinaris spring. In this way [illegible] weighing, after being dried at 100° C., exactly 54·101 grammes, which is equal to 27·050 grammes from 10 litres, a number that will be seen to be in close agreement with that recording the total saline constituents in Analysis No. 1, which was conducted in THE LANCET Laboratory. The salts so obtained were finely powdered and intimately mixed and submitted to analysis and the following results expressed in parts by weight per cent. were obtained:—

ANALYSIS NO. 2.

Percentage Composition of Salts from 20 Litres.

Silica	0·90
Iron	0·70
Sodium chloride...	15·93
Sodium carbonate	46·65
Sodium sulphate	10·35
Calcium carbonate	9·00
Magnesium carbonate	16·47
	100 00

The indication for lithium was distinct, though subsequent examination showed the amount to be small. There were present also traces of bromine, strontium, and arsenic. In spite of the small quantity of lithium present this metal was detected in every sample of Apollinaris water examined, including bottles purchased at different shops in London.

The next sample was taken from a tank into which the water direct from the spring and slightly warm was being discharged after the addition of salt:—

ANALYSIS NO 3.

Iron	0·008	grammes per 10 litres.
Sodium chloride	13·700	,, ,,
Sodium carbonate	13·144	,, ,,
Sodium sulphate	2·860	,, ,,
Calcium carbonate... ...	1 850	,, ,,
Magnesium carbonate ...	4·280	,, ,,
Total saline constituents	35 842	

As will be seen from a comparison of Analysis No. 1 the amount of salt is increased to an amount identical with that subsequently shown to exist in the bottled water. The salt is added in the form of a solution and according to our analysis the salt so dissolved is practically pure sodium chloride. The analysis was as follows:—

ANALYSIS NO. 4.

Sodium chloride	99·562 per cent.
Calcium chloride	0·183 ,,
Sodium sulphate	0·255 ,,
	100·000

It thus contained over 99½ per cent. of pure chloride of sodium and is beautifully clean, white, and crystalline.

The next analysis refers to the sample taken from the tank after an exposure to the air of seven days:—

ANALYSIS NO. 5.

Iron	Trace.	
Sodium chloride	13·740	grammes per 10 litres.
Sodium carbonate	13·140	,, ,,
Sodium sulphate	2 860	,, ,,
Calcium carbonate... ...	1 450	,, ,,
Magnesium carbonate ...	4·610	,, ,,
Total saline constituents	35 800	

The tank contained about 12,000 litres of water and after emptying it a trifling deposit was scraped on the walls and floor which was found to weigh when dried at 100° C. 0·402 gramme. Its percentage composition is given below.

ANALYSIS NO. 6.

Moisture	4 00
Water of hydration	12 68
Silica	2·90
Iron	43·40
Calcium carbonate	35·90
Magnesium carbonate	0 84
Arsenic (As_2O_3)	0·12
Phosphoric acid (P_2O_5)	0·16
	100·00

It is interesting to notice that the iron carries with it during precipitation a distinct but minute quantity of arsenic. Roughly speaking, however, this deposit consists of one half oxide of iron and one half calcium carbonate. This represents all that is eliminated from Apollinaris water during seven days' storage in the tanks. The quantity per litre amounts to about 0 0335 gramme of ferric oxide and carbonate of lime or three-tenths of a grain per pint.

The following analysis was made of the water bottled and taken straight from the filling machine:—

ANALYSIS NO. 7.

Iron	Slight trace.	
Sodium chloride	13·747	grammes per 10 litres.
Sodium carbonate	12·062	,, ,,
Sodium sulphate	2·560	,, ,,
Calcium carbonate	2·250	,, ,,
Magnesium carbonate ...	4·881	,, ,,
Total saline constituents	35·500	

These results express the composition of Apollinaris water as it comes upon the table and it will be seen that except as regards iron (of which the amount was hardly perceptible) and salt the results are practically identical with the analysis

(No. 1) of the water taken from the spring. The amount of salt occurring naturally in the water is 4·212 grammes, while the amount in the bottled water ready for export is 13·747 grammes per ten litres, a difference of 9·535 grammes of salt, which represents the amount added for preserving purposes.

Subsequent analysis of Apollinaris water bought in the shops proved it to contain practically the same amount of salt which, in fact, varies within very trifling limits. On the whole, the results of analysis in regard to salt may be said to be remarkably constant in the case of the whole of the samples examined.

The total quantity of gas found in one bottle of Apollinaris water was found to be approximately three times the volume of water. Thus, a bottle containing 740 cubic centimetres of water gave off at ordinary temperature and pressure 1320 cubic centimetres of gas. Since one volume of water holds one volume of carbonic acid gas in solution at one atmosphere pressure the total gas in this case would amount to 740 cubic centimetres (in solution), 1320 cubic centimetres (discharged)—i.e., a total of 2060 cubic centimetres, or a volume nearly three times that of the water, which is exactly the quantity of gas contained in the water of the spring at a depth of 50 feet—that is, where the pressure (columnal and atmospheric) is equal to three atmospheres.

Two different samples of the gas gave respectively the following results on analysis :—

(1) 99·50 per cent. CO_2.
(2) 100·00 ,, ,,

Analyses were also made of the gas discharged from several bottles of Apollinaris water obtained in London and the following results were ascertained :—

99·60 per cent. CO_2.
99·75 ,, ,,
99 50 ,, ,,

The residue of gas, amounting on the average to about ½ per cent., contains air and possibly also argon and the rarer gases.

Recent investigations would appear to show that all natural mineral waters which evolve gas are radio-active. If that proves really to be the case and the radio activity is found to be permanent we may hope to possess some means of determining whether a given mineral water is a natural or artificial preparation. Experiments in this direction in regard to Apollinaris as well as upon the point of the possible presence of helion and other rare gases would be of considerable interest.

It only remains to add the analyses made independently in THE LANCET Laboratory of various samples of Apollinaris water obtained at different places in London. They serve to show the constancy of composition of the water wherever it is obtained and that it is identical with the water taken directly from the spring by our Commissioner except, as already stated, in regard to a trifling quantity of iron lost during storage in the tanks and an addition of salt (0·1 per cent.) which is advisable in order that the condition of the water at the spring may be preserved.

ANALYSES OF SAMPLES PURCHASED AT DIFFERENT SHOPS.

	(1)	(2)	(3)
Iron	Slight trace	Slight trace	Slight trace
Sodium chloride	13 800	13·680	13·510
Sodium carbonate	13·640	12·190	12·914
Sodium sulphate	3·016	2·895	2·852
Calcium carbonate	2·000	2·100	2 500
Magnesium carbonate ...	5·030	5·030	5 024
Total saline constituents (grammes per 10 litres)	37·486	35·895	36·800

Lithium was detected in every sample examined and the following results in regard to saline and albuminoid ammonia are interesting in indicating that the water undergoes no departure from its admirable state of organic purity at the spring during the process of bottling and exportation.

	Water direct from spring (grains per gallon).	Water purchased in London (grains per gallon).
Free ammonia	0 0224	0 021
Albuminoid ammonia ...	0·0028	0·0042
Nitrogen in nitrites and nitrates	*Nil.*	*Nil.*
Residue on ignition ...	No charring.	No charring.

In conclusion it is difficult to suggest, in the face of the facts just recorded and of the experience which has decided upon the adoption of the methods of bottling Apollinaris which we have described, how those methods could be altered with any possible advantage to the public or how any modification of those methods would enable the public to receive the water in a condition more natural than it is. As a matter of fact Apollinaris water is bottled in such a way that the natural equilibrium of the water and its complement of gas at a depth of 50 feet in the spring are preserved in the bottle for public use. Both water and gas are absolutely the natural products of the spring and the composition of the bottled water is, according to our analysis, always the same and without any appreciable variation in the mineral constituents. Some portion of a useless constituent, in the form of oxide of iron (the total amount in the water being quite minute) separates from the water prior to bottling but a useful constituent, in the shape of a small quantity of salt, is added to augment the amount of salt already naturally present in the spring in order to prevent the possible decomposition to which the sulphate of sodium of the water is occasionally liable. The taste of the water in bottle is identical with that of the water taken directly from the spring. Apollinaris water has a peculiar soft flavour which is due not to common salt at all but in part to the alkaline carbonates which neutralise the acids in the mouth, and in part to the natural state of combination of the mineral ingredients. As Professor Oscar Liebreich has said, "even the best manufactured artificial mineral waters differ from the natural ones in taste and value." There is nothing disclosed in our analysis of the bottled water which is not found in the water at the spring. In view of these facts which we have taken some trouble to ascertain for ourselves, it seems to us that the recent decision of the Lord Chief Justice that Apollinaris water is entitled to the description of a natural mineral water is in accordance with both law and common sense.

We may add that our analyses and observations are in substantial agreement with those given at various times by the late Professor Virchow, Professor Bischof, Professor Liebreich, Professor Mohr, Professor Hofmann, Professor Kekulè, Professor William Odling, and the late Sir Edward Frankland.

THE RETIRING AGE FOR PROFESSORS, PHYSICIANS, AND SURGEONS.

IN his presidential address to the Congress of American Physicians and Surgeons,[1] held at Washington on May 12th, 13th, and 14th, 1903, Professor W. W. Keen makes the following remarks on an age limit for college professors and hospital physicians and surgeons which in view of the leading article published in THE LANCET of Jan. 16th, p. 169, we think will be of interest to our readers :—

"One of the difficult questions which boards of trustees have to face is whether there shall be a fixed age at which a college professor or a hospital physician or surgeon shall retire from the active duties of his post. I firmly believe that they should fix such a retiring age in the interest of the students and the patients. As age advances a man's opinions and his practice become 'as petrified as his arteries.' He is incapable of constant study, of adding to his knowledge, or of keeping up with the feverish strides of medicine. He ought then to be relieved of his cares and his duties. If no rule exists he is allowed to continue his inefficient or even disastrous work or by some harsh suggestion is compelled to give place to another more competent man. A rule is a condition accepted when he is appointed, and just as in the army and navy when an officer reaches 64 or 62 years of age, he is retired on reduced pay, and because it is a rule he does not feel hurt or humiliated; so, in a college or hospital, when time and the rule bring us to the period when we must gracefully retire no one's reputation is injured or his feelings lacerated.

"I have ascertained that the following rules are in force in some of the larger institutions :—

"At Harvard the age when a professor may request to be retired is 60 years, provided he has been in the service of the University for 20 years with a reduced pay ranging from one-third to two-thirds of his salary. At 66 years of age he may be retired by the President and Fellows partly or wholly. The details of the plan are admirably arranged.

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[1] The Duties and Responsibilities of Trustees of Public Medical Institutions, being the presidential address delivered to the Congress of American Physicians and Surgeons, 1903, by W. W. Keen, M.D., LL.D., F.R.C.S. (Hon.), Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia (Transactions of the Congress, p. 232).

"At Chicago, while no plan is yet in force, largely, I presume, because of its recent establishment on the present basis, such a plan will soon be made operative.

"At Columbia the retiring age, after 15 years of service, is 65 years, either at the request of the professor or upon motion of the trustees, and on half pay.

"At Yale the retiring age is 65 years after 25 years of service and on half pay, but the retirement is not compulsory. It will probably be made compulsory before long.

"At Cornell the retiring age is 70 years, but the Pension Fund will not be available until 1914. The retiring pension will then be $1500.

"At the University of Pennsylvania and at Johns Hopkins no retiring age is fixed.

"The only hospitals I know of in which a retiring age is fixed are the Massachusetts General Hospital and the Boston City Hospital. At the former the compulsory retiring age of the surgeons is 63 and of the physicians 65. At the Boston City Hospital the visiting surgeons are retired at 65 but the physicians, gynæcologists, and all the other medical officers continue in service indefinitely—a very curious anomaly.

"These varying, but in the main identical, provisions, when any exist, show the trend of thought and practice. They generally apply to the medical department, except that in case a professor is engaged in the practice of his profession, and so has a private income, the provision for continuing a portion of his salary does not apply. This is right and fair. Of course, in all hospitals where there are no salaries no provision as to reduced salary would obtain.

"The point I wish to emphasise is, however, that the age limit (which in my opinion should be 65 years) should be *compulsory* and so not be invidious in any given case. It will be objected that not a few men are in full intellectual and physical vigour at the age of 65 years and it will be a detriment to the institution to lose their services when their ripe experience and admirable teaching are most desirable. I admit it. But for every one such case of harm done by compelling a man to stop there are a score of instances of men who are doing vast injury by their inefficiency. Moreover, in the very few cases in which it might be allowable, as boards of trustees make rules they can unmake them, and in special cases they could pay a graceful compliment and preserve to the institution their exceptional men by extending the limit to 70 years. In no case can I think it wise to go beyond this limit."

MEDICINE AND THE LAW.

The Colouring of Foodstuffs.

SIX tradesmen were fined at the South-Western police-court on Jan. 21st for selling preserved peas containing crystallised sulphate of copper in varying proportions, added to them for the purpose of dyeing them a more brilliant green than they would otherwise have been. In defence it was stated that the public demanded that peas should be green and would not buy them unless they were. The obvious answer to this is that the public asks for green peas because it associates that colour with fresh well-cooked vegetables and not because it desires to absorb sulphate of copper. That the public has an unreasoning faith in certain appearances with regard to its food as indicative of good quality is well known. In London in particular it likes milk and butter coloured with anatto and bread of an unnatural and unnecessary whiteness. Jams also are readily bought of a colour which the ordinary process of cooking sound fruit with sugar could not produce. A few weeks ago evidence was given at the City of London court of a fish-dealer having recommended a retailer to "try cochineal" in order to impart to an unclean salmon the colour of a fresh run fish. If he meant what he said to be taken seriously he must have held the opinion that the consumer would rely upon his eye rather than upon his palate.

Garbage-mongers Fined and Imprisoned.

At the South-Western police-court on Jan. 21st a man named Carl Hetzel was convicted of having pork which was unfit for human food upon his premises for the purpose of making it into sausages. He was fined £10 with costs. On the same day at the Guildhall police-court Frederick Cutting, a pig-dealer of Roper's green, Hadleigh, Suffolk, was charged with sending eight diseased pigs to Smithfield Market. In this case the knowledge of the defendant with regard to the condition of the animals was proved by the evidence of the man who had sold them to him and to whom he had observed that they had the cramp and looked "a bit lungy." On account of their condition he had offered 50*s*. for ten, and eventually had bought nine for 53*s*. The after-history of the ninth pig was not reported. A previous conviction was proved against Cutting, after which it is not surprising to learn that he was sent for six weeks to a place where the food, if not luxurious, will be more wholesome than that which he endeavoured unsuccessfully to place upon the London market.

The Wording of the Medical Certificate of the Cause of Death.

We have received the following letter:—

To the Editors of THE LANCET.

SIRS,—I should be glad of an o
placed on the passage, "I heret
during h—— last illness." Shou
certificate of death in the case of
at 6 A.M. the next morning and n
death was probably broncho pneu
nearly a week I can hardly be
illness.

Jan. 17th, 1904. AORTA.

Incidents such as that referred to above are not uncommon and the medical man has to exercise his discretion with regard to them. The words of the Act which impose upon him the obligation to give a death certificate are as follows: "In the case of any person who has been attended during his last illness by a registered medical practitioner that practitioner shall sign and give to some person required by this Act to give information concerning the death a certificate stating to the best of his knowledge and belief the cause of death, and such person shall when giving information concerning the death, or giving notice of the death, deliver that certificate to the registrar, and the cause of death as stated in that certificate shall be entered in the register together with the name of the certifying medical practitioner" (37 & 38 Vict., c. 88, section 20, subsection 2). The mere fact of the medical man seeing the patient on one occasion only during the illness from which he dies does not, according to this section, affect the matter. In the ordinary construction to be put upon the words used he "attends the deceased during his last illness," and the question for him to decide is whether he can certify "to the best of his knowledge and belief the cause of death." If the opportunity for observation has been insufficient or if the disease has remained obscure so that he neither "knows" nor has formed any "belief" upon the subject, he is not under the obligation to certify and should not do so. Doubt may occur whether he has attended during the fatal illness once or many times. In any particular case, however, it may be the duty of the medical practitioner not to certify, although the "cause of death," strictly speaking, is clear to him. He may be of the opinion that the death which has been the result of well-defined physical conditions would not have taken place but for the neglect to summon medical aid before it was too late. He may further have reason to suspect that this neglect was deliberate and that he was only summoned in order that he might certify a death into which the coroner should inquire. In the case of children parents are not always anxious that they should survive or escape illness, and it is not impossible to expose children to cold or wet so that they may become ill and their lives may be eventually in danger. It is a matter for regret that the coroner is not bound to hold an inquest on all occasions where there is no medical certificate of the cause of death, but as the law stands inquests are only for cases of "violent or unnatural death, or of sudden death where the cause is unknown." A death caused by neglect is not a "natural" death and for this reason a medical man, where he has any ground for suspecting that matters are not, to use a convenient phrase, "all right," should decline to certify and should leave the matter to the coroner, upon whom the responsibility will then rest. In all cases he must exercise his discretion, taking into consideration all the facts connected with the death so far as he is aware of them.

Salisbury v. *Gould.*

In Salisbury v. Gould, recently tried in the King's Bench Division before Mr. Justice Grantham and a special jury, Mr.

W. R. Gould, a medical man practising in Lamb's Conduit-street, successfully defended an action in which damages were claimed against him on the ground of negligence and he is heartily to be congratulated upon the verdict obtained. Mr. Gould had in September, 1901, certified a little girl to be suffering from small-pox but after she had been placed in an observation shed at Rotherhithe for three days the conclusion was formed that her condition was due to chicken-pox and she was restored to her mother. The evidence showed that, so far from treating the case with anything approaching negligence, Mr. Gould had exercised considerable caution, visiting the patient twice, on Sept. 1st and 2nd, before calling the attention of Dr. W. A. Bond, the medical officer to the Holborn borough council, to the case. Dr. Bond had then examined the patient thoroughly and it was after consultation with him and not until he had secured his approval of the step to be taken that Mr. Gould gave the certificate and the child was removed on Sept. 5th. The evidence further showed that the symptoms pointed strongly to small-pox rather than to chicken-pox. It is a little surprising to see that a medical witness was called, apparently as an "expert," in support of the plaintiff's case and according to the *Times* report of his evidence, deposed that he thought it impossible to mistake chicken-pox for small-pox, at all events after a few hours' development of the illness. The jury do not appear to have given much weight to his testimony, for after Dr. Bond had corroborated Mr. Gould they intimated that they had heard enough of the case and returned a verdict for the defendant, for whom judgment was accordingly given. In addition to this gratifying decision given by the jury Mr. Gould was also entitled to judgment in his favour under the Public Authorities Protection Act, 1893 Mr. Justice Grantham intimated that this was his view but suggested the taking of the jury's verdict as a precaution in case on appeal he should be found to be wrong. The statute referred to provides that "where any action, prosecution, or other proceeding is commenced against any person for any act done in pursuance, or execution, or intended execution of any Act of Parliament or of any public duty or authority or in respect of any alleged neglect or default in the execution of any such act, duty, or authority, the action, prosecution, or proceeding shall not lie or be instituted unless it is commenced within six months after the act, neglect, or default complained of or in case of a continuance of injury or damage within six months after the ceasing thereof." This certainly appears to cover the case of a medical practitioner certifying under the Public Health Acts, although called in to treat the patient in the course of his ordinary practice. A medical man in such circumstances has an unpleasant duty to perform and little enough to protect him from attack when through no fault of his own he lays himself open to it. It would be doubly hard if he were allowed to be at the mercy of a plaintiff several years after the event. At the same time it is not easy to see in what way the Public Authorities Protection Act afforded any practical protection to Mr. Gould. At all events it did not prevent him from being exposed to the anxiety, the expense, and the loss of time entailed by an action persevered in until the jury refused to hear any more of it.

ASYLUM REPORTS.

London County Asylum, Cane-hill (Report for the year ended March 31st, 1903).—The average number of patients resident during the year was 2139, comprising 924 males and 1215 females. The admissions during the year amounted to 323—viz , 181 males and 142 females. Of these 277 were first admissions. Mr. James M Moody, the medical superintendent, states in his report that "a considerable number of the admissions, in regard to prospect of recovery, were of much the same hopeless class as in recent years." A large proportion of those received were in an advanced state of senility or suffering from epilepsy, general paralysis of the insane, and other forms of organic brain disease. The number of patients discharged as recovered during the year amounted to 132—viz., 69 males and 63 females, or 6·17 per cent. of the average number resident. The deaths during the year amounted to 158, or 7·38 per cent. as calculated on the same basis. "This death-rate is," says Mr. Moody, "below the average death rate of the county and borough asylums in England and Wales." Post-mortem examinations were made in 146 cases, or 94·4 per cent. of the deaths. Of the deaths four were due to epilepsy, seven to senile decay, ten to renal disease, 14 to pneumonia, 17 to cardiac disease, 24 to pulmonary and other forms of tuberculosis, 29 to general paralysis of the insane, and the rest to other causes. A severe epidemic of influenza prevailed in the institution towards the latter part of 1902, 26 male and 127 female patients and 31 members of the staff being attacked. A female patient (a single woman) admitted whilst pregnant was safely delivered of a male child who was afterwards removed to the workhouse. "The mother remains an inmate of the asylum." A commodious balcony has been erected in connexion with the first floor of the male infirmary whereby helpless patients can be given the benefit of open-air treatment. The Commissioners in Lunacy state in their report that the wards were found to be cheerful and comfortable, that the dormitories were clean and well ventilated, that there was an air of general contentment about the patients who were quiet and orderly. and that the medical case-books and records were well kept. The committee of management states in its report that the structural alterations carried out during the year include the erecting of fire escape windows in the male and female blocks D2 and that other precautions have also been taken against fire. The farm and garden accounts show a debit balance of £430 10*s*. on the year's working, this being mainly due to an outbreak of swine fever which necessitated the slaughter of a large number of pigs. The practice of subjecting the cows purchased to the tuberculin test has been continued with satisfactory results.

Fife and Kinross District Asylum (Report for the year ending July 31st, 1903).—The average number of patients resident during the year was 550, comprising 261 males and 289 females. The admissions during the year amounted to 137—viz , 74 males and 63 females. Of these 101 were first admissions. Dr. A. R. Turnbull, the medical superintendent, states in his report that "the most striking feature of the year's admissions was the large number and the very unfavourable nature of the male cases." Of the 74 male admissions no fewer than 12 were cases of general paralysis. "It is often said," adds Dr. Turnbull, "that general paralysis has become distinctly more frequent of late years, and our figures, though by themselves too small to allow of any definite conclusion, bear out in this respect the experience of other asylums. There is reason to believe that general paralysis is a sequel of syphilitic infection or of vicious indulgences which destroy the natural healthy tone and disease-resisting power of the constitution, and is therefore largely an avoidable disease; and the frequency of its occurrence has thus a very grave and serious meaning in reference to the mode of life and habits of many of the general population." The number of patients discharged as recovered during the year amounted to 41—viz, 19 males and 22 females, or 7 4 per cent. of the average number resident. The deaths during the year amounted to 32, or 5 8 per cent. as calculated on the same basis. Of the deaths three were due to influenza, three to pulmonary and other forms of tuberculosis, four to bronchitis and broncho pneumonia, five each to cardiac disease and senile decay, six to general paralysis of the insane, and the rest to other causes. Extensions of the buildings to accommodate additional cases are in progress and additions have been made to the houses occupied by the head male attendant and clerk of works. Precautions have been taken and additional exits provided against outbreaks of fire. The rate of board for parochial cases has remained at £25 per annum *per patient*. The farm operations have been favourable and the accounts show a profit of £768 for the year. The Commissioners in Lunacy state in their report that owing to increase in the admissions the present accommodation of the asylum is taxed to the utmost, so that the extensions now in progress to accommodate 50 males and 50 females have not been started a moment too soon, that the institution was in excellent order and scrupulously clean, that the inmates were neatly and suitably clothed, that the bedding and sleeping rooms were in good condition, and that the medical books and records were accurately and regularly kept. The committee of management states in its report that steps for installing electric light in place of gas had been taken in the summer of 1903.

VITAL STATISTICS.

WE have received from the Registrar-General the following figures relating to the year 1903 which are extracted in advance of publication from his quarterly return. These figures will be appreciated by medical officers of health who need them for their annual report to the Local Government Board.

—	Annual rate per 1000 living.			Infant mortality. Annual death-rate of infants under one year per 1000 births.
	Births.	Deaths.	Death-rate seven chief epidemic diseases.	
England and Wales	23 4	15 4	1 46	132
76 great towns ...	29 7	16 3	1·89	144
103 smaller towns ...	27 4	14·6	1·41	135
Rural England ...	27·3	14 8	1·08	118

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8718 births and 5304 deaths were registered during the week ending Jan. 23rd. The annual rate of mortality in these towns, which had been 20 6 20·3, and 19 0 per 1000, further declined last week to 18·1 per 1000. In London the death-rate was 17·4 per 1000, while it averaged 18·4 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 2·3 in King's Norton, 7·1 in Hornsey, 8·7 in Barrow-in Furness, 10·3 in East Ham, 11·3 in Bournemouth, and 11·8 in Leyton and in Hastings; while the highest rates were 22·6 in West Ham, 22·8 in Liverpool, 23·2 in Wigan, 23·6 in Tynemouth, 24·0 in Stockton-on-Tees, 25·0 in Great Yarmouth, 29·5 in Preston, and 39·4 in Merthyr Tydfil. The 5304 deaths in these towns last week included 427 which were referred to the principal infectious diseases, against 495, 462, and 450 in the three preceding weeks; of these 427 deaths 121 resulted from whooping-cough, 114 from measles, 66 from diarrhœa, 64 from diphtheria, 36 from scarlet fever, 25 from "fever" (principally enteric), and one from small-pox. In Hornsey, Southampton, Norwich, Wolverhampton, Aston Manor, Birkenhead, Huddersfield, Halifax, and in eight other smaller towns, no death from any of the principal infectious diseases was registered, while they caused the highest death-rates in West Bromwich, Burnley, Preston, Gateshead, Rhondda, Merthyr Tydfil, and Swansea. The greatest proportional mortality from measles was recorded in West Ham, Warrington, Preston and Rotherham; from diphtheria in St Helen's and Rochdale; from whooping-cough in Rochdale, West Hartlepool, Gateshead, Newport (Mon.), Rhondda, Merthyr Tydfil, and Swansea; and from diarrhœa in West Bromwich. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. One fatal case of small-pox was registered last week in Gateshead, but not one in any other of the 76 large towns. The Metropolitan Asylums hospitals contained 24 small-pox patients on Saturday last, Jan. 23rd, against 26 on each of the three preceding Saturdays; three new cases were admitted during the week, against four, six, and four in the three preceding weeks. The number of scarlet fever cases remaining under treatment in these hospitals and in the London Fever Hospital, which had been 1632, 1659, and 1660 at the end of the three preceding weeks, had further risen to 1677, at the end of last week; 178 new cases were admitted during the week, against 194, 201, and 195 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 404, 433, and 406 in the three preceding weeks, declined last week to 353, and were 58 below the number in the corresponding period of last year. The causes of 78, or 1 5 per cent., of the deaths registered in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Bolton, Salford, Bradford, Cardiff, and in 39 other smaller towns; while the largest proportions of uncertified deaths were registered in Northampton, West Bromwich, Liverpool, St. Helen's, Blackburn, Sheffield, Sunderland, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 21·7, 23·2, and 20·2 per 1000 in the three preceding weeks, further declined to 19·8 per 1000 during the week ending Jan. 23rd, but was 1·7 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 12·0 in Greenock and 14·9 in Paisley, to 25 2 in Dundee and 26 2 in Perth. The 655 deaths in these towns last week included 19 which were referred to measles, 14 to diarrhœa, 11 to whooping-cough, four to "fever," three to diphtheria, two to small-pox, and one to scarlet fever. In all 54 deaths resulted from these principal infectious diseases last week, against 71, 53, and 63 in the three preceding weeks. These 54 deaths were equal to an annual rate of 1·6 per 1000, which was slightly above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been 26 13, and 23 in the three preceding weeks, declined again last week to 19, of which 13 were registered in Glasgow and five in Dundee. The deaths from diarrhœa, which had been 21, 15, and 13 in the three preceding weeks, rose again to 14 last week, and included five in Glasgow, four in Edinburgh, three in Aberdeen, and two in Dundee. The fatal cases of whooping-cough, which had been 15 in each of the two preceding weeks, declined last week to 11, of which four occurred in Edinburgh, two in Glasgow, and two in Leith. The deaths referred to different forms of "fever," which had been three in each of the two preceding weeks, increased to four last week and included three in Glasgow. The three fatal cases of diphtheria corresponded with the number in each of the two preceding weeks and were all registered in Glasgow. The deaths from small-pox, which had been five, three, and five in the three preceding weeks, declined again last week to two, both of which occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 177, 213, and 198 in the three preceding weeks, further declined last week to 167, and were 16 below the number in the corresponding period of last year. The causes of 27, or more than 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 31·8, 27·8, and 28·8 per 1000 in the three preceding weeks, declined again to 26·0 per 1000 during the week ending Jan. 23rd. During the past four weeks the death-rate has averaged 28 6 per 1000, the rates during the same period being 19 2 in London and 18 7 in Edinburgh. The 189 deaths of persons belonging to Dublin registered during the week under notice, showed a decline of 20 from the number in the preceding week and included eight which were referred to the principal infectious diseases, against 16, 23, and ten in the three preceding weeks; of these, five resulted from whooping-cough and three from "fever," but not one from any other of the principal infectious diseases. These eight deaths were equal to an annual rate of 1·1 per 1000, the death-rates last week from the principal infectious diseases being 1·4 in London and 1·3 in Edinburgh. The fatal cases of whooping cough, which had been 12, nine, and five in the three preceding weeks, were again five last week. The deaths referred to different forms of "fever," which had been two, five, and two in the three preceding weeks, rose again last week to three. The 189 deaths in Dublin last week included 40 of children under one year of age and 54 of persons aged 60 years and upwards; the deaths of infants showed a marked excess over the number in the preceding week, while those of elderly persons were considerably fewer. Five inquest cases and four deaths from violence were registered, and 67, or more than a third, of the deaths occurred in public institutions. The causes of 11, or nearly 6 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: E. W. Luther to the *Cæsar* and J. S. Lambert to the *Victorious* (dated Feb. 2nd, 1904) Surgeons D. P. Chapman to the *Victorious* and A. C. Bean to the *Cæsar* (dated Feb. 2nd, 1904); G. R. MacMahon to the *Leander* (dated Jan. 21st, 1904); and R. A. Ross to the *Vivid* (dated Feb. 14th, 1904).

ROYAL NAVAL VOLUNTEER RESERVE.

The undermentioned gentleman has been appointed an Honorary Surgeon—viz, Charles O'Brien Harding (dated Jan. 18th, 1904).

ROYAL ARMY MEDICAL CORPS.

Lieutenant O. Challis, from temporary half-pay, to be Lieutenant (dated Dec. 24th, 1903). Lieutenant O. Challis to be Captain (dated Dec. 24th, 1903).

Lieutenant-Colonel E. L. Maunsell is specially selected for increased pay under Article 365 Pay Warrant. Lieutenant-Colonel P. Mulvany succeeds Lieutenant-Colonel W. J. R. Rainsford, C.I.E., as medical officer in charge of the Princess Louise Hospital at Alton. Lieutenant-Colonel C. R. Tyrell is posted to the South-Eastern District for duty.

INDIAN MEDICAL SERVICE.

The following is a list of the successful candidates at the Indian Medical Service examination held on Jan. 19th and four following days:—

	Marks.		Marks.
H. B. Drake	3515	I. D. Jones	2834
E. C. Hodgson	3167	H. Watts...	2810
W. S. McGillivray	3046	J. Anderson	2800
W. Gillitt	2991	W. T. Finlayson	2799
W. F. Brayne...	2978	H. E. Stranger-Leathes ...	2792
M. S. Irani	2899	E. A. Roberts	2789
S. W. Jones	2882	G. G. Hirst	2777
W. Tarr	2874	M. J. Quirke	2753
C. H. Barber	2867	J. M. Holmes	2684
W. T. McCowen	2839	M. F. White	2666

42 candidates (of whom 26 had University degrees) competed for 20 vacancies.

ROYAL ARMY MEDICAL CORPS (MILITIA).

Scottish District Company: Lieutenant (Honorary Lieutenant in the Army) W. V. Sinclair to be Captain (dated Dec. 19th, 1903).

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion the Buffs (East Kent Regiment): Surgeon-Lieutenant C. K. Bowes to be Surgeon-Captain (dated Jan. 23rd, 1904). 1st Volunteer Battalion, the Worcestershire Regiment: Surgeon-Lieutenant B. Addenbrooke to be Surgeon Captain (dated Jan. 23rd, 1904). 1st Volunteer Battalion the Hampshire Regiment: Surgeon-Lieutenant D. L. Thomson to be Surgeon-Captain (dated Jan. 23rd, 1904).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Edinburgh Company: Lieutenant D. Waterston to command under paragraph 55A Volunteer Regulations (dated Jan. 23rd, 1904).

VOLUNTEER INFANTRY BRIGADE BEARER COMPANIES.

East Surrey: Surgeon-Captain (Honorary Captain in the Army) E. W. St. V. Ryan, from 16th Middlesex Volunteer Rifle Corps, to be Captain (dated Jan. 2nd, 1904).

ALUMINIUM FOR MILITARY PURPOSES.

M. Moissonnier, principal apothecary of the first class in the French army, having taken part in several campaigns in Algeria and Tunisia, became impressed with the great importance which is attributed by commanding officers to the alleviation of the burden that the soldier has to carry. He accordingly was induced to turn his attention to aluminium, of which metal he made a profound study, and has now embodied the results of his investigation in a small volume of 219 pages, the publisher being M. Gauthier-Villars of Paris. Although aluminium is almost as common in nature as iron it has not been utilised to any considerable extent until within the last few years. Until lately the cost *was prohibitive, 150 francs per kilogramme, but thanks to improved* methods of production, all of which are described by M. Moissonnier, the metal can now be obtained for three francs per kilogramme. At this price it is permissible to believe, he thinks, that aluminium can with advantage be made to take the place of iron in the manufacture of many of the articles of equipment in use in the army. A metal as hard as iron and only one-fourth of the weight of silver, which is moreover unaffected by exposure to air whether moist or dry, or by immersion in water whether hot or cold, which does not oxidise or tarnish like most common metals, withstanding even the action of sulphuretted hydrogen, cannot but have a great future before it. Experiments which have been conducted under the auspices of the French Minister of War in Oran and elsewhere have conclusively shown the superiority of aluminium utensils, culinary and otherwise, over those of enamelled iron. Not only were the former more durable and much more easily kept clean but also very much lighter. It was calculated that the weight carried by each soldier was reduced by about 600 grammes (one pound and a third) In addition to culinary utensils, including plates and dishes, the following portions of a soldier's equipment can with advantage be fabricated of aluminium or one or other of its alloys: helmets, saddle-trees, stirrups, spurs, scabbards, buckles, belt-clasps, buttons, watch and other chains, epaulettes, water-bottles, drinking cups, spoons and forks, bicycles, drums, and field guns. Aluminium can be soldered *to itself without the intervention of lead or any other metal* and is consequently eminently suitable for the fabrication of surgical instruments and appliances. In conclusion, M. Moissonnier deals with the various alloys of aluminium and describes his methods for their analysis.

ARMY RECRUITING.

Owing to a change consequent on the decision of the Secretary of State for War as to the time of rendering the annual reports on recruiting in future the report of the Inspector-General of Recruiting just issued only embraces nine months of the past year. The number of recruits raised for the regular army, excluding Colonial corps, for the nine months amounted to 29,324, and for the Militia to 25,774. These numbers show a large diminution on those of the corresponding period of previous years. This falling off is, however, largely to be accounted for by the fact that owing to the mounted corps having been specially recruited during the late war they were all of them at the end of it largely in excess of establishment—to say nothing of the effect of the changes that have been made in the conduct of recruiting for the army with the view of preventing the enlistment of undesirable characters. With regard to the physical standard, the measurement of recruits, eyesight, and artificial teeth, the results of the very limited experiment of the employment of dentists having been such as to lead to an anticipated extension of the scheme, the report contains a number of interesting and instructive remarks and comments. A good deal of official inquiry into these and other points has already been instituted and is still taking place. The large number of recruits lost to the service owing to their physical unfitness and the growing increase in the percentage of rejections on this ground are forcibly pointed out in the report. Major-General Sir F. Howard, the inspector-general of recruiting, tells us that "the matter has been very fully dealt with by the Director-General of the Army Medical Department and a conference took place in July last between representatives of the Admiralty and the War Office to consider the subject as affecting the two services. As a result of this conference the matter was brought to the notice of the Home Office and an inter-departmental committee has been appointed to consider the subject of the physique of the classes from which recruits are drawn for both the army and the navy, with a view of determining whether the whole question should be considered by a Royal Commission." The subject is one of great national importance, especially when, as in the case of Manchester, the medical rejections amount to 49 per cent.

THE ROYAL NAVY LIST.

The 105th quarterly issue of this work of reference, dated January, 1904, contains notices of appointments and promotions in the Royal Navy up to, and including, Dec. 23rd, 1903. The records of the war and meritorious services of the officers of the Royal Navy, Royal Marines, and Royal Naval Reserve occupy a large portion of the book, the careers of some 10,000 officers being dealt with. The list of the vessels in the Royal Navy, with their tonnage description, war record, and so on, forms a complete guide to *all ships* in commission, with their officers and present stations. A feature of the recent issues of the Royal Navy List is the carefully compiled record of the current history of our first line of defence. It is impossible in a short notice to enumerate all the matters of interest in connexion with the Royal Navy which find a place in this list and it must suffice to say that it is an indispensable work of reference to all who are in any way brought into contact with the Royal Navy. Messrs. Witherby and Co., 326, High Holborn, and 4, Newman's-court, Cornhill, are the publishers.

THE ROYAL ARMY MEDICAL CORPS MANUAL.

Surgeon-Major Reginald R Sleman, C.I.V., informs us that an extract from the manual for the Royal Army Medical Corps has recently been published giving important alterations in the drill. The movements are much simplified and are mostly in accordance with the changes adopted in infantry training. The words of command are more practical. The following movements have been abolished: extending at the halt, moving to a flank with sloped stretchers, and changing front The bearer company and field hospital camps are altered; in the former the tents are reduced to nine, two of the officers' tents and the guard tent being omitted, and in the latter two tents for general stores have been added, whilst the tents for the Army Service Corps have been reduced by two. Surgeon-Major Sleman, after stating that a combined camp for a bearer company and a field hospital has been authorised, says "perhaps we shall soon see the *personnel* also combined to form a 'brigade medical unit.'"

SURGEON-MAJOR G. H. DARWIN, LATE 2ND VOLUNTEER BATTALION THE MANCHESTER REGIMENT.

Surgeon-Major G. H. Darwin, who has recently retired from the 2nd Volunteer Battalion the Manchester Regiment, after 17 years' service in the Volunteer Force, has done much good work in the cause of first aid and has been connected with the St. John Ambulance Association for 25 years. A correspondent, writing to a lay contemporary, recalls the fact that some years ago Surgeon-Major Darwin was made a Knight of Grace of the Order of St. John of Jerusalem and says that, "in the interest of those who work for years as Dr. Darwin has done, it is befitting that some further recognition should be forthcoming as a reward for past service and as an incentive to other medical men to go and do likewise."

INDIAN REST CAMPS

According to the *Pioneer*, it seems that the Indian Government intends to abolish most of the halting places for troops known to all who have travelled in India as rest camps. We do not know the reasons which are causing the Indian Government to take this step, supposing it really to be contemplated. We should have thought that it was very desirable to have such places for the comfort and convenience of troops making long railway journeys, for example. So far as we know the rest-camp system has proved an effective, popular, and healthy system and we are consequently at a loss to understand why it should not be maintained, seeing that experience has been altogether in its favour.

THE TRAINING OF MILITIA RECRUITS AND VACCINATION.

The War Office in a recent memorandum issued to military districts announces that it has been decided that a militia recruit's training cannot be extended to make good the time lost through inflammation of the arm consequent on vaccination. Lord Roberts is of opinion that cases where men are totally incapacitated from work by vaccination are comparatively rare and that only in very exceptional circumstances need the training of a militia recruit be entirely suspended from causes attributable to his having been vaccinated.

ROYAL ARMY MEDICAL CORPS VOLUNTEERS.

The annual distribution of prizes won by the London Companies of the Royal Army Medical Corps Volunteers will take place at the headquarters of the corps, Calthorpe-street. London, W.C., on Feb. 6th, at 8 P.M. The proceedings will be followed by a dance.

PRESENTATIONS TO MEDICAL PRACTITIONERS—Mr. G. P. Rogg, M D. Aberd., L R.C.P. Lond., M R C.S. Eng., who has been the medical officer of the British Home and Hospital for Incurables at Streatham, London, S.W., for more than 24 years, recently received from the patients and nursing staff of the home a silver bowl.—On Jan 20th at Holmes Chapel, Cheshire, Mr. C. F Sutton, M.R C.S. Eng., was presented by his patients and friends with a silver soup tureen, together with a silver tea and coffee service and tray, as a token of esteem on his retirement from practice after nearly 40 years' residence.

Correspondence.

"Audi alteram partem."

ST. BARTHOLOMEW'S HOSPITAL.

To the Editors of THE LANCET.

SIRS,—Since our former letter was published by you in December, 1903, several events have occurred which are of importance to those interested in this institution; we are therefore again asking you to give publicity to our views on the present situation. We wish to emphasise the fact that the recent decision of the governors to extend our site, either by acquiring more land or by utilising adjacent land, already in our possession, on which to erect the nurses' home and the residential college for students meets with our unanimous approval and support. It has been alleged that the plans for rebuilding are not sufficiently advanced to enable any accurate estimates to be made and we should like, therefore, to say publicly that this is certainly not the case. The needs of the hospital for additional buildings were placed by us before our governors more than two years ago, and the fullest details of even the floor space required by individual departments were also given. This has enabled the hospital architects to supply estimates of the cost of the required buildings and the precise positions of the new blocks in a completed plan will not affect their conclusions.

It has always been the opinion of the medical council that all such additional buildings as they have asked for should be planned so as not to interfere with the rebuilding of the wards; and plans have now been submitted to us which support our views and show that a completely new hospital can be satisfactorily erected on our site of six and a half acres. It will thus be seen that, instead of St. Bartholomew's Hospital having no sufficiently settled plans or estimates, the latter are in an advanced state. We are, indeed, quite convinced that more than enough time has been already spent in preliminary considerations and we most heartily support the decision of the governors to issue an appeal at once, for we know better than others can possibly know how urgent is the need for prompt action.

There is another matter that has also attracted attention to which we desire to allude—namely, the situation of St. Bartholomew's. Its great accessibility is a matter of the very highest importance to the poor of London. So long as the City is the heart of London and of the empire, so long will access to it, and consequently to St. Bartholomew's, be cheap and easy, and so long will this charity remain a great consulting centre for the sick poor. The fact that its out-patients number about 150,000 in a year is a sufficient proof in itself of the usefulness of the hospital on its present site. There is no other district in any part of this city or in its suburbs where the hospital could be more advantageously placed and none where a more healthy site could be found. But the situation of St Bartholomew's is further of importance to its medical school, and we may be pardoned for thinking that this is also a matter of material public interest. For many years past St. Bartholomew's has been not only one of the most important hospitals in England but also the largest school of medicine. In this way the benefits of the hospital are not restricted to its numerous patients but are spread over Great Britain and its colonies. For the past 20 years an annual average of 600 students have studied at St. Bartholomew's and nearly one in every eight medical men in England can lay claim to the distinction of having learnt medicine and surgery there. The interests of the hospital and of its school are one and removal to some remote district would not only destroy the school but would also by so doing completely alter the whole character of the institution itself.

Many other reasons might very easily be adduced in support of the appeal for sufficient funds both to maintain St. Bartholomew's in its present position and also to make it one of the most complete and modern of English hospitals of which the City of London might well be proud But we have said enough to show the public that the present appeal is made in the best interests of the poor of London and we know that many thousands of our fellow citizens will now and in after years reap the benefits of those buildings which money alone can supply.

We are, Sirs, yours faithfully,

Samuel Gee.
Dyce Duckworth.
T. Lauder Brunton.
Norman Moore.
Samuel West.
John Langton.
Harrison Cripps.
W. Bruce Clarke.
Anthony Bowlby.
C. B Lockwood.
J. A Ormerod.
W. P. Herringham.
H. H. Tooth.
A. E. Garrod.
J. Calvert.
F. H. Champneys.
W. S. A. Griffith.
D'Arcy Power.
H J. Waring.
W. McAdam Eccles.
R. C. Bailey.
W. D. Harmer.
W. H. H. Jessop.
T. Holmes Spicer.
A. E. Cumberbatch.

Jan. 20th, 1904.

THE PROPOSAL TO PROHIBIT MEDICAL PRACTITIONERS FROM DISPENSING.

To the Editors of The Lancet.

Sirs,—I have read with interest your article entitled "The Medical Profession and the Dispensing of Medicines" in The Lancet of Jan. 23rd, p 242 It is to me a sign of hopeful augury as indicating the drift of opinion, at all events among the later generation of practitioners, that the discussion of this subject should have been found among the agenda of the British Medical Association. In your article, after quoting the clause of the Draft Medical Act Amendment Bill you plead for greater precision of the terms employed. Precision in law is certainly desirable but I would venture the opinion that in the explanatory details which follow the clause in question the work of definition has been overdone. No one surely would for a moment think of describing as a dispensing practitioner, in the ordinary sense of that term, a medical officer on shipboard or on military service compelled for the nonce to administer drugs to the sick in his charge. Still less, if possible, is the the term applicable to one who, in an emergency, finds it needful to administer a remedy. To treat as a pharmaceutical dispenser the physician who administered tuberculin, or, for that matter, the antitoxin diphtheriæ, to his patient would be, as you rightly suggest, to render homage to absurdity. It appears to me that all that the clause is intended to effect is the prohibition of the routine and business like assumption of the duties proper to the pharmaceutist pure and simple by the medical practitioner. The proposed rule would, in fact, extend to licensees under the Medical Acts the prohibition imposed in this connexion by the Royal College of Physicians of London upon its Members and the Royal College of Surgeons of England upon its Fellows and the penalty in case of disobedience would logically be that which is allotted to a breach of professional contract. The wisdom of imposing a penalty at the present stage is open to question. I think such a step would be premature. It must be borne in mind that the dispensing of drugs enjoys among the general practitioners of England a sanction of long standing. It is not to be expected that a change which requires its total extinction is to be brought about by a legislative stroke of the pen and enforced by the imposition of a heavy fine. Such reasonable time as may be considered adequate to a reconstruction of arrangements on the new basis must in justice be allowed to precede any attempt at absolute prohibition. It is nevertheless, I consider, quite within the right of the General Medical Council to announce its disapproval of dispensing as a regular adjunct of medical practice with a view to promote its spontaneous disappearance, and such an announcement should meet with general approval. In the meantime it would probably be best to leave in abeyance the consideration of more decisive measures.

I regret, Sirs, to have to express a difference of opinion with regard to certain of the conclusions arrived at in your article. You suggest that a non-dispensing system is incompatible with practice in country districts and in the poorer quarters of large towns. Experience is, of course, our best guide to a settlement of this question, but it is not without significance that we have already learned much from this source, both in this country and on the continent, which does not tend to support your contention. Otherwise, how are we to account for the fact that in France, Germany, and other European countries, even in Scotland, where the population is distinctly less wealthy than in England, prescribing, not dispensing, is the rule alike in towns and in many, if not in most, of the country districts. It is not to be supposed that a dispensing druggist will expect a poor man always to pay at the same rate as the well-to-do. The practitioner does not do this nor can the druggist. Again, it is asserted that with the disappearance of the dispensing practitioner, the prescribing druggist will flourish more than ever. Wherefore? The medical man who now supplants him in his means of livelihood will then provide him with greatly increased means of earning it. Is it not then the interest of the druggist to send patients to the medical man and is it not rather his interest in the present day to retaliate upon his rival dispenser of a higher qualification? I know from personal experience that druggists do continue to send patients unsolicited and without suggestion to the prescribing practitioner, doubtless with an eye to legitimate business The advantages which would accrue from a general adoption of the prescribing system are neither small nor few. The practitioner when released from what is to him the routine drudgery of making up his medicines will have more time to spend on the proper and sufficiently responsible duties of his profession. Being able to do more his ideal of work will be raised and the quality of that work will be improved to his own advantage and that of others, and there can be no question that he will also rise with it in public estimation The dispensing druggist, receiving a stimulus of opportunity hitherto denied to him, will not continue to be, as now he too often is found to be, unstocked with many of the requisites of medical treatment, and he will be met with in districts which have hitherto failed to support both him and a practitioner who is in effect an *alter ego*. Who can reasonably doubt that the population at large will be the ultimate gainer by the addition to its resources and its convenience which these wide-reaching improvements must entail. Nothing, however, is to be gained by rushing through a reform of this kind and I have no desire to see this question finally settled without full and adequate discussion. Precipitate action is more likely to defeat than to further its object. At the same time I can only view with satisfaction the fact that this subject has at last been brought prominently before the eyes of the medical profession, so that it may have some prospect of effective treatment on an extended scale. I believe that the result of critical inquiry will be to further the development of prescribing practice and to prove that a system which has been found to work satisfactorily in other countries is equally suited to the requirements of the English people.

I am, Sirs, yours faithfully,

Green Lanes, N., Jan. 26th, 1904. B. G. Morison.

To the Editors of The Lancet

Sirs,—The medical practitioner has frequently been indebted to you for championing his cause, and never more so than at the present moment when by your editorial remarks and the insertion of Dr J. Oliver's letter you have drawn attention to the grievous wrong which it is proposed to inflict upon him. I should like, with your permission, to point out one monstrous result which would follow if the proposal to prohibit medical men from dispensing were to become law, and that is that the capital at present invested in dispensing practices, amounting in the aggregate to many thousands of pounds, would at the end of three years be represented by as many hundreds only or less. It is a matter of common knowledge that druggists repeat prescriptions again and again at the request of patients, and if the proposal were to become law one visit to the medical man would suffice in place of, it may be, nine or ten or more necessary under the present system. And it would be a vain hope to expect that the patient would make good the difference by paying an increased fee—indeed, it is more than probable that he would wish to pay less as there is a second fee to be paid to the druggist. After a while, also, the patient would go directly to the druggist without troubling his medical adviser and so save a fee which he would come to consider unnecessary. The inevitable result would be a big slump in dispensing practices and a corresponding loss in capital invested. It would be no argument to reply that a medical man has no vested right in a patient; the fact remains that under the present system he has such a right and it would be nothing less than wholesale robbery to deprive him of it without an attempt at compensation and to divert the money which should go into his pockets into the coffers of the chemist and druggist.

I should also like to add from many years' experience in one of the poorest districts in London that such a scheme would be quite impracticable in working class districts. The working man is the backbone of a great many practices in the larger towns and his 1*d.* a week club payment or the small surgery fee he pays includes his medicine. He certainly will never pay a fee to the medical man and a second fee to the druggist and the practitioner in such districts will be unable to exist. This would inevitably lead, as Dr. Oliver points out in his letter, to still greater overcrowding of the already overcrowded out-patient departments of our hospitals and charitable dispensaries, an evil which even now cries aloud for a remedy.

I am, Sirs, yours faithfully,

Oxford-terrace, W., Jan. 25th, 1904. W. F. GRANT.

To the Editors of THE LANCET.

SIRS,—Dr. James Oliver has, I think, very wisely drawn attention to this extraordinary idea of interfering with the liberty of medical men. That such a proposition should be advanced at a time [illegible] of the falsification [illegible] are so extensively at [illegible] not only extraordinary but astonishing.

The medical man is absolutely responsible that his patient should have the exact drug, of proper quality, of the prescribed dosage, and for the right period. Under existing conditions he delegates this grave responsibility to others and cannot be assured in many instances that these requirements are fulfilled. The present system has grown up owing to the complexity of dispensing, but if our pharmacopœia were brought up to the present-day standard the greater part of this difficulty would vanish. Instead of giving advertisement to the advertising proprietary medicine vendors the medical man with little trouble and great saving of time to himself and patient could avoid resort to these undesirable methods.

I believe that this delegation of responsibility has done much to lower the reputation of the profession in many ways [illegible] should be put in the hands of a patient" and that "no medicament should be supplied to a patient except on the direct responsibility of a medical man."

I am, Sirs, yours faithfully,

HENRY RAYNER, M.D. Aberd.

Queen Anne street, W., Jan. 23rd, 1904.

LONDON HOSPITALS AND CENTRAL CONTROL.

To the Editors of THE LANCET.

SIRS,—If you regard this subject of sufficient general interest to warrant you in giving me a little more space I should be glad to reply briefly to the letter of "Hospital Surgeon" in THE LANCET of Jan. 23rd, p. 254. He has, I think, confused my proposal for the establishment of a central board with proposals recently made by other writers on the same subject. I agree with "Hospital Surgeon" that any board composed of delegates appointed by the hospitals themselves would be as useless to control the hospitals as is the present Central Hospitals Council or as is the General Medical Council to control the examinational activity of the universities and colleges which appoint the majority of its members. The two policies which seem to have secured the chief support from recent writers on this subject are either to strengthen the existing council by adding to the number of hospitals represented upon it or to invoke State aid and with it State regulation. The first, I believe, will prove [illegible] egarded with great disfavour by a [illegible] istrators, whilst all practical men [illegible] to be carried out during the life- [illegible] ation. Meanwhile the establishment of central funds to collect money for the hospitals is making it more and more difficult for the hospitals themselves to obtain individual support and at the same time shows no prospect of making such local and individual support unnecessary. Is it too much to ask that these three collecting funds should intrust to a board appointed by themselves the distribution of a small proportion of their alms in accordance with a plan which would increase both the central and local contributions towards medical charities in London and would provide at once a measure of effective control? The size of the board appointed by the three funds is not material to the scheme. One delegate from each fund, if one member with adequate leisure and experience could be found in each committee, would suffice. But whatever its size —and we can trust to the common sense of the appointing committees not to make it too large for its work—this board would possess the power of the purse and should be able as an independent body to perform the important functions assigned by "Hospital Surgeon" to his proposed commission. If the County Council or any other municipal or State authority were disposed to adopt the proposal to give certain hospitals free rates or to contribute to certain hospitals in proportion to the sums collected by the hospitals themselves it would be possible for such authority to make this board its almoner.

I venture to explain my suggestion a little more fully because I believe that the central authority proposed fulfils in nearly every respect the requirements of the kind of board desired by "Hospital Surgeon" and in the hope that being more within the region of practical politics than a commission appointed by the State it may secure his powerful advocacy.—I am, Sirs, yours faithfully,

London, W., Jan. 23rd, 1904. LAURISTON E. SHAW.

IN WHAT DOES CANCER CONSIST?

To the Editors of THE LANCET.

SIRS,—Under the above heading you published a letter from me in your columns on August 25th 1888, p. 395. Researches carried out during the intervening 15 years have tended to confirm both positively and negatively the thesis there advanced. Pathologists are coming to look more and more to the natural history and tendencies of the cell and less and less to vegetal parasitism as affording a solution of the mystery of cancer. The thesis to which I allude was thus stated in my letter of August, 1888:—

> If, then, we believe that in her wildest vagaries of pathological neoplasm nature makes no jumps; if we recognise a transition [illegible] malign, [illegible] carci- [illegible] inflam- [illegible] factor [illegible] may [illegible] malig- [illegible] In the [illegible] nal cells [illegible] the other [illegible] ither to differentiate into tissue or to suppurate. They lack the influence which makes for organisation; their instincts are of the lowest—are amœboid, in fact. They possess the fecundity of cells unfitted for "colonial" life and share their vagabond propensities. Herein lie the factors of malignancy, the causes alike of the rapid growth and the infectivity of cancer. It may also be, as Dr. Creighton with acumen and felicity has put it, that these cells possess a veritable "seminal" influence; that is, by their contact they cause other cells to generate, and make the offspring like [illegible] possibly should [illegible] suspended

If it be inquired whence this influence is which makes for malignancy [illegible]

I am, Sirs, yours faithfully,

Albert-terrace, Regent's Park, Jan. 27th, 1904. W. J. COLLINS.

"MANUAL TREATMENT IN TYPHOID FEVER AND DIPHTHERIA."

To the Editors of THE LANCET.

SIRS,—I a[illegible] ur criticism on my book ("[illegible] Treatment") which appea[illegible] 100. I feel, however, called upon to reply to two of your remarks. You state that "We have our doubts as to the wisdom of 'heart shaking' and 'side shaking' in typhoid fever and diphtheria." I would like to point out that these manipulations are of a very gentle nature, in spite of what their name might imply to the uninitiated. I have found in cases of typhoid fever and diphtheria that these manipulations, far from causing embarrassment of the heart or other distressing symptoms, could reduce the pulse-rate, remove intermittences of the pulse, if such existed, and make the cardiac action stronger and more regular; dyspnœa could also be relieved by their means. Two of my colleagues who practise Kellgren's methods have had the same experience.

You also state that "Surely also to allow absolute freedom of diet to a patient suffering from typhoid fever is, to say the least of it, risky." The manipulations we apply to a patient suffering from typhoid fever have the effect of preventing stasis in the abdomen by removing venous congestion and by equalising the pressure in different parts of the abdominal cavity; also of promoting the powers of assimilation and excretion and raising the natural power of resistance of the body, including in all probability the intestine. It is also likely that the formation of the natural antitoxin is aided. It is just because we are enabled to do this that the diet of the patient need not, as a general rule, be restricted. I stated in my book that I have always in *fever cases which come under my care from the beginning of* their illness allowed perfect freedom as regards diet and that I have never had the slightest cause to regret this procedure. I should perhaps have added that in the event of my noticing any harmful results arising in consequence of this freedom as regards diet I should at once take steps to regulate the latter in order to prevent or to remove such symptoms.

I am, Sirs, yours faithfully,
EDGAR F. CYRIAX, M.D.
West Hampstead, N.W., Jan. 23rd, 1904.

THE RELATIONS OF THE GENERAL PRACTITIONER TO THE CONSULTANT.

To the Editors of THE LANCET.

SIRS,—*Re* your leading article in THE LANCET of Jan. 23rd, p. 239, on the Relations of the General Practitioner to the Consultant, do you not think that the name of the consultant referred to should be made known or, any way, that "F.R.C.S." should furnish it to medical men who might ask him for same? This is a consultant unworthy of our professional confidence. I have discussed the question with two of my medical brethren and that is our feeling in the matter. We regard the circumstance as a most painful one, too.

I am, Sirs, yours faithfully,
Jan. 25th, 1904. E. A. LUBBOCK.

⁂ We feel that "F.R.C.S." must decide as to the advisability of communicating the name of the consultant to correspondents.—ED. L.

THE CAUSES OF HIGH INFANTILE MORTALITY.

To the Editors of THE LANCET.

SIRS,—A short time ago you inserted a letter on this subject in which I suggested that one of the causes of high infantile mortality among poor people was the want of proper medical help in the early stages of illness. The tables that are appended to the letter which I now send certainly show that, as a general rule, in those town unions which give very little out relief the infantile mortality is higher than in those which give a fair amount of out-relief. (It should be understood that the term "out-relief" includes all medical relief given in connexion with the Poor-law outside the workhouse, &c.) I may add that I possess some other evidence tending in the same direction. Of course, high infantile mortality arises from a great variety of causes but I think the facts here stated make it well worth while for the sanitary authorities in every district where a high death-rate for children prevails to inquire whether the poorest class have sufficient facilities for obtaining medical relief for their children. In the following tables I have called a union "indoor" which treated more than half its legal poor by means of indoor relief and the other unions I have called "outdoor." Under the heading "Infantile Mortality" I have given the numbers of infants per 1000 births who die under one year of age from the Registrar-General's tables for the ten years 1881-90. The first table includes all the London unions and the second table relates to the six largest towns.

I am, Sirs, yours faithfully,
Jan. 23rd, 1904. J. THEODORE DODD.

TABLE I.—*London.*

No.	Name of union.	Infantile mortality per 1000 births.	Policy of administration of Poor-law (1892).
1	Strand.	226	Strongly indoor
2	Stepney.	196	Very strongly indoor
3	St. George's in-the-East.	182	"
4	Whitechapel.	173	"
5	London city.	171	Neutral.
5a	Shoreditch.	163	Very slightly indoor.
6	St. Saviour, Southwark.	166	Strongly indoor
7	Holborn.	164	Slightly indoor.
8	Westminster.	163	Strongly indoor.
9	Fulham.	161	" "
10	Chelsea.	160	" "
11	Bethnal Green.	157	Indoor.
12	St. Olave, Southwark.	156	Outdoor.
13	St. Giles.	154	Indoor.
14	Kensington.	154	Strongly indoor
15	St George's, Hanover-square.	153	" "
16	St. Pancras.	153	Rather indoor.
17	Marylebone.	148	Strongly indoor
18	Poplar.	148	Very slightly indoor
19	Greenwich.	147	Outdoor.
20	Mile End Old Town.	146	Slightly indoor.
21	Lambeth.	145	Outdoor.
22	Islington.	144	"
23	Paddington.	143	Very slightly indoor
24	Camberwell.	143	Outdoor
25	Wandsworth.	141	"
26	Hackney.	137	"
27	Woolwich.	124	"
28	Lewisham.	121	"
29	Hampstead.	117	Indoor.

TABLE II.—*The Six Large Towns.*

Name of union.	Infantile mortality per 1000 births.	Policy of administration Poor law (1892)
Liverpool.	219	Indoor.
Manchester.	193	Very strongly indoor
Sheffield.	176	Strongly outdoor.
Birmingham.	174	Indoor.
Leeds.	174	Strongly outdoor
Bristol.	156	"

CHLORETONE IN SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS,—Your correspondent, Mr. John Dunlop, invi experiences from others of the use of chloretone in s sickness. I, too, first heard of this use of chloretone thro your correspondence columns and a trial I made of it, so as a single case goes, amply confirms the claims of this d to soothe vomiting of reflex causation In a family atte by me there is a little girl, now about 12 years of age, w has all her life been subject to "train sickness." If ever s travelled by train for more than a few miles she was inva ably prostrated by vomiting Devices of all kinds were tri and finally medicinal treatment, without any success, t only sure way of avoiding the sickness was to avoid a r way journey of any distance, and this she religiously di but twice in each year, when going to and from the se side in summer, the infliction had to be borne. Eve precaution would be taken, the stomach kept reasonably empty, the recumbent position at once assumed and maintained, medicines taken, &c., but on every occasion without exception the journey was rendered miserable to all and she herself was upset for several days. This year I provided her with chloretone in capsules, of which she took two five-grain doses before starting. For the first time in her experience the journey was performed quite comfortably, and this although the distance was considerably longer than had hitherto been attempted. On the return journey a similar dose produced equally happy results. I have always assumed that the action of chloretone in checking sickness is due to its anæsthetic effect on the mucous membrane of the stomach which soothes and lessens reflex irritability.

I am, Sirs, yours faithfully,
Bromsgrove, Worcestershire, Jan. 25th, 1904. CAMERON KIDD.

To the Editors of THE LANCET.

SIRS,—Mr. J. Dunlop asks in THE LANCET of Jan. 23rd p. 253, for your readers' experience of chloretone. I advised a lady who is always, whatever the weather, miserably sick on crossing the Channel to try the effects of a dose of ten grains. She tells me that the result was perfect both on going and returning. In another case of a patient, 40 years old, with mitral disease and a bad stomach a state of nausea was caused by the withdrawal of morphia to which he had been accustomed for four years. Thanks to chloretone this symptom was relieved entirely and the only (and what appeared at the time a serious) obstacle to the successful suppression of the morphia removed. When, with a view to morphia weaning, the alkaloid is decreased gradually according to my plan, there is not as a rule any trouble of this kind, but in the case of a patient with a bad stomach in whom such a symptom does occur I do not think anything, that is in these circumstances allowable, is as likely to be as efficacious as chloretone.

I am, Sirs, yours faithfully,
Paris, Jan. 25th, 1904. OSCAR JENNINGS.

A DISCLAIMER.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to the report of a case in the *Daily Telegraph* of Tuesday, Jan. 26th, in which, during his cross examination, the plaintiff, Dr. Williamson, stated that my fee for the removal of enlarged onsils and adenoid growths of the naso-pharynx was 25 guineas. May I be allowed to state that I have never asked for, nor received, so large a fee for that operation? I regret that such a statement should have been made without my knowledge or consent.—I am, Sirs, yours faithfully,

Jan. 27th, 1904. HERBERT TILLEY, F.R.C.S. Eng.

1) WHAT IS VERONAL? (2) THE DANGERS OF TABLETS.

To the Editors of THE LANCET.

SIRS,—An article entitled "A Case of Veronal Poisoning" appears in THE LANCET of Jan. 23rd, p. 223. The writer iquires as to the nature of this new hypnotic. It was ntroduced only a few months ago and is di-ethyl-malonylrea. Its chemical formula is $C_8H_{12}N_2O_3$. The dose is from ve to 15 grains, but personally I have found ten grains a sufficiently large dose in those cases in which I have preribed it. The literature of the drug is as yet somewhat anty, but the article by Berent in the *Therapeutische onatshefte* for June, 1903, and that by Trautmann in the *herapie der Gegenwart*, 1903, No. 10, are well worth erusal. Apparently the patient referred to had taken an verdose, hence the disastrous results. All hypnotics are angerous and medical men cannot be too careful in preribing them for their patients, and no druggist should peat such prescriptions unless with the consent of the escriber.

The article entitled "A Case of Acute Sulphonal Poisong" recalls to my mind a letter which I wrote you some me ago, and which you were good enough to publish, on e dangers of tabloids or tablets, which you will. Mr. ind tells how the patient under his care took three bottles of sulphonal tablets. This form of medication, as I have again and again pointed out, enables patients to prescribe for themselves. Why the profession is not alive to this fact I cannot tell. Surely it is an easy matter to prescribe powders, pills, or cachets. Or do they imagine that the druggist is unable to dispense prescriptions? Very soon, indeed, the druggist will be unable to do so simply from want of practice. We are yearly degenerating so far as the art of prescription writing is concerned. It is rapidly becoming a lost art and the reason is that we trust more and more to the manufacturing chemist rather than take the trouble to master the contents of the British Pharmacopœia. We are simply playing into the hands of those who care little whether their wares are advertised to the public or to the profession so long as they obtain a world-wide market. *Even many of those houses which state that they do not* advertise to the public do so by means of show-cases placed in a conspicuous position in druggists' shops.

Assuredly, medical men are fools not to see through all this gelatin coating. The genuine article is beneath it but the covering is so suited to their tastes that they reck little of the rest. If we would be richer in pocket and loftier in tone as a profession we must first sweep away all this trumpery and get back to the old-time powders and pills which, after all, are much more valued by the public than tons of tablets and elegant elixirs.

I am, Sirs, yours faithfully,
Edinburgh, Jan. 23rd, 1904 JAMES BURNET.

DEATH AND SUDDEN DEATH.

To the Editors of THE LANCET.

SIRS,—May I be allowed, on behalf of Dr. Brouardel and for the sake of accuracy and justice, to make a slight correction in the leading article on "The Death of Miss Hickman" which appeared in THE LANCET of Nov. 21st, 1903, p. 1443. You write: "The remains had evidently not been disturbed saved by marauding rodents and the agents of putrefaction which Brouardel has so aptly termed 'the labourers of death.'" The authorship of the term "labourers of death" ("travailleurs de la mort") is really due to the distinguished entomologist M. P. Mégnin. Dr. Brouardel quotes and adopts the expression in his work "Death and Sudden Death," translated by myself, and acknowledges M. Mégnin's claim in the following words (second edition, p. 75): "The observations of M. Mégnin, who has carefully studied the insects which prey on dead bodies and which he has picturesquely styled 'the labourers of death,'" &c. The term is to be found in M. Mégnin's work, "La Faune des Cadavres," from which the account of the processes of decomposition by insects in "Death and Sudden Death" is drawn.—I am, Sirs, yours faithfully,

F. LUCAS BENHAM, M.D., M.R.C.P. Lond.
Exeter, South Australia, Dec. 21st, 1903.

A REPUDIATION.

To the Editors of THE LANCET.

SIRS,—Our attention has been called to a report of police-court proceedings under the Merchandise Marks Act in respect of adulterated soda crystals supplied by a Messrs. Burgoyne and Co., and as we are commonly known in the trade and medical profession as Burgoyne and Co. we ask the favour of your kindly inserting this letter disclaiming any connexion with the house or proceedings in question. Thanking you in anticipation of your compliance with this request, We are, Sirs, yours faithfully,

BURGOYNE, BURBIDGES, AND CO.
Coleman-street, London, E.C., Jan. 21st, 1904.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Sanitary Neglect by Municipalities in Bengal: Further Supersession. — The Mulkowal Disaster. — The Plague Epidemic.

THE municipal commissioners of Nadia having made persistent default with regard to the sanitation of the town have been declared incompetent to perform their duties and have been superseded. This is the second case within a few months. It appears that there are no less than 825 well privies within the limits of the town and in consequence of this method of disposal of the excreta the water-supply is excessively polluted. Repeated inspections, reports, and admonitions failed to induce the commissioners to make any improvement. A serious condition exists in the low level of the town, causing it at times to be inundated. The taxation of the town is ridiculously low, being only about 7½*d* per head, and the people are well able to bear the additional tax which will now be imposed. There is no analysis given showing the exact state of the water, but it is reported as "so polluted as to be unfit for human consumption." The mortality of the town has been increasing year by year—viz., from 25·4 per 1000 in 1899 to 42·55 per 1000 in 1902 The so-called well privies are nothing less than holes dug in the ground and being so numerous it can readily be understood how polluted the soil must be. Moreover, as wells exist for the supply of water within the town area the danger is constant, especially as the soil is of sand. Being a place of pilgrimage also a severe outbreak of cholera might develop at any time. These evils have existed for several years and it is a-question whether the Government is not to blame for allowing such a scandal to continue so long. This case is another instance showing that the natives of India are totally unfitted for sanitary administration.

At last some negative information about the Mulkowal disaster has been given. The medical officer who inoculated the villagers of Mulkowal with the antiplague serum has been granted a certificate to the effect that he is exonerated from blame in connexion with the accident in November, 1902. It will be remembered that 19 persons died from tetanus following plague inoculation. The real facts of the disaster are still suppressed and consequently distrust is widespread and the benefits of inoculation cannot be urged until confidence is restored. At the time of the appointment of the commission of inquiry I expressed doubts as to its fitness, but whatever its report more harm has probably been done by suppressing it than would have occurred by making public its conclusions.

The plague mortality throughout India has had a temporary decline, 15,606 deaths being recorded for the week ending Dec. 26th, 1903, as against 17,304 for the preceding seven days. The decline appears to be entirely in the Bombay Presidency, as the other provinces show but little change. The figures for the week are: Bombay districts, 5656, as against 7579; United Provinces, 2522, against 2504; Central Provinces, 1547, against 1687; Bengal, 1377, against 1039; the Punjab, 1049, against 1066; Central India 1176, against 1175; and Bombay city, 65, against 57. Although plague has been quiescent in Bombay city and rife in the Mofussil the Government still persists in confining its plague inspections to railway passengers leaving the city and to persons leaving the city by the coast steamers, while those arriving from infected areas are permitted to enter the city unchallenged. This very act shows the inefficiency of railway inspection, because, notwithstanding the virulence of plague in the districts, Bombay city has been quiescent as regards plague for over six months.

Jan. 9th.

IRISH UNIVERSITY EDUCATION.

(From a Correspondent.)

There is no question which is exciting greater attention in Ireland at present than the extremely thorny problem of the settlement of university education; and, unfortunately, political and sectarian feeling has entered so largely into the discussion that it is well-nigh impossible to touch the subject in a journal which is concerned with the matter simply in its bearings on the medical profession.

Every true Irishman, irrespectively of his religion or politics, must admit that the present position of educational matters in his native country is indeed intolerable, if for no other reason than for the great uncertainty on two points: (1) Is fresh legislation on Irish university education about to be introduced? and (2) In what direction is this new legislation to go? We have had a Royal Commission on University Education in Ireland giving us several volumes full of contradictory evidence and with many suggested schemes all illustrating the truth of the proverb, "*Tot homines, quot sententiæ.*" Then quite recently, as reported in The Lancet, we have had rumours of a scheme to settle everything by the creation of a national university with three autonomous and coördinated colleges, a plan put forward first by Sir Antony MacDonnell, the Irish Under Secretary, and afterwards by Lord Dunraven. Indeed, almost every week the press gives us details of various schemes which are to bring peace and contentment to Ireland.

As a natural result of all this utter uncertainty many Irishmen are at present sending their sons outside that country to be educated. We know of numbers of young men who have of late gone to Oxford and Cambridge and, from a purely professional point of view, it is a remarkable fact that in the year 1903 there were attending the University of Edinburgh 677 students of medicine and of these 118 were from Ireland. If to this number we add those who attended the extramural medical schools in that city as well as those who stopped at Glasgow, it is probable that from 150 to 200 students went from Ireland to Scotland to pursue their medical studies, a proportion altogether unknown a few years ago. So long as the present state of affairs exists this, I fear, will continue unless statesmen will say definitely that they will make some changes in Irish university education or they will not. Constantly to be leading people to expect legislative measures is a profound mistake and a sign of very feeble statesmanship if really nothing is meant in the end to be done. In attempting to give any country a new measure of university education three factors naturally suggest themselves: (1) The projected legislation should strictly follow academic lines; (2) it should aim at satisfying all sections of the people who demand higher education; and (3) it should possess the elements of finality.

Can any such scheme be put forward for Ireland? I fear many will say that Irish university education is a Chinese puzzle and that its solution passes the wit of man. A statesman in dealing with such a question, so full of inherent difficulties, might ponder over several solutions. First, he might attempt a scheme of united education but unfortunately it is impossible in Ireland, as even in such a field as secular education people will not unite. He might, however, persevere with the scheme in the hope that with mutual toleration matters in the end would come right. Secondly, he might grant sectarian education that is like Mr. Balfour's proposal—have three universities, one for Roman Catholics, one for Episcopalians (Trinity College), and a third for Presbyterians—or he might advise that there should be only two universities, one for Irish Roman Catholics and the other for Irish Protestants, the latter being Trinity College, Queen's College, Belfast, and other affiliated institutions. Or, thirdly, in despair the statesman after full inquiry might decide to leave matters *in statu quo* and to do nothing. This apparently is what is about to take place at present, for at a meeting held in Belfast on, Jan. 22nd the Marquis of Londonderry, who presided, said: "There is no question whatever of the creation of a Roman Catholic university. Let me say once and for all—and you may take it from me—that during the existence of the present Government there will be no question whatever of the creation or foundation of a Roman Catholic university." This is the last official pronouncement on this question by a member of the Cabinet. It does not, however, preclude Lord Dunraven's scheme being brought forward either by the Government or by a private Member.

BIRMINGHAM.

(From our own Correspondent.)

Degeneration of the National Physique.

It is the custom for the lecturer on hygiene at the Midland Institute to deliver twice in each year a public lecture on some matter connected with the laws of health. The present lecturer is Mr. William Wright who is also a lecturer in the anatomical department of the University, and the subject of his recent popular lecture was that mentioned above. Mr. Wright advocated the formation of boys' brigades and cadet corps and also suggested that the German plan of allowing ten minutes or a quarter of an hour's play to every hour's work in school was one which might with advantage be imitated.

Health of the City.

It is also a custom for the chairman of the health committee to preside at these lectures and to make a statement in reference to the health of the city. Alderman Cook on this occasion referred to the exceedingly low death rate of the past year, 17·1 per 1000, the lowest in the city since any records have been kept. The number of cases of typhoid fever was small, 362 as against an average of 588 in the previous ten years. The number of deaths of young children from summer diarrhœa was 597 as against an average of 645 in the previous ten years. Small-pox threatened to become prevalent on three occasions but owing to the energetic measures adopted by the health committee it never got beyond control and was stamped out. Eight patients were at present in the hospital but the committee hoped that the city would soon be clear of the disease. Owing to the diminution in scarlet fever the committee had again been able to provide accommodation for cases of typhoid fever at the Yardley-road Hospital and 11 patients were now being treated there. The alderman concluded by stating that in his opinion 16 per 1000 was an ideal death-rate and it was pleasing to know that the rate in Birmingham was approaching that figure.

The Training of Imbecile Children.

A conference has recently been held between representatives of the Birmingham board of guardians and of the education committee with a view of coming to a conclusion as to the best method of dealing with idiot or imbecile children and feeble-minded girls who should be placed under permanent care. Mrs. Pinsent, chairman of the special schools subcommittee, explained fully the work which was being undertaken by the after-care subcommittee which tries to help the children from the special schools after the age of 16 years when they become emancipated from all control. It was found that there were a large number of cases for which there was no adequate provision and the only thing that could be done for them was to advise the parents to make application for assistance to the Poor-law authorities. The parents were, however, in many cases prejudiced against the Poor-law and preferred, as they said, "to battle on without its assistance." Various suggestions were made and discussed as to the treatment of such cases by the board and the question of the treatment of feeble-minded girls when they reached the age of 16 years was fully dealt with. Cases were cited showing that this was a very serious subject. The members of the conference felt that legislation was necessary in this particular direction, the representatives of the guardians pointing out that in this, as in other instances which had been discussed, they could only deal with each case upon its merits. They also expressed their sympathy with the work which was being done and promised to give every assistance in their power to the after-care subcommittee in its work.

Midland Counties Home for Incurables.

The Earl of Denbigh presided over the annual meeting of this institution which has recently been held The receipts for the year had amounted to £6249, as compared with £5082 in the previous 12 months. Mr. Best's legacy of £2000 had been placed to the endowment fund which was still small and which only produced about one-tenth of the annual income. The average number of inmates during the year had been 87, as compared with 83 in the preceding year, and the number of pensioners had been raised to 29.

Antivivisectionist Pronouncement by a Bishop.

One is accustomed to hear extraordinary statements made upon antivivisectionist platforms but perhaps the most extraordinary which has ever come under my notice is that which the *Birmingham Daily Gazette* reports as having been made by Bishop Mitchinson, Master of Pembroke College, Oxford, at an antivivisectionist meeting held at Cheltenham recently. The attitude towards science and the acquisition of new knowledge which this speech reveals is one which one can hardly credit as existing at the present day. But the speech requires no comment. The bishop said that the [illegible] had a tremendous business [illegible] rt of the country. How was [illegible] ling against their cause to be [illegible] ere not cruel or callous. He [illegible] had all gone mad upon that [illegible] Oxford they were as "mad as a March hare" upon it and the sooner they were shut up in an asylum the better it would be for learning. They had actually been put to the necessity of offering "research" degrees the qualification for which was to have done what he should have thought it the part of any wise man not to do—write a book. They had it at every turn and it was not only amongst scientific men they found it. It was the same with classical men; they were wild about getting research somehow or other into the different examinations. The one great step towards salvation was to set their youngsters to research. It constituted amongst literary people a mania, and first of all it was fostered by academic clamour. The bulk of modern literature also had something to do with "finding out something fresh" and it was the same in theology. Everybody was trying to find and course a new hare. If one person found a queer thing in an animal everybody else had to find out two queer things, and they were never happy unless in finding some "mare's nest." He did not think all this a mark of intellectual progress; it was far too selfish. His lordship also regarded the lessened hold of religion and the "hide-bound, cynical body worship" as two other causes making against antivivisection. The scare for our own skins was largely due to the medical profession whose attitude on the vivisection question would, he was afraid, bring about a split between the soul doctor and the body doctor—had, in fact, already done so in some cases.

Electric Tramway Accident at Dudley.

An extraordinary accident and one of a character most alarming to the public occurred a few days ago at Dudley. A cart laden with iron and drawn by three horses was being driven up a road in the town where there are overhead wires and on account of the muddiness of the surface the cart was kept upon the paved tramway track. When about halfway up Castle-hill the driver noticed a flash coming from the tram-rails, immediately after which the leading horse swerved, or, as the driver imagined, was drawn against one of the iron pillars carrying the wires. The driver jumped down and taking hold of one of the horses sustained a shock which caused him to stagger. Almost simultaneously a blue flame was seen to spring from the iron pole and run along the draught chains of the cart. All three horses then fell to the ground as if struck by lightning and smoke was seen ascending from the portions of their bodies which the chains had touched. The driver of the cart was not seriously injured but all the horses were killed instantaneously. Moreover, at the points where their bodies had been touched by the chains there were deep burns, in some places penetrating to a depth of an inch. It was at first thought that an overhead wire had broken but when the state of affairs came to be looked into it was found that the accident arose from a defective insulator. This had been presumably burned through. At any rate, the damage had rendered the supporting pole "live" to the electric current and the condition of the horses shows that the current at the time must have been very powerful.

Prosecution of a Jam-Maker.

The city authorities recently summoned a local maker of jam for having on his premises several casks of fruit pulp for sale or for preparation for sale which were unfit for human consumption. When the inspector visited the premises the proprietor informed him that he made jam of various kinds from fruit pulp, sugar, and glucose; and grape jelly from grape pulp Rejected jams were re-mixed with fresh mixing, were reboiled and sold again. For sweetening purposes he said that he had used the refuse of boiled sweets of various kinds and as a result a quantity of the jam had been rejected. The inspector on his first visit found a number of casks containing gooseberry pulp in a state of decomposition, also bottles containing decomposed fruit. On his second visit these had been marked "Not to be used." The medical officer of health in his evidence stated that he had examimed the pulp and found it to be decomposed and to contain pieces of fungus. In answer to an inquiry from one of the magistrates he said that the effect upon those who ate jam made from this pulp would probably have been to produce gastric disturbance, possibly sickness, not much more than that, but that the result would certainly have been conducive to the spread of disease. The defence was that the proprietor had not sent for an inspector because he thought that if he had done so he would have been punished for having the pulp, although he had made it known himself by calling for inspection. It was also urged that the barrels had been labelled prior to the first visit of the inspector but that the labels had been washed off by rain. The bench, after retiring to consider the case, said that they found the offence proved and, regarding it of a grave nature, considered it their duty to impose the maximum penalty of £20 and costs or in default a month's imprisonment.

Jan. 23rd.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

"*Doctors and Friendly Societies.*"

IN the course of an address delivered at a meeting of Oddfellows in Hulme on Jan. 23rd Mr. W. J. Galloway, M.P., made some remarks on the relation between friendly societies and the medical profession which may perhaps excite criticism. So long as the present relations exist there will be no objection to the statement that "the interests of the societies were so interwoven with those of the great medical profession that it was essentially necessary good feeling should exist between the two." But when, as in his next sentence, he says "he sympathised with the view of the friendly societies that if a doctor entered into a contract to visit its members for a certain sum of money it was absurd of him to say he would only visit such members as earned only a certain wage," he raises debatable questions. He said further: "The question of wages had nothing whatever to do with belonging to a friendly society and indeed the latter welcomed all who would agree to pay the stipulated amount of subscription." It is quite true that if a man makes a contract he is bound to carry it out, but if anyone, however wealthy he may be, is welcomed as a member of a friendly society and as such claims the services of the medical man it will be necessary for medical men to consider whether such contracts are conducive either to their self-respect or to their material welfare. With many the result of such consideration would probably be that it was not desirable to take such contracts. Mr. Galloway went on to comment adversely on "certain doctors who formed societies and ran them as kinds of unlimited companies. They caught a certain number of people who would subscribe so much a week and for that they undertook to visit them whenever they were ill," and went on to say that it "very often happened that a doctor had a great many more patients than he could properly attend to" and that even when it was not so "it had unfortunately been proved that he had not given that care and attention that their cases required." These general accusations are easy to make and it would be well if Mr. Galloway would take the trouble to hear the medical man's view before endorsing the one-sided statements that have no doubt been made to him. The whole question of the medical treatment of those who are above the rank of paupers and below those who are sufficiently well-to-do to come under the category of "private patients" is fraught with difficulties. There are many objections to the "club system" as it is ordinarily understood. On the part of the members it leads to a sense of proprietorship as regards the medical officer and to scant courtesy, not agreeable to anyone with the feelings of an educated gentleman. The system of contracting to be kept in health is said to work well among the Chinese but it does not as a rule attract the Western mind and the unlimited private companies that excite Mr. Galloway's wrath are not popular with the majority of our profession, although it is quite possible, no doubt, that the medical man may run one with the integrity that Mr. Galloway desires the medical profession to maintain. He appears to think "it does not seem difficult to find some solution of the question which would protect the interests of the friendly societies and also those of the medical profession." He may possibly, therefore, find an opportunity of making useful suggestions if the "Bill to be introduced into Parliament for the better regulation of the medical profession" comes under discussion. But he must bear in mind that though long suffering the profession may become tired of being "sweated."

New Small-pox Hospital.

Application has been made to the Local Government Board on behalf of the Ashton and Stalybridge borough councils and the district councils of Hurst, Andenshaw, and Limehurst to form themselves into a joint small-pox hospital board to maintain a hospital at Hartshead Farm, which has an area of 41 acres. At the inquiry held at Ashton-under-Lyne Dr. Wheaton, the inspector, suggested that the mayors of Stalybridge and Ashton should be ex-officio members of the board. This was objected to by the various representatives but the difficulty was got over by all assenting to the chairman of the board of guardians being nominated an ex-officio member. Mr. W. H. Hughes of Ashton stated that at the beginning of the year there patients in the present unsuitable small-pox hos Ashton and 170 cases had been treated since the e broke out. It was agreed that the designation sh "Ashton and District Joint Small-pox Hospital." H will it be before such hospitals will be reminde disease once prevalent but now almost forgotten, leper houses which are still to be found in various the country?

Brandy and British Brandy.

A good deal is said just now about whisky bein adulterated with grain spirit and it seems that th are similarly cheated with regard to brandy, of wh reputed parent, or rather grand-parent, is the grape, is really made up of "spirit distilled from potato root, or something of that sort," with an infin modicum of French brandy. A grocer of Lower B was fined £10 and costs on Jan. 20th for stuff of this kind as Martell's Three Star Brand defendant said that it was ordered as ordinary and sold as such. It will be well, therefore, order "ordinary brandy." But he also said been sold to him as Martell's brandy, bottled by firm, and that the Manchester agent of that f since told him that an action had been bro Martell's against the printers of the label. The n Jan. 21st, the magistrates at Church were occupie similar case where the so called brandy was flavour or potato spirit. The chairman said it was evide custom of the trade to sell "British brandy," abou the public knew very little and were deceived and protected. For similar offences two other publica Oswaldtwistle were also fined. It is clear, therefo this nasty injurious stuff is sold very largely. If possible it would be better to stop its production fine the publicans who in some cases may be the deceived.

The late Mr. William Crosby, M.R.C.S. Eng., L of Salford.

Yesterday the funeral took place of one of the old most respected of the general practitioners of Salfo W. Crosby. He qualified as Member of the Royal of Surgeons of England and Licentiate of the Apoth Hall in 1847 and was 78 years old at the time death. His funeral was largely attended by of the profession, including Dr. Maguire of and by some of the principal inhabitants of By his knowledge of his profession and by his kindness he had long had a very extensive not limited to the Salford side of the Irwell. But his own calling he was well known for his great k knowledge of music and, like another of our Man medical men, he was an accomplished organist. F years he was a constant attender of Hallé's concerts refined features, of a somewhat Georgian type not fre seen in these days, were very familiar to the audienc leaves a widow and a wide circle of friends to deplo loss.

Jan 26th.

WALES AND WESTERN COUNTIES NO

(FROM OUR OWN CORRESPONDENTS.)

Administration of the Midwives Act in Cardiff.

AT a meeting of the Cardiff division of the Medical Association held in Cardiff on Jan. 21st the officer of health of the borough (Dr. E. Walford) *résumé* of the Midwives Act, 1902, and made reference to its local application The Cardiff corpo which is the local supervising authority under the A delegated the whole of its powers and duties to the committee and has appointed the medical officer of the executive officer, adding to his staff an add woman inspector who has had some training as a nur present she undertakes all the clerical work connecte the administration of the Act and later will car a certain amount of supervision and inspection response to public notices issued by the corpo 60 or 70 women applied for forms of application central board for certificates. Nearly all these applic were made on the ground that those applying were a acting as midwives, very few on the ground of holding any kind of certificate. Dr. Walford stated that he feared that the supervising authority would have some difficulty in making the former class of women carry out the rules of the central board in a satisfactory manner. Some are unable even to read or to write, while others have a most elementary knowledge of these arts and would be quite incapable of keeping the records and registers of cases and case books which are required by the board. Rule No. 17, which provides that a midwife must in certain specified circumstances decline to attend a patient alone and must advise that a medical practitioner must be sent for, met with some criticism at the hands of Dr. Walford and other members of the division. It was pointed out that the midwife can only advise the attendance of a medical man; there is no power to enforce his attendance nor is there any provision for paying him a fee. In view of these circumstances which might at any time be responsible for disastrous results it was decided to ask the Cardiff corporation to discuss the matter with a deputation appointed by members of the division in order, if possible, to arrive at some means of overcoming the difficulty.

Medical Acts Amendment Bill.

Clause 34 of the Medical Acts Amendment Bill, which has been drafted by the medico-political committee of the British Medical Association, met with a great deal of adverse criticism at the same meeting of the Cardiff division of the Association. The clause provides for the disclosure of the identity of a practitioner by requiring him to place his full name outside the premises in which he practises. Dr. T. Wallace and others considered that the price which general practitioners were asked to pay for the suppression of unqualified practice was too great and they thought that it was unnecessary to affix the name of an assistant or of a locum-tenent outside his place of residence. Ultimately a motion was carried (though not unanimously) approving of the clause with a recommendation for exemption to be made in the case of a locum-tenent or deputy holding office for two months or less and permanently in the case of all charitable institutions.

Instruction to a Bearer Corps in Infirmary Wards.

A suggestion has been made to the board of management of the Cardiff Infirmary by the officers of the Welsh volunteer bearer corps that members of the corps should be allowed to attend the male wards of the infirmary for the purpose of gaining experience in the dressing of surgical cases. It is proposed that each member of the corps should have two weeks' instruction in each year under the supervision, not of the surgeons, but of the ward sisters. With suitable restrictions there does not appear to be any reason why the nursing committee of the infirmary which has the matter under consideration should not comply with the suggestion. The members of the bearer corps could not fail to benefit by the instruction they would receive and the good work done by the institution would be much more widely known and appreciated than it is at present by the working classes of the town.

Vagrancy and Labour Colonies.

The court of quarter sessions of the Lindsey division of Lincolnshire has recently issued a very exhaustive report based upon an account of the Belgian labour colonies submitted by Mr. H J. Torr, J.P., and Major R A. Marriott, the governor of the prison at Lincoln. This report of the Lincolnshire justices was considered on Jan. 23rd by a subcommittee appointed by the Glamorganshire court of quarter sessions when a motion was unanimously adopted expressing the opinion that the vagrancy question required instant attention and recommending that the Government should be asked to appoint a commission to consider the best method of grappling with it. It is stated that in the Cardiff union alone the number of tramps dealt with in 1903 was 5500, an increase of 4400 over the number recorded in 1900. The Bridgend guardians have convened a conference of representatives of Glamorganshire boards to consider the establishment of a labour colony for the county.

University College, Bristol.

The fifth annual dinner of the University College Colston Society was held in the large hall of the College on Jan. 21st. Mr. Henry Hobhouse presided and the principal speakers were Sir John Gorst, who was the guest of the evening, and the President of Magdalen College, Oxford (Mr. T. H. Warren). Several references were made to the prospect of the College ultimately developing into a university. The financial statement showed that during the past year the sum of £387 had been raised by the society and this will be devoted towards the completion of the buildings of University College.

Jan. 25th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Rectorial Address at the University of Edinburgh: Rowdy Behaviour of the Students.

THE Lord Rector of the University of Edinburgh, Sir Robert Finlay, M P., appeared on Thursday, Jan. 21st, in the McEwan Hall to deliver the address which is expected from the person honoured by election to this high position. The chair was occupied by the Chancellor of the University, the Right Hon. A. J. Balfour, and he was supported and surrounded by much of the intellect of Edinburgh. The hall was crowded by those who were fortunate enough to have got tickets and by the students. The hour before the meeting was devoted to a students' concert. It was noisy and boisterous and the atmosphere did not augur well for the more serious ceremonial which was to follow. Even the Prime Minister's presence had no deterrent effect—only a few of the words he uttered in introducing the Lord Rector were audible. Sir Robert Finlay stood for nearly an hour before this great hall full of people and it is doubtful if 60 words were audible during the hour. There was a perfect pandemonium of noise of every conceivable description The students behaved in a way that has made Edinburgh thoroughly ashamed of them and the University is metaphorically gnashing its teeth. The scene recalled those of a quarter of a century ago before the days of the Students Representative Council. That body must have either lost its power or it did not anticipate what happened.

The Students' Representative Council and the Rectorial Address.

A special meeting of the Students' Representative Council was held on Jan. 26th to consider the conduct of the students on the occasion of the rectorial address and to take steps to prevent its recurrence. The following motion was adopted:—

1. That the Students' Representative Council, in its own name and [illegible]

continued and that [illegible]
of an hour or 20 [illegible]
meeting commence. [illegible]
to such gatherings it might be desirable that each professor
a day before such meetings should point out to his students
that the honour of the University on such occasions is very
largely in their keeping and that the public naturally judge the
whole institution by their condu [illegible]
members to resign his seat on [illegible]

vestige of any authority [illegible] in unseemly fancy costume.
person who accompanied him in unseemly fancy costume.

At the same meeting a letter was read from Sir Willliam Turner conveying a communication from the Principal and Deans committee on the same subject as follows:—

DEAR SIRS,—At a meeting of the Principal and Deans committee [illegible] connect New York with Brooklyn, between the Brooklyn Bridge and the lately opened Williamsburg structure. According to the *New York Herald* the most disastrous of all building operations in which it was found necessary to sink caissons was the New York East River gas tunnel where the men were at one stage working at a depth of 120 feet, under an air pressure of 52 pounds to the square inch, in addition to the normal atmospheric pressure of about 15 pounds. In the sinking of the caissons for the new Manhattan Bridge a depth of 92 feet has been reached, with an air pressure of 42½ pounds. There will be, however, no increase in the depth or in the air pressure. Dr. Andrew H. Smith of New York, the best-known authority on caisson disease in the United States, is of the opinion that a hospital should be established wherever caisson work is in progress, as a quick return to the conditions which induced the disease is, he deems, the best and nearly the only remedy for it. He therefore suggests that a chamber should be constructed in which a cot containing the patient could be placed and to which the compressed air could be admitted through a pipe connected with the caisson. After abatement of the symptoms the pressure should be very slowly reduced, as much as several hours being occupied in the process. Dr. Smith's advice will probably at once be acted upon.

Pneumonia in New York.

364 deaths occurred in New York from pneumonia for the week ending Jan. 9th, 143 more than recorded from the same cause for the corresponding week in 1903. 1635 deaths resulted from all causes in the week ending Jan. 9th of this year and of all the diseases which made up this large total pneumonia claimed by far the largest number of victims. Dr. William H. Guilfoy, registrar of records in the New York Department of Health, stated that of the 364 abovementioned deaths from pneumonia 239 were due to lobar pneumonia and 125 to broncho-pneumonia. New York is also undergoing an epidemic of measles; 800 cases were reported for the week ending Jan. 9th and there were also 189 deaths. This fact will largely account for the prevalence of broncho-pneumonia, while influenza and the extremely cold weather recently experienced in New York will account for the many cases of, and fatalities from, lobar pneumonia.

Treatment of Cancer by Radium in New York: Remarkable Cases.

Dr. William James Morton, professor of electro-therapeutics at the New York Post-graduate Medical School, delivered a lecture on Radium at a meeting of the Technology Club held in New York on the evening of Jan. 13th. Dr. Morton stated that he was treating a number of patients for cancer and that by means of radium he had effected three cures. The lecturer described the treatment of patients internally as giving them doses of liquid sunshine and bathing the diseased parts with rays of the sun condensed into liquid form and liberated by the action of radium. Dr. Morton went on to say that certain solutions, such as quinine, asculin, and orcin, when exposed to the action of radium become fluorescent and give off the violet and ultra-violet light of the solar spectrum. If the patient takes one of these solutions and lets it become absorbed by the blood and blood-vessels the application of the x rays or radio-active rays to the diseased tissues will liberate the violet rays in the solution and give the tissues what is equivalent to a bath in sunshine. This actinic stimulus stirs up the sluggish system to the work of rebuilding healthy and normal tissues, but, like other kinds of stimulus, it ceases to be beneficial when given in too great quantities. So far as the cure of cases of cancer by means of radium reported by Dr. Morton is concerned, he stated that several medical men of good standing had examined the patients and pronounced the cures complete.

Jan. 16th.

Obituary.

JOSEPH RABUTEAU WELLAND, M.D. DUB.,

LIEUTENANT, R.A.M.C.

THE news of the death of Lieutenant Welland at the battle of Jidballi on Jan. 11th was received with profound regret by his many friends. The deceased officer was born on Sept. 19th, 1878, and so was little more than 25 years of age when his death occurred. He was educated at Rossal and entered Trinity College, Dublin, in 1895 where he speedily became known as a persevering student of [illegible] turn of mind, always desirous of [illegible] ings of his text-books or his professors. At Steevens's Hospital where he was a resident in 1898, he was continually experimenting with drugs upon himself; just as at school, when he was learning chemistry, he would conduct experiments in his study by himself, no explosions—and they occurred—deterring him from finishing his research to his own satisfaction. He took his B.A. degree at the University of Dublin in 1899 and in the following year he was admitted M.B., B.Ch. B.A.O. In June, 1901, he joined the Royal Army Medical Corps and at the beginning of the next year he was ordered out to Somaliland where he was attached to the King' African Rifles. In April, 1903, he was invalided home and graduated M.D. in June of that year. In the Novembe following he again went out to Somaliland where he receive his death-wound at the post of duty, for the telegram relating to the battle of Jidballi seem to indicate that h fell speared while attending to the wounded.

Lieutenant Welland took a keen interest in boating and the Dublin Boat Clubs have sustained a serious loss by his death. In the Michaelmas of 1899 he won the "Junio Pairs." The following year he was chosen stroke and on the advice of R. C. Lehmann was transferred to the stroking o the senior crew for the Henley Regatta and he acquitte himself in this position in a manner which gained for hi the reputation of being the finest stroke seen in the clu for a decade. He stroked the college eight against th Pennsylvania crew which came over to England in 1901 t row for the Grand Challenge Cup at Henley and whilst o leave in 1903 he stroked the Lady Elizabeth eight—a post graduate Dublin crew—at the Boyne, University, Coleraine and Waterford Regattas.

GEORGE EDMUND LEGGE PEARSE, F.R.C.S. ENG., L.S.A.

WE regret to announce the death of Mr. G. E. Legge Pears which took place at his residence, Homefield, Merton Surrey, on Jan. 13th. Born in 1843, he was educated a Westminster School and subsequently entered as a medica student at Westminster Hospital, where he distinguishe himself, taking the Chadwick prize besides several clas prizes. After qualifying in 1864 as a Member of the Roya College of Surgeons of England, he spent two years at th Westminster Hospital, first as house physician and then a house surgeon, and later went to Manchester and becam senior house surgeon to the Royal Infirmary there. Returnin to London, he passed the final examination for the Fellow ship of his College and was appointed demonstrator o anatomy at Westminster Hospital Medical School, afterward becoming assistant surgeon and lecturer in surgery. H retired from active work about four years ago in consequenc of ill-health. He was a Fellow of the Royal Microscopica Society, a Fellow of the Zoological Society, and a Member o the Pathological Society. He was also a contributor to the medical press.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men ar announced:—Dr. Vasili Afanasieff, formerly lecturer o pathological anatomy in the Military Medical Academy, St. Petersburg.—Dr. Diego Coco, formerly *privat-docent* o internal pathology in Naples.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held in January the following candidate passed in the subjects indicated:—

Surgery.—R. S. Dollard, Royal College of Surgeons in Ireland and Westminster Hospital; P. Elias (Sections I. and II.), Amsterdam B. C. Ghosh (Section II.), Cambridge; F. W. Higgs (Sections I and II.), St. George's Hospital; and W. G. Kinton (Section I) and J. W. Watson (Section II.), Manchester.

Medicine.—W. V. Braddon (Sections I. and II.), Cambridge and Man chester; F. H. Hand (Section II.) and J. D. Keir (Section II. St. Mary's Hospital; W. G. Kinton (Section I.) Manchester; E. B. Price (Sections I. and II.), Birmingham; A. Rogers (Section II Cardiff and St. Mary's Hospital; A. Turner (Sections I. and II Charing Cross Hospital; and S. Zweiback Section I), Konigsberg

Forensic Medicine.—F. H. Hand, St. Mary's Hospital; W. G. Kinto Manchester; and A. Turner, Charing Cross Hospital.

Midwifery—H. Archer Leeds, C H J Fagan St George's Hospital W S Lewis, Birmingham and P B Whittington London Hospital

The diploma of the Society was granted to the following candidates entitling them to practise medicine surgery and midwifery —W V Braddon R S Dollard P Elias B C Ghosh J D Keir, W S Lewis and A Turner

TRINITY COLLEGE, DUBLIN —At examinations held in Hilary term the following candidates were successful —

PREVIOUS MEDICAL EXAMINATION

Anatomy and Institutes of Medicine—William G Harnett William C MacFetridge Joseph H Elliott and Robert E Dunn

Physics and Chemistry William F Casey, William F Samuels and Hercules J Knox

Botany and Zoology—James C C Hogan, Rupert Magill Robert L Lee Denis J Stokes Alexander K Cosgrave, John H Morton, John A L Hahn and William F Casey

MEDICAL MAGISTRATE —Mr George Philip Francis, L R C S Edin , L A H Dub , of Brecon, has been placed upon the commission of the peace for Breconshire

CENTENARIANS —Mrs Brembridge of Sidmouth, Devon, celebrated her 103rd birthday on Jan 21st She is the widow of the late Mr R Brembridge, Member of Parliament for Barnstaple, at which town she was born in 1801 —Mr Henry Wilkinson who died recently at Newby Wiske near Northallerton, celebrated his 100th birthday on Oct 23rd, 1903. On this occasion the local members of the Wesleyan body, to which he belonged, held special services and presented him with a sum of money He had eight children, of whom only one (now aged 75 years) is living

LITERARY INTELLIGENCE —Messrs. Wright and Co of Bristol have in the press a small work written by Dr W G Sutherland entitled "Dispensing Made Easy, with Numerous Formulæ and Practical Hints to Secure Simplicity, Accuracy, and Economy " It is designed specially for the dispensing medical practitioner and is the result of observations made while the writer was acting as locum tenent in over 100 different practices in England and Wales —Mr Alban Doran, after having played a prominent part in establishing the *Journal of Obstetrics and Gynæcology of the British Empire*, has resigned the editorship of that periodical Dr T W Eden has been appointed to fill his place

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, WATERLOO ROAD, S E —The great Royal Opera House ball on behalf of the above hospital will take place on Tuesday next Feb 2nd We understand that all grand tier boxes have long since been disposed of and that two supper tables and one second tier box only are left unsold Large dinner parties for this ball have been

n restaurants
s Hatzfeldt
Dolgorouki,
'ortland, the

Duchess of Wellington, the Duchess of Sutherland, the Marchioness of Winchester, the Marchioness of Sligo, the Countess of Derby, the Countess of Airlie, the Countess of Leven and Melville, the Countess of Aberdeen, Countess Cowper, the Countess of Portsmouth, Countess Cadogan, Countess Howe, Lady Denman, Lady Cheylesmore Lady O Hagan, Lady Llangattock, Lady Vincent, Lady Pearson Miss Moresby Chinnery, Miss Drummond, Miss Meyer,

lds, and Miss Harmsworth
can be ascertained, is the
sed world and has already

relieved over a million patients On this account alone it deserves all possible assistance in raising the £50 000 required for rebuilding

LECTURES ON MEDICAL JURISPRUDENCE —On Jan 21st the second of a course of lectures on medical jurisprudence was delivered by Dr F J Waldo, coroner for the City of London, at the Old Hall, Lincoln's Inn The lecturer dealt with "Live Birth in Relation to Civil and Criminal Law," a subject of great importance to lawyers The consideration of live birth, he said, was naturally divided into two classes—namely, those which affected either civil cases of inheritance or criminal cases of infanticide In both the evidence that established the fact of live birth was identical The medical view of live birth differed from the legal The medical man demanded proof of the establishment of circulation and of respiration even when the child had not been born into the world In this way crying was one of the most satisfactory proofs of respiration and hence, to the medical mind of live birth The law, on the other hand, was content with the faintest sign of vitality, provided the child was fully born into the world, as establishing the fact of live birth The tremor of a muscle or the quiver of an eyelid might be sufficient evidence of live birth from the legal point of view The positive signs of live birth, as laid down by Casper were next discussed and the crucial point of viability or the capacity of a child to survive birth was treated at some length The remaining lectures of the course will be delivered on subsequent Thursdays They deal with death in its medico legal relations, insanity, and poisons

BOOKS, ETC , RECEIVED

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PENTLAND YOUNG J, Edinburgh and London

Manual of Surgery By Alexis Thomson M D F R C S Edin , Surgeon to the Edinburgh Royal Infirmary Assistant Surgeon er Miles M D,
Royal Infirmary,
Surgery Price
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REDMAN LIMITED 129 Shaftesbury avenue W C

Functional Diagnosis of Kidney Disease with Especial Reference to Renal Surgery Clinical Experimental Investigations by Dr Leopold Casper Privat-docent an der Universität and Dr Paul Friederich Richter in Berlin Translated by Dr Robert C Bryan of Richmond Va, and Dr Henry L Sanford of Cleveland Price 7s net

THE WEARING OF MEDALS BY EX-CIVIL SURGEONS.

To the Editors of THE LANCET.

SIRS,—In reply to Ex-Civil Surgeon's queries *re* his South African medal, he can with good taste wear it when in evening dress but it should be in miniature form with ribbon attached The War Office some 16 years ago sanctioned the wearing of medals by officers when in evening dress, and the custom is followed by many officers, from the Commander-in-Chief downwards, when attending public dinners, &c.

I am, Sirs, yours faithfully,
Jan. 25th, 1904. I. M. D.

THE HICKMAN REWARDS.

THE £100 reward offered by Mr. Hickman and the £100 offered by the board of the Royal Free Hospital for the discovery of the late Miss S. F. Hickman have, we are authorised to state, now been paid. The money has been applied as follows—viz.: £5 paid to the lad, H. W Mackinney, who first gave information to the police, and £5 to the boy's father for clothing and necessaries. The balance of £190 will be invested by the Mayor and Vicar of Richmond in Government stock, in trust, as to £90 for the boy Mackinney, and £50 each for Fennell and Watkins, the two boys who were with Mackinney in the plantation. The interest of these sums is to be applied for the benefit of the boys until they attain the age of 21 years and the principal then is to be paid to them.

BIRD "PRESERVING."

IN THE LANCET of Jan. 16th, p. 203, we recorded the humanity and the interest in ornithology displayed by Mr. E. *Symonds*, a game keeper, who saw a wax-wing and did not shoot it. But the usual idiot with a gun has turned up and Mr. E. Kay Robinson writes to the *Times* of Jan. 26th that according to the press of Jan. 21st "a wax-wing has been shot near Beccles." It is difficult to speak politely of the person who committed this act but let us hope that he was simply an ignoramus, not a collector.

A CASE OF ACUTE TRAUMATIC CHOLECYSTITIS.

To the Editors of THE LANCET.

SIRS,—In the case of acute traumatic cholecystitis reported by Dr. F. J. Smith and Mr. C. W. Mansell Moullin in THE LANCET of Jan. 23rd, p. 220, might not the injury have been caused by the man falling with his right arm under him? The internal condyle of the humerus in that position is opposite the gall-bladder.

I am, Sirs, yours faithfully,
F. F. JONES, M.R.C.S. Eng., L.S.A.
Twerton-on-Avon, Bath, Jan. 26th, 1904.

A WARNING TO MEDICAL MEN APPLYING FOR SHIPS' SURGEONCIES.

To the Editors of THE LANCET.

SIRS,—I obtained an appointment as ship's surgeon through an agent who introduced me to the shipping firm's superintendent and they both told me that the voyage would be for six months. I unfortunately signed the ship's articles without putting in a special clause as I trusted to the statements made to me at the time of engagement. I was kept at sea for nearly a year and I might have been detained for two years but luckily the steamer was ordered back to England. I was refused permission to leave at the end of six months by the captain on any other condition than that I found a substitute, which was impossible. I was informed by the shipping firm when I returned that they entirely ignored any responsibility in the matter and that as I had signed the ship's articles they were entitled to my services for two years at £6 a month, unless the steamer returned within that time, and that the contract made with the agent did not concern them. I write this to warn others who may be similarly placed not to sign the ship's articles without inserting an extra clause if necessary.

I am, Sirs, yours faithfully,
Jan. 23rd, 1904. LATE SHIP'S SURGEON.

◆

Scrutator.—1. The patient is apparently "in such circumstances as to require relief for his proper care" and must therefore be dealt with as a pauper by the relieving officer under Section 14 (2) of the Lunacy Act, 1890. 2. The justice before whom the alleged lunatic is brought may call in any registered medical practitioner to examine such alleged lunatic and is not bound by any contract between the guardians and their medical officer. In practice, however, justices are accustomed tacitly to sanction contracts of this kind. Unless, therefore, there are special circumstances which would lead the justice to ignore the medical officer of the district "Scrutator" is not likely to be asked to certify. 3. The justice's order is in Form 12 of the second schedule of the Act. 4. Children "being of a sufficient ability" are liable for the maintenance of a parent. The extent of the claim made is at the discretion of the guardians.

A. B. C.—We consider that the proposer should be told of his condition. He will be to some extent prepared for the bad news by the fact that the insurance company, upon our correspondent's report, will certainly either refuse his life or only accept him upon very high rates. We think that the proposer might be told in general terms that the result of the investigation is to show him to be not a first-class life, while he should be advised to consult his own medical man with regard to particulars. These particulars could be communicated by "A. B. C." in confidence to the proposer's own medical man.

W. J. B.—Radio-active rays are not in the ordinary sense visible to the eye. Their existence must be made manifest by a fluorescent substance. The gleaming of the cat's eye presumably acts as a warning to the prey.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's [illegible] minster (2 P.M.), West L[illegible] (2 P.M.), St. George's (1 P[illegible] (2.30 P.M.), Cancer (2 P.M.), [illegible] (9.30 A.M.), Royal Ear (3 P.M [illegible] Throat, Golden-square (9.30 A[illegible] (2 P.M.).

WEDNESDAY (3rd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M).

THURSDAY (4th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat, (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (6th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES.

MONDAY (1st).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—9 P.M. Mr. C. B. Lockwood: Aseptic Surgery in Theory and Practice. Lecture I.—Introductory (Lettsomian Lecture.)

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND (London School of Medicine for Women, Hunter street. W.C.)—4 P.M. Specimens will be shown by Mr. R. H. Burne. Paper:—Prof. J. Symington: Grattan's Craniometer and Craniometric Methods. Discussion on the Best Practical Method of Locating in the Living Subject (1) the Pylorus, (2) the Duodeno-jejunal Flexure, (3) the Hila of the Kidneys, (4) the Commencement of the Pelvic Colon, also on the Unreliability of the Costal Arch as a Guide for Surface Marking (opened by Dr. C. Addison).

TUESDAY (2nd).—PATHOLOGICAL SOCIETY OF LONDON (Lister (Jenner) Institute, Chelsea-gardens).—8.30 P.M. Mr. H. G. Plimmer: The Organisms of Monkey Malaria and Sleeping Sickness.—Dr. A. Paine: Iron Hæmatoxylin Staining.—Mr. S. Rowland: Mechanism of Agglutination of Typhoid Bacilli. Mr. J. A Craw; Agglutination. Dr. C. J. Martin: A Modified Riva-Rocci Apparatus for the Clinical Determination of Blood-pressure. And other exhibits.

WEDNESDAY (3rd).— OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 [illegible] Specimens:—Mrs Scharlieb: Unruptured Tu[illegible] Deciduoma Malignum. - Dr. Briggs: [illegible] opian Tube. The President (Dr. Malins of Birmingham): Annual Address.

THURSDAY (4th).—NEUROLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.)—8.30 P.M. Annual General Meeting. Dr. S. J. Sharkey: Presidential Address.

RÖNTGEN SOCIETY (20, Hanover-square, W.).—8.30 P.M. Discussion on Production of Photographic Reversal through the Action of Various Radiations.

FRIDAY (5th).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.45 P.M. Mr. C. [illegible] The Surgical Treatment of Appendicitis.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, Hammersmith, W.).—8 30 P.M. Paper —Dr. S. West: Some Points in Functional Albuminuria.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.) —8.30 P.M. Clinical Evening. Communications by the President, Dr Luke, and Dr. McCardie.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and Specimens will be shown by Dr. E. S. Yonge, Mr. A. H. Burt, and others

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (1st).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.)—5 P.M. Dr. Saunders: Examination of the Stomach and Gastric Contents.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C) —4 P.M. Dr. E G. Little: Clinique. (Skin.) 5.15 P.M. Dr. A. Morison: On the Treatment of the Muscular Factor in Cardiac Failure.

TUESDAY (2nd).—POST-GRADUATE COLLEGE (West London Hospital Hammersmith-road, W.).—5 P.M. Mr. C. Williams: X Rays (illustrated by lantern slides).

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.) —4 P M. Sir W. H. Broadbent: Clinique. (Medical.) 5 15 P.M. Mr. W. Stuart-Low: Mucous Membranes, Normal and Abnormal.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Taylor: Myasthenia Gravis.

WEDNESDAY (3rd).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.).—5 P.M. Dr. Russell: Pneumonia.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C).—4 P.M. Mr. J. Clarke: Clinique. (Surgical.) 5.15 P.M. Dr. T. H. Green: The Treatment of Pneumonia.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton) —4 P.M. Dr. Fowler: The Treatment of Thoracic Aneurysm by Gelatine Injections.

THURSDAY (4th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. S. Edwards: Tuberculosis of the Bladder.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.) —4 P.M. Mr. Hutchinson: Clinique (Surgical.) 5.15 P.M. Mr. E. Clarke: Errors of Refraction, their Diagnosis and Treatment.

[illegible]

Lecture)

THE HOSPITAL [illegible] W.C).—4 P.M. Mr. Kello [illegible]

COUNCIL OF LEGA[illegible] 8 P.M. Dr. F. J. Waldo: [illegible] nity in its Medico-legal Aspects.

FRIDAY (5th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W [illegible]

MEDICAL GRADUATES' C[illegible] W.C.).—4 P.M. Dr. E. [illegible]

NATIONAL HOSPITAL FO[illegible] square, Bloomsbury).— [illegible]

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THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1903, which was completed with the issue of Dec. 26th, were given in THE LANCET of Jan. 2nd, 1904.

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(Taken daily at 8.30 a m. by Steward's Instruments.)

THE LANCET Office, Jan. 28th, 1904.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radia in Vacuo	Maximum Temp. Shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M
Jan 22	30 67	N E.	...	54	42	33	33	34	Cloudy
" 23	30 61	SSW	...	37	37	33	35	35	Foggy
" 24	30 33	S E.	...	37	34	32	32	34	Overcast
" 25	30·16	S.W	...	41	41	32	32	34	Overcast
" 26	30 01	S.	..	69	49	33	40	41	Fine
" 27	29 78	S W	0 02	52	62	41	48	49	Squally
" 28	29 69	S W.	0 17	60	49	48	48	49	Raining

During the week marked copies of the following newspapers have been received: *Aberdeen Free Press, Aberdeen Free Press (Weekly), Westminster Gazette, Hertfordshire Mercury, Windsor and Eton Express, South Wales Daily News, East Anglian Daily Times, Walsall Advertiser, Surrey Advertiser, Reading Mercury, Mining Journal, Local Government Chronicle, Yorkshire Herald, Daily News, Daily Chronicle, Standard, Liverpool Post, St. Mary's Hospital Gazette, &c.*

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A Lecture

ON

THE PHYSIOLOGICAL ACTION AND ANTIDOTES OF SNAKE VENOMS WITH A PRACTICAL METHOD OF TREATMENT OF SNAKE BITES.[1]

Delivered in the Physiological Laboratory of the University of London on June 9th, 1903,

BY LEONARD ROGERS, M.D., M.R.C.P. LOND.,
CAPTAIN, INDIAN MEDICAL SERVICE.

DURING the last few months the physiological actions of a number of snake poisons, representing every class of these poisonous reptiles, have been investigated by me in this laboratory in continuation of previous work in India, the main results of which I propose to bring before you to-day, illustrating the different points as far as possible by my own experience but referring to previous work wherever advisable.

In some of the earlier investigations on snake venoms no very essential differences were detected in the action of the various classes, but the large amount of work which has been carried out in recent years has shown that they may be broadly divided into two classes: first, the colubrines—of which the cobra is the best worked out—acting mainly by paralysing the respiratory centre in the medulla and the motor end plates of the phrenic nerves, more especially combined with a much less important action on the blood; and, secondly, the viperine class, which have hitherto been thought to act mainly on the blood, producing intravascular clotting as in Russell's viper of India, or loss of coagulability and hæmorrhages as in the rattlesnake of America. I shall hope to show you presently that a still more important and constant action of the viperine class is the production of a paralysis of the central vaso-motor centre in the medulla, just as the colubrine class paralyse the respiratory functions of this part of the nervous system, a factor which has been hitherto largely overlooked except for a reference to it by Weir Mitchell and Reichart in their classical work on the rattlesnake. It will simplify matters if I first direct your attention to a table in which I have summarised the actions of each of the four classes of snake poisons, illustrating them by examples of species which I have myself investigated (Table I.).

You will see from the table that the venoms having the colubrine action characterise the sea snakes (which I have carefully investigated during the last two years), the hamadryad or king cobra, and the two kinds of krait. The viperine poisons include the viperidæ, represented by the daboia Russellii of India and the African puff adder; and the crotalidæ or pit vipers (which differ from the former in having a depression in the scales beneath the eye the function of which is not known) which are represented by the rattlesnakes of America and the trimensurus, or tree viper of India. A study of the venoms of these species will serve to illustrate all the important points of this extensive subject, a brief summary of which is all that I can attempt to-day. With regard to the chemical nature I will only mention that the venoms all contain actively poisonous albumoses (the peptones of the older literature) and that the viperine ones are coagulated and rendered inert at a lower temperature than are the colubrine ones. You see in the table a very marked difference between the colubrine and the viperine poisons, especially in their actions on the nervous system. Nevertheless, the difference is not absolute; there are connecting links between the two classes and I shall show you presently that the venom of the bungarus fasciatus, or banded krait, is of mixed colubrine and viperine action, as was found to be the case by C. J. Martin in the Australian colubrine snake the pseudechis porphyacus. Further, according to Weir Mitchell and Reichart and to Flexner, some of the pit vipers of the Western Hemisphere contain varying proportions of the colubrine element acting by paralysing the vaso-motor and respiratory centre, so that in certain species mixtures in varying proportions of the two active nerve poisons are present. Again, the relatively slight action of some at least of the colubrine poisons in reducing the coagulability of the blood and in lowering the blood pressure may well be minor degrees of the much more marked similar effects brought about by the viperine poisons. There is, then, a gradation by means of connecting links between the main colubrine and viperine divisions—a point the great interest of which will become clearer after I have described the actions of the different venoms.

TABLE I.—GIVING A SUMMARY OF THE ACTIONS OF THE DIFFERENT CLASSES OF SNAKE VENOMS.

		Species.	On the nervous system.	On the blood.			On the arteries.
				Hæmolysis.	Coagulation.	Hæmorrhages.	
Colubrine venoms.	Hydrophidæ (sea snakes).	1. Enhydrina Bengalensis.	Paralysis of respiration and end plates.	Very slight.	Slightly reduced.	*Nil.*	—
	Colubridæ.	2. Cobra.	"	Very marked.	Much reduced.	"	Vaso-constriction.
		3. Hamadryad (king cobra).	"	Very slight.	—	"	—
		4. Bungarus cœruleus (common krait).	"	Fairly marked.	—	"	—
		5. Bungarus fasciatus (banded krait).	Ditto, a viperine action.	Very slight.	—	"	—
Viperine venoms.	Viperidæ.	1. Daboia Russellii.	Paralysis of vaso-motor centre.	Marked.	Marked thrombosis and loss of coagulability.	Very slight.	Vaso-constriction.
		2. African puff adder.	"	"	"	Marked.	—
	Crotalidæ (pit vipers).	3. Trimensurus.	"	"	Ditto, but thrombosis less marked.	Fairly marked.	—
		4. Rattlesnake.	"	"	No general thrombosis; loss of coagulability.	Very marked.	—

ACTION OF COLUBRINE VENOMS ON THE NERVOUS SYSTEM.

The best known of the colubrine venoms is that of the cobra, the physiological action of which was first carefully studied by Brunton and Fayrer some 30 years ago. They showed that its primary action was a paralysis of the respiratory centre and of the motor end plates, especially of the phrenic nerves; they also ascertained the important fact that by means of artificial respiration the circulation could be kept going for many hours after natural breathing had finally stopped as a result of the poison. Their researches were confirmed by Ragotzi and by Vincent Richards and Wall in India, although attempts by an Indian commission, including Vincent Richards, failed to obtain complete recovery in animals by artificial respiration. More recently Calmette's serum has been made by injecting horses with increasing doses of a mixture of venoms, mainly consisting of cobra poison, for many months and it has an undoubted specific action against cobra venom. It has therefore become a matter of practical importance to ascertain whether the physiological action of other colubrine venoms (including that of the hydrophidæ which are morphologically colubrines adapted to an aquatic existence) is the same as that of the cobra and if so whether Calmette's serum is also effective against them and in what doses, especially in view of the fact that C. J. Martin has found that it had only a very slight and practically unimportant antidotal action against the Australian colubrine snakes.

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[1] A grant in aid of the research work on which this lecture is mainly based was received from the Royal Society, by whom the original full papers have been published. Some work done since the delivery of the lecture has been added.

HYDROPHIDÆ OR SEA SNAKES.

Enhydrina Bengalensis.—This is the commonest and most deadly of the sea snakes which swarm round the coasts of India and not infrequently cause loss of life among fishermen. I have collected venom from four out of the six genera met with in Indian seas and found them all to produce death with typical colubrine symptoms, so that the enhydrina will serve to illustrate the action of the whole class. The symptoms of poisoning by comparatively small doses are as follows. After a long latent period, which in the case of very small doses may last several hours, the animal begins to show signs of sleepiness, closing the eyes now and then and nodding its head. After a while it sits down and begins to show signs of commencing muscular weakness, for when aroused movements are only carried out with difficulty. It will now be found that the animal is breathing both more quickly and deeply than normal, but before long the number of respirations becomes decreased in frequency while still laboured in character. The paralysis increases until the animal cannot stand or raise its head, the respirations become slower and slower, finally violent respiratory convulsions set in, the animal rolls over on its side, and the breathing finally ceases, the heart continuing to beat for a few minutes longer. After death the blood is found to be dark, but it clots very firmly when placed in a test tube and after a time exudes a nearly clear serum. Stimulation of the phrenic nerves with the secondary coil of faradic current produces no contraction of the diaphragm, but the muscle responds to direct stimulation. A typical curara effect is thus present and I find that the nerve trunks are not affected, as the direct application of strong solutions of the venom does not alter the negative variation of the current of injury. The sciatic and other nerves may or may not show this complete motor end plate paralysis, it being most marked after large doses of the venom.

The symptoms which I have just described are precisely similar to those produced by cobra venom, of which respiratory paralysis is the characteristic effect. For their closer study I have taken simultaneous tracings of the respirations by means of a Sandstöm's recorder and of the carotid blood pressure by a Gad's manometer and will now show you some slides illustrating the results. The sequence of events you will see is the same in each, the time in which they appear varying inversely with the dose administered. The first change noted is a steady slowing down of the respiration, the amplitude of which is also decreased until breathing ceases, by which time the blood pressure has begun to rise above the normal as a result of commencing asphyxia, only to fall rapidly soon after respiration has finally ceased. This asphyxial rise of pressure is most evident after small doses in which respiratory convulsions are marked. In every case the respiration failed before the circulation and motor end plate paralysis was found post mortem affecting the phrenic nerves and after the larger doses also the sciatics, &c. In order to study the time relationship between the paralysis of the respiratory centre and of the phrenics an experiment was performed in which this nerve was exposed in the neck, and the minimal faradic current, which would produce a contraction of the diaphragm when applied to the nerve, was noted. It was found that almost complete failure of respiration occurred before the phrenics showed any weakening, so that the primary action of the poison is clearly on the respiratory centre in the medulla. Next I tried the effect of artificial respiration in maintaining the circulation after cessation of natural breathing. The process was begun when the respirations had almost ceased at the commencement of the usual terminal asphyxial rise of pressure. The result was that the rise was counteracted and the circulation was steadily maintained as long as the inflation of the lungs was carried on only to rise once more on leaving it off. This sequence of events occurred repeatedly and even when respiratory convulsions were allowed to begin renewed artificial respiration both lowered the excessive blood pressure and stopped the convulsions. Here once more we find similar results to those obtained by Brunton and Fayrer with cobra venom.

There are a few other points of interest concerning the sea-snake venoms which I made out while in India. The quantity of venom obtained from them was very small, the average amount got from an enhydrina four or five fee in length being 0·010 gramme only, but it makes up for thi by its great toxicity, which in the case of birds I found to be ten times as great weight for weight as that of cobra venom, being by far the most potent snake venom I know of. On comparing its action on fish (which these sea snakes live on) with that of cobra venom I found that while 50 times as much cobra venom per kilogramme was required to kill fish as was necessary to kill birds, in the case of the enhydrina poison only ten times as much was necessary, while the venom of some other sea snakes killed fish in only very slightly larger doses than they killed birds—a remarkable adaptation of the poison of the sea snakes to the needs of their environment. Again, some harmless snakes withstood 100 times the fatal dose for a fish and 1000 times that for a bird. Further, I found that the enhydrina poison resembled tetanus toxin in that small quantities of it may be fixed and rendered inert by being mixed for some time at blood heat with fresh brain matter of a highly susceptible animal, so that the great differences I have just mentioned in the susceptibility of different classes of animals to the venom may possibly be due to varying affinities of their nervous systems for the poisons.

INDIAN POISONOUS COLUBRINES.

Hamadryad or king cobra.—This is the largest and most deadly snake in India, if not in the world, but is fortunately rare. In a few experiments made by Fayrer many years ago it was not observed to differ in its effects from cobra venom, but I am not aware that its physiological action has hitherto been closely examined. I will show you some tracings illustrating its action on the respiration and circulation. In the first experiment five milligrammes per kilogramme administered intravenously paralysed the respiration in one and a half minutes, while the blood pressure began to fail half a minute later. In the second, with one-fifth of the former dose, you see that there occurred a temporary increase in the number and amplitude of the respirations, followed by the usual steady failure and cessation after ten minutes. In both cases the phrenics were completely paralysed after death, but stimulation at regular intervals in the first experiment showed that their paralysis had not commenced until after failure of the respiratory centre. In the third tracing you see the effect of artificial respiration, showing that the circulation could be kept up for a long time after respiration had finally ceased by this means, just as in cobra and enhydrina poisoning. Hamadryad venom, then, also resembles in its action cobra venom.

Bungarus cœruleus or common krait.—This is a small, very widely distributed poisonous snake of the colubrine class. Thanks to the kindness of Dr. V. W. Shaw in giving me a small quantity of its venom I have been able to get a tracing of its action on the respiration and circulation and to do some other experiments with it. The tracing presents the characters typical of a colubrine poison. The respiration ceased in four and a half minutes, while the blood pressure shows the usual late asphyxial rise and the heart continues to beat for some minutes longer. After death the end plates of the phrenics were weakened but not completely paralysed, this venom having apparently less action on them than that produced by the other colubrine poisons. In other experiments on small animals the symptoms were typically those of colubrine poisoning.

Bungarus fasciatus or the banded krait.—This snake is much larger than the common krait, yet it has been considered by Fayrer, Wall, and others to be less deadly than its smaller relative. Wall has also described a chronic form of poisoning by it, in which respect its effects differ from those of other colubrine snakes. I have performed a number of experiments with it which bring out these points more distinctly. In the first place weight for weight it is a very much weaker venom than the other colubrine poisons, for I found its lethal dose to be seven milligrammes per kilogramme in pigeons, or 14 times as weak as cobra venom, 22 times as weak as the common krait, and no less than 140 times as weak as the venom of the enhydrina (see Table III.). When small doses are injected into pigeons typical colubrine symptoms are produced, but with larger doses intravascular clotting may be found more especially in the portal system, just as I shall show you presently is typical of most of the viperine poisons. This venom, then, contains both the colubrine and the viperine elements. I shall return to this point in speaking of the antidotes to the colubrine poisons and will now show you tracings illustrating its action and exhibiting what I regard as points of exceptional interest. The first three experiments were carried out on rabbits the blood pressure of which is always rather low. In each of them the first effect of the poison was to cause a marked fall in blood pressure which was to a considerable extent recovered from after a short time. Then a steady failure both in frequency and amplitude of the respirations occurred (preceded in the case of the smallest dose of five milligrammes per kilogramme by a temporary increased rate). With the failure of respiration the usual asphyxial rise of blood pressure to above the original height took place and the heart continued to beat for several minutes after the cessation of the breathing. So far the effects were typically colubrine, but in one of these animals a small clot was found post mortem in the portal vein such as is commonly produced by a viperine poison, but never by a purely colubrine one. In the other two cases, however, there was no clotting to account for the temporary fall of blood pressure. *The next tracing from a cat injected with ten milligrammes per kilogramme* intravenously shows a still more marked primary fall of blood pressure accompanied by an immediate cessation of respiration, both of a very temporary nature, and this was followed by the usual steady respiratory failure of colubrine poisoning. In this case as soon as breathing finally ceased artificial respiration was started, but it had only a momentary effect in keeping up the circulation instead of a prolonged one, as in all purely colubrine arrests. In each instance the phrenics were found to be completely paralysed after death, and in one case of a dose of 20 milligrammes per kilogramme the sciatics were also similarly affected. The primary temporary fall of blood pressure and the failure of artificial respiration to avert the final circulatory failure after cessation of breathing are, then, peculiar to the poison of the banded krait among Indian colubrine snakes, while I shall show presently that these are characteristic features of viperine poisons, so they are doubtless due to the viperine element already pointed out. In order to test this further a lethal dose of venom was heated to 90° C. for half a minute, an application of heat which has a much greater effect on the viperine than on the colubrine element. The result was a much less marked primary fall of blood pressure and a much greater effect of artificial respiration in maintaining the circulation than in the last experiment; doubtless due to the elimination of most of the viperine action, thus confirming the presence of this element in the unheated natural poison.

ACTION OF COLUBRINE VENOMS ON THE BLOOD.

Hæmolytic action.—The very marked action of cobra venom in dissolving the red corpuscles of the blood has long been known and has been more especially studied by D. D. [illegible] named [illegible] the lc[illegible] action of all the colubrine poisons in Table I. by adding small measured quantities of blood to varying strengths of the venoms dissolv[illegible] counting the number of red [illegible] as well as in controls, and [illegible] Table II. gives the strengths required to produce complete, or very nearly complete, hæmolysis in 24 hours.

TABLE II.—*Hæmolytic Action of Colubrine Venoms.*

Snake.	Blood.	Strength of venom.	Complete hæmolysis.
Enhydrina	Human.	1 in 1,000	In 24 hours.
Cobra	,,	1 ,, 100,000	,,
Hamadryad	,,	1 ,, 1,000	,,
Common krait	,,	1 ,, 10,000	,,
Banded krait	,,	1 ,, 1,000	,,

It is evident from these figures that the cobra venom has an exceptionally powerful hæmolytic action compared with the other colubrine venoms. The common krait comes next to it, while that of the others is very slight indeed, especially in the case of the enhydrina venom, which relatively to its lethal power has only one-thousandth part of the hæmolytic action of cobra venom. Yet even in the case of the cobra, if the red corpuscles be counted before the administration of a lethal dose and again immediately after death, the decrease in their number is very far short of what would be required to produce a lethal effect, while in the case of the enhydrina I have not been able to detect any reduction in the number of the red corpuscles as a result of a minimal lethal dose. It is clear, then, that the hæmolytic action of the colubrine venoms as a class is of very slight importance compared with their action on the nervous system and that it is quite a negligible quantity in producing death, except perhaps in the case of cobra venom in very large doses.

Action on the coagulability of the blood.—Cobra venom when added in solution to blood prevents its clotting, as was shown by D. D. Cunningham. I have found that this action is possessed also in a lesser degree by enhydrina venom, for while a 1 in 200 solution of cobra venom permanently prevented the clotting of the blood, the same strength of enhydrina venom only prolonged the clotting time by a few minutes. This action in both cases is too slight to influence the mass of circulating blood of an animal in ordinary doses, *but it will be sufficient to render it fluid locally at the seat* of injection of the venom and so may materially increase the rapidity with which it will be absorbed through the open mouths of the small vessels severed by the fang, and in this way it probably plays an important part in producing the extremely rapid action of relatively very large doses of colubrine venoms.

ANTIDOTES TO COLUBRINE VENOMS.

The relative value of Calmette's serum against different Indian colubrine venoms.—We have learned that the physiological action of the venoms of the hydrophidæ and poisonous Indian colubrine snakes is identical with the exception of the added viperine element in the case of the banded krait. We now have to see if Calmette's serum has the same specific action against the others as it has against the cobra. To test this I have carried out a series of experiments with each of the colubrine venoms by mixing varying quantities of the same serum with an equal amount of the venoms (about ten times a lethal dose being employed) and injecting the mixtures after half an hour at room temperature (18° to 20° C.). The amount of serum required to neutralise a given quantity of serum in vitro was thus obtained and the results are shown in Table III. In column 1 is given the minimal lethal dose of each of the venoms per kilogramme weight, which, you see, varies so greatly that the differences can be explained only on the hypothesis that they contain widely different proportions of the active respiratory paralysing poison. If this is so, then an equal weight of enhydrina poison will contain ten times as much of the active toxin as does cobra venom, and the amount of serum required to neutralise ten milligrammes of the former must be divided by ten before we can compare the action of the serum against equal quantities of the active

TABLE III.—*Showing the Relative Value of Calmette's Serum against the Colubrine Venoms.*

No.	Species of snake.	Minimal lethal dose for birds in milligrammes	Cubic centimetres of serum to neutralise 10 milligrammes	C c of serum to neutralise equivalent of 10 milligrammes of cobra venom.	C c. of serum to neutralise one lethal dose for 50 kilogrammes in man.	Grammes of venom ejected at one bite.	Lethal doses ejected at one bite.	Serum required to neutralise in vitro venom ejected at one bite.
1	Cobra (Keautiah).	6·5	17·7	17·7	44 25	0 045* ·254†	10	40 c c.* 442 ,, †
2	Cobra (Gokurrab).	0 4	36 2	28 9	72·25	,,	,,	(772) ,,
3	Hamadryad	0 6	28 8	34·5	86 25	?	10)	(862) ,,
4	Bungarus cœruleus.	0 25	166 0	83 0	207 5	?	(3)	(600) ,,
5	Bungarus fasciatus	7 0	(No effect)			?	—	—
6	Enhydrina (sea snake).	0 05	444 4	44 4	111·0	0·010	4	444 c.c.

* Lamb. † D. D. Cunningham.

principles of the two venoms. In this way the figures have been obtained showing the cubic centimetres of serum required to neutralise toxin equivalent to ten milligrammes of cobra venom. Two different varieties of cobra venom have been tested, the first being the common one, from which most of the antivenin is prepared; and you see that the antivenin acts better against this than against the rarer variety. Not far behind comes the closely related hamadryad, then the enhydrina (a sea snake), while its action against the krait is more feeble. In all of these some of the animals were saved by the serum from at least ten lethal doses of the venoms, but, on the other hand, no recovery took place from the venom of the banded krait, for, although the colubrine symptoms were neutralised by the larger doses of serum used, the animals died three or four days afterwards with symptoms of slow viperine poisoning—probably the chronic form described by Wall—thus confirming the conclusion I had previously come to that this venom is a mixture of the colubrine and viperine elements.

The fact that Calmette's serum has a definite specific action against all the above purely colubrine poisons, including one of the sea snakes, is an interesting and important one, but we have further to consider the doses which must be used. In column 4 of Table III. is entered the amount of serum required to neutralise one lethal dose of each venom for a man of 50 kilogrammes weight, about the average of natives of India, and you will see that the amounts are very large except in the case of the common cobra. Further, we must know how many lethal doses the different snakes eject at a single bite on an average, as well as the limits within which they vary, but even here the data available are incomplete and even contradictory. Thus, D. D. Cunningham, working in Calcutta, a home of the cobra, gives the average amount for this snake at 0·254 gramme, while Lamb quotes Calmette as placing the amount at *from* 0 030 to 0 045 gramme, or about one-sixth *to one-eighth* of Cunningham's figure. In the case of the enhydrina I obtained an average of 0·010 gramme, or about four lethal doses for a man, judging from its effects on birds and rabbits. In column 7 the amounts of serum required to neutralise in vitro the average amount ejected by different snakes is entered, the doubtful ones being placed in brackets, and it will be seen that the amounts are very large, while if injected after the venom they would be still larger. It is clear, then, that the serum must be made much stronger if it is to be relied on to save patients who have received full doses of any of these venoms. If sufficient is given to neutralise all but a little less than one lethal dose the patient would be saved, so that theoretically the dose of serum can be reduced by an amount equivalent to a little under one fatal dose, but in practice it could not be cut so fine, while it is advisable to prevent all symptoms by fully neutralising the whole of the venom received

In view of the conclusion just arrived at I think that wherever possible such serum as is available should be injected intravenously so as to obtain the fullest and most rapid action possible. In colubrine poisoning its use should never be neglected as we cannot know the dose injected by the snake and whether the serum available may not suffice to reduce it below a fatal dose, especially if combined with a method of destroying much of the venom locally, which I shall describe to you presently. I think also that it may be possible to obtain a more generally powerful antitoxin by using in its preparation a mixture of the different purely colubrine venoms. Artificial respiration may also be of great value in keeping the patient alive while medical aid or antivenine is being sent for; one case is on record where life appears to have been saved by this method of treatment.

Viperine Poisons.

I have already mentioned that hitherto the main action of the viperine poisons has been considered to be their effects on the blood but that my observations of the last few months have led me to the conclusion that the blood changes are altogether secondary in importance to the failure of circulation by paralysis of the vaso motor centre. It will then be most convenient in the case of these venoms first to consider their effects on the blood and to see if they are sufficiently constant and extensive to account for the symptoms and lethal effects observed and subsequently to deal with their action on the nervous system and with their antidotes.

Action on the Blood.

On the coagulability.—The first point I have to draw your attention to is the marked difference between the action on the blood of the daboia Russellii, a true viper, and of the rattlesnake, a pit viper, the two vipers which have been hitherto most carefully investigated. In the case of the daboia it was suggested by C. J. Martin and shown by Lamb that, in small animals at any rate, the most marked action is the production of intravascular clotting, causing rapid death with violent convulsions. On the other hand, Weir Mitchell and Reichart found that a total loss of clotting power of the blood accompanied by *hæmorrhages* was the essential feature of rattlesnake poisoning; they considered that it also had a marked action in paralysing respiration. Flexner, who has recently made a careful study of the blood changes caused by the rattlesnake, lays stress on the absence of intravascular clotting. This apparently opposite action is, however, largely a difference of degree, for when thrombosis is produced by daboia venom the remaining unclotted blood has usually entirely lost its coagulability, as in rattlesnake poisoning. D. D. Cunningham showed that if repeated small doses of daboia venom, each insufficient in itself to cause *death by thrombosis*, are injected subcutaneously, then no intravascular clotting takes place, but on the contrary the negative phase of reduced coagulability is produced as in rattlesnake poisoning. I have fully confirmed this important observation and have found further that rapid death from circulatory failure without any intravascular clotting can be readily and constantly produced by first giving small do either subcutaneously or intravenously, and after a t larger doses by either method of administration. T significance of these observations lies in the fact that in t case of such large animals as man intravascular clotting h not been found to occur, but only a loss of clotting a hæmorrhages.

That the difference between the action of daboia a rattlesnake venom on the blood is one of degree rather th of kind is confirmed by some results which I have obtain in the cases of the African puff adder (for the venom which I am indebted to Dr. J. W. W. Stephens) and of Indian representative of the rattlesnake—namely, trimensurus anamallensis (for which I am indebted to Dr. Dowson), the physiological action of which has not, so far I am aware, been previously investigated. The puff add venom, whether administered subcutaneously or intr venously, may cause intravascular clotting like the dabo but it is more easily prevented by a single small prelimina dose than in the case of daboia poison, and in that ca complete loss of coagulability alone results. Again, in t case of the trimensurus venom I have obtained still mo remarkable results, for in small doses intravenously loss coagulability without any thrombosis was produced, as the rattlesnake, while larger doses caused immediate int vascular clotting of a rapidly fatal nature, as in dabo poisoning. These differences evidently depend solely on t rapidity with which the poison enters the blood, a precisely parallel results are obtained when Wooldridge "tissue fibrinogens" are injected intravenously. It is clea then, that there is no essential difference in kind in t action of viperine poisons as a class on the coagulability the blood, but only a difference in the *amount* of t thrombosis-producing element in the different venom the daboia containing the largest proportion and pr ducing the most marked clotting, and the rattlesnake t least, while the puff adder and trimensurus are intermedia gradations between the two extremes.

Hæmorrhagic action.—The next most important action the viperine poisons on the blood is the production petechial hæmorrhages, more especially in the mesentery an other parts of the peritoneum, the peri- and endo-cardiu especially of the left ventricle, more rarely in the pleura, an *always at the seat of injection into the tissues.* Here, agai different degrees of the effect are produced by the variou venoms which I have investigated. They are far the mos marked in the case of the rattlesnake, while they are almos *absent in fairly rapid* poisoning by the daboia even wher there is no intravascular clotting. After intravenous injectio of a fatal dose of rattlesnake venom I have seen marke hæmorrhages at the end of 15 minutes, while when watchin the circulation in the mesentery the passage *of red* corpuscle into the tissues outside the vessels can *be seen* within a few minutes following the very marked vaso-*dilatation* of the portal system The pericardium may also contain a blood stained effusion within an hour of the injection of the poison. Flexner has recently attributed this phenomenon to a dissolution of the endothelial cells lining the vessels. On the other hand, in acute daboia poisoning with death from circulatory failure without any intravascular clotting such hæmorrhages are usually entirely absent, although I have occasionally seen slight petechiæ in the endocardium of the left ventricle similar to those occurring in rattlesnake poisoning. Here, again, I have found intermediate degrees in other vipers, for the puff adder venom, although this is a pure viper like the daboia, produces very marked petechial hæmorrhages only second in degree to those of the rattlesnake, while the trimensurus, although a pit viper, causes less marked hæmorrhages than the rattlesnake or the puff adder but greater in degree than those of the daboia, so that here again we have a regular gradation running through the viperine venoms, only the lesser degrees are not peculiar to the true vipers or the more severe ones to the pit vipers.

Hæmolytic action.—In all four of the vipers dealt with a fairly marked hæmolytic action was met with, for if the incoagulable blood obtained after death be allowed to stand in a test-tube for a day the corpuscles will sink and the serum remaining above will be found to be blood-stained. Lamb has studied this action and concludes that it is more marked in the body than in vitro, but in any case it is much less than that produced by cobra venom and it is certainly of very slight importance as a factor in the causation of death by these venoms, especially in the more rapidly fatal cases.

Will the blood changes account for the fatal symptoms?—I now come to the question whether these blood changes will satisfactorily account for the lethal effects of the viperine venoms. In the case of small animals bitten by a daboia or puff adder death is certainly commonly produced by intravascular clotting, but this is not so in the case of rattlesnake poisoning, or in man when affected by either class of viper. In such cases the further question arises: Will the secondary loss of coagulability of the blood accompanied by hæmorrhages fully account for death? That mere loss of clotting power will not be fatal unless it produces uncontrollable hæmorrhages is clear from what we know of hæmophiliacs. Further, cases have been recorded by Weir Mitchell and others in which animals injected with rattlesnake venom showed complete loss of clotting power for several days, accompanied by marked hæmorrhages, yet made a complete recovery, so that even persistent loss of coagulability is not necessarily fatal in these cases. More conclusive still is the fact that with all the four viperine venoms mentioned I was able repeatedly to produce death without any thrombosis and without anything more than a few petechial hæmorrhages, which could not have materially affected the vitality of the animals. Lastly, in one experiment with trimensurus venom the usual well-marked circulatory failure occurred, but after an hour very evident signs of recovery showed themselves and persisted. The animal was killed and the blood was found to be completely incoagulable and petechial hæmorrhages were present, so that recovery, for a time at any rate, was taking place in spite of the persistence of the blood changes produced by the venom. In the fairly rapid deaths without thrombosis, then, it is clear that there is some important factor present other than the blood changes, and our question must be answered in the negative and some more potent cause of death sought for. This we shall find in the circulatory changes already referred to.

ACTION ON THE CIRCULATION.

This has been studied by taking similar tracings to those I have already shown you in the case of the colubrine poisons. First, single lethal doses of daboia venom were injected intravenously and subcutaneously and the expected intravascular clotting followed a few seconds after the direct injection into the blood stream and some minutes after the subcutaneous injection of a much larger dose of the venom, the tracings showing a primary circulatory, quickly succeeded by a secondary respiratory, failure or just the reverse of what occurs in colubrine poisoning.

On reducing the dose a very different and unexpected result was obtained, for when 0·1 milligramme per kilogramme (one tenth of what produced immediate thrombosis) was given intravenously a primary steady fall of pressure occurred eight minutes after the injection, followed quickly by a secondary cessation of respiration and respiratory convulsions such as commonly appear just before death But instead of the heart quickly ceasing to beat the blood pressure rose again rapidly, well-marked Traube-Hering curves appeared, and slow breathing recommenced. A few minutes later the blood pressure suddenly declined once more, although the slow but well-marked pulse indicated that the heart was still beating strongly. On the recurrence of respiratory convulsions the pressure once more rose and Traube-Hering curves reappeared, this sequence of events being repeated no less than five times before the final fatal circulatory failure occurred. Post mortem there was absolutely no intravascular clotting found anywhere, nor were there any hæmorrhages, although the blood was quite incoagulable. Here, then, we have a primary circulatory failure of peculiar character produced by a very small intravenous dose of daboia venom without any intravascular clotting. At first I thought the peculiar curve I have just described might be explained by capillary clotting in the pulmonary circulation, the obstruction caused by which was overcome for a time by the pumping action of the respiratory convulsions. To test this hypothesis I transfused both saline solutions and the fluid blood always found after viperine poisoning through the pulmonary, portal, and systemic circulations from given heights in a series of cases of both daboia and rattlesnake poisoning without any naked-eye intravascular clotting and found that both fluids always passed through readily from a head of only from 30 to 40 millimetres, so that it was evident that there was no capillary obstruction due to clotting or other cause. I therefore proceeded to carry out a long series of experiments with the four varieties of viperine poisons already mentioned in order to ascertain the real nature of the lethal circulatory failure without clotting which was the one important factor which I found to be common to the action of all of them.

In the first place I established the fact that by first giving small doses of daboia venom, either intravenously or subcutaneously, to produce the negative phase of reduced or lost coagulability, followed by a further larger dose by either mode of injection, the primary circulatory failure without any intravascular clotting could always be induced, while it was still easier to get it with the puff adder venom. In the case of the rattlesnake it was always caused by a single lethal intravenous dose and also sometimes with trimensurus venom. This circulatory effect is, indeed, the only important symptom which is common to all four of these venoms; neither the thrombosis nor the hæmorrhages are produced by all of them and the hæmolytic action is of slight lethal importance. Secondly, on testing the effect of these venoms on the heart directly they were found to have no power to slow or to stop its action even in stronger solutions than those which produced circulatory failure when injected intravenously, so that the action of the venoms could not be explained by any direct action on the heart itself.

The remarkable Traube Hering curves, already mentioned, pointed to an action on the vaso-motor centre, so this point was next investigated in the following ways. Complete vaso-dilatation was produced in a dog by cutting across the spinal cord in the cervical region and the circulation was maintained by means of artificial respiration. On now injecting first a small and a few minutes later a large dose of daboia venom no sudden primary circulatory failure was produced, such as occurs in like circumstances in which vaso-dilatation has not previously been produced, while the continuation for some minutes of the pulse showed that the heart also was not paralysed. Again, when a very marked and persistent fall of blood pressure, without any thrombosis, has been produced by a viperine venom, then section of the spinal cord in the cervical region caused no further persistent fall of pressure, showing that complete vaso-dilatation had already been produced by the venom. This was confirmed by the fact that once the Traube-Hering curves (of vaso-motor origin due to the struggles of the affected centre to maintain the blood pressure) had disappeared and a persistent very low pressure had been produced by the venoms, then stimulation of the central end of the sciatic nerve with a strong faradic current failed to cause any rise of blood pressure, proving that the vaso motor centre had been completely paralysed by the venom. Once more the circulation in the mesentery or omentum was watched under the microscope and the portal vessels were seen to dilate very markedly coincidently with the primary fall in blood pressure. The rise of blood pressure on the occurrence of respiratory convulsions can also be readily explained by the mechanical aid afforded to the circulation by the contraction of the diaphragm and other muscles emptying the dilated portal and systemic vessels and driving the blood on to the empty heart and possibly assisted by stimulation of the failing vaso-motor centre by the venous blood produced by the previous cessation of respiration Lastly, I have been able to demonstrate the dilatation of the portal circulation coincidently with the fall in the general blood pressure by means of simultaneous tracings of the carotid pressure and of the variations in the volume of a loop of small intestine (the ends of which had been ligatured) placed in an oncometer connected with a recording apparatus. If the fall of general blood pressure was of cardiac origin the lever of the oncometer should fall simultaneously with the decrease of the carotid pressure, owing to less blood passing to the intestinal vessels as well as to the carotid artery, but you see from the tracings that with the fall in the carotid pressure the oncometer lever rises rapidly showing a very marked dilatation of the portal vessels and that this rise is already well marked by the time the carotid pressure begins to show itself. The only exceptions to this were when intravascular clotting occurred in the portal circulation, when both levers fell rapidly together. These experiments furnish final proof that the primary circulatory failure is due to vaso-dilatation, while I have already given you some evidence that this paralysis is of central origin. It is conceivable, however, that it might be partly due to a local action on the blood-vessels, especially in view of the undoubted action of some of these venoms in dissolving the lining cells of the small vessels and so causing hæmorrhages. In order to test this Dr. T. G. Brodie very kindly tried the effect of cobra and daboia venoms on the peripheral vessels cut off from the central nervous system, using his perfusion apparatus, and we found that both cobra venom in large doses and daboia venom in very small ones caused marked local vaso-constriction. It is clear, then, that the vaso-dilatation is purely of central origin, occurring in spite of a contrary local action on the blood-vessels.

We arrive, then, at the conclusion that the essential lethal factor of all the viperine venoms tried is the production of a paralysis of the central vaso-motor centre producing a primary circulatory failure, followed by a secondary respiratory failure, due to deficient supply of blood to the medulla.

I should also mention that none of the viperine venoms ever produce any paralysis of the motor end plates of the phrenics or other nerves.

ANTIDOTES TO VIPERINE POISONS.

Calmette's antivenine.—Calmette's serum has no efficiency against the viperine venoms, apparently because he heats for a short time the mixtures of venoms which he uses in its preparation and thus destroys, or very greatly weakens, the small proportion of viperine poison in the mixture. A few observations which I have made support the conclusion that the antivenine is useless against the vipers; its failure against the mixed venom of the banded krait already referred to points to the same conclusion.

Vaso-constricting drugs.—The discovery of the main lethal action common to all the viperine venoms dealt with naturally led me to try how far the primary circulatory failure due to vaso-motor paralysis can be counteracted by such drugs as have a powerful effect in contracting the peripheral vessels, the most important of which is suprarenal extract. I found that 0·1 to 0·5 cubic centimetre of a 1 in 1000 solution of adrenal chloride (Parke, Davis, and Co.) immediately sent up the blood pressure in cats poisoned by viperine venoms, but that if the vaso-motor centre was already completely paralysed (stimulation of the central end of the sciatic nerve no longer causing any rise in pressure), then the effect of the adrenal extract only lasted a few minutes. On the other hand, if there were still well-marked Traube-Hering curves present the effect was much more lasting and powerful. Nicotine, which was suggested to me by Sir Lauder Brunton, in doses of one milligramme for a cat, also had a similar effect in restoring the blood pressure and at the same time it powerfully stimulated the flagging respiratory centre, being superior to adrenal in this respect. Further, some increase of the blood pressure of considerable duration was obtained by means of pressure applied to the abdomen by a binder acting by partly emptying the portal vessels and bandaging the limbs might also assist in a similar way. As, moreover, the venoms of the vipers are much weaker weight for weight than the colubrine venoms (daboia being about ten times as weak as cobra venom) it is probable that the vipers do not often eject much more than one lethal dose for a man. Hence a larger proportion of borderland cases of viperine poisons may be expected to be met with than in the case of colubrine bites and the methods of maintaining the circulation just described may very possibly prove to be of value in saving the lives of some cases which not so treated might prove fatal, so that in the absence of any specific antidote to viperine poisons the above suggestions appear to be well worthy of consideration.

A SIMPLE AND PRACTICAL METHOD OF DESTROYING SNAKE VENOM IN THE BITTEN PART.

Lastly, I come to a practical method of treating any kind of snake poisoning which promises to be of great value in all cases seen early and which might be carried out by any intelligent person if a medical man was not at hand. I have shown you that Calmette's serum is not strong enough to prove efficient against full doses of colubrine venoms, while it is very seldom at hand when wanted and tends to lose its power in a hot climate. It is also useless for viper bites, while the methods I have described of counteracting the physiological effects on the circulation of the latter would not be likely to succeed when very full doses have been injected. If, however, most of the poison could be destroyed locally at the seat of its injection before much of it had gained access to the circulation, then the above metho might prove efficient in dealing with the comparatively sm amount of venom already in the system. Many attem have been made to find some substance which would destr the poison at the seat of injection, the best known of which permanganate of potassium, which Wynter Blyth first show will rapidly destroy the power of cobra venom when mi with it in vitro. But experiments by Brunton and Fay and others, in which strong solutions of this substance w injected at the seat of insertion of the poison, did not pro successful in averting the death of the animals. They ha however, recently suggested a more radical plan of using t salt—namely, first to place a ligature round the limb abo the seat of inoculation of the venom and then to make small incision through the place of injection and to rub pure crystals of the permanganate moistened with a litt fluid, with a view to neutralise as much as possible of t venom before it has had time to be absorbed into the circul tion. At their request I have carried out a preliminary seri of experiments to test this method of using the salt wi very promising results.

In the first place I set to work to find out if the pe manganate will destroy other venoms than that of the cob by mixing from 10 to 20 lethal doses with a fraction of cubic centimetre of a 10 per cent solution of permangana of potassium, enhydrina, bungarus fasciatus, rattlesnak African puff adder, and daboia venoms being tried. Th mixtures were injected into animals after from five to te minutes, with the result that none of them showed any sym ptoms of poisoning except one which had received a ve large dose of bungarus fasciatus venom mixed with less tha its own weight of the permanganate and in this case th animal lived longer than a control with less than one thir of the dose, so that most of the venom had been destroye locally in this instance. It is clear, then, that the salt wi destroy in vitro nearly its own weight of every class of snak venom. Next, rabbits and cats were chloroformed and injected with several times a fatal dose of cobra or daboi venom, a ligature was applied after half a minute, five, o 10 minutes, and the treatment described was carried out, th ligature being released immediately after its completion. I the case of the rabbits only very marked prolongation of life, as compared with the controls with the same doses, wa obtained, owing to these animals being found to be muc more susceptible to the venoms than cats, so that the dose injected into the rabbits were many times a lethal quantity In the case of the cats much more favourable results were obtained, only two out of 12 animals treated having died, one being the first case treated with cobra venom, while the other had received five times a fatal dose of daboia venom (a much larger dose than this snake could inject in the case of an adult man) and the ligature was not applied until after five minutes. On the other hand, recovery took place after 10 lethal doses of cobra venom treated after half a minute from five lethal doses after five minutes, and from three lethal doses after ten minutes; while with daboia venom animals were saved from five lethal doses after half a minute and from three lethal doses after five and ten minutes respectively. I also found that even 30 seconds after the injection of the venoms there was a local extravasation of blood-stained serum present which clearly indicated the position of the poison and the salt was rubbed in directly over this until the tissues were quite blackened. The amount of tissue thus destroyed was quite superficial, while the salt has antiseptic properties. I hope to have an opportunity of carrying out further experiments on my return to India very shortly with fresh venoms and to wait longer before ligaturing the limb so as to ascertain the exact limits of the value of this method. The rapid local effusion which I have just mentioned makes me think that after the first few seconds this pouring out of lymph will very materially retard the rapidity of the absorption of the venoms so that it is possible that even half an hour or more from the time of the bite a considerable proportion of the venom may still be unabsorbed at the site of its injection and so may still be destroyed by the treatment suggested, and it is obvious that if this can be done at any time before a fatal dose has entered the circulation life will be saved and in any case the chances of success with the other methods of treatment will be greatly enhanced. That the absorption of a subcutaneous injection of snake venoms is very slowly completed is shown by the fact that one milligramme per kilogramme of cobra venom in a cat will kill in a few minutes when injected intravenously, yet the same dose takes from 24 to 48 hours to cause death when injected subcutaneously. When a very large dose, such as 50 times a lethal amount, is injected subcutaneously into a dog's tail and this member is cut off inside the seat of injection within a few seconds the animal will still die, as shown by Fayrer years ago. The reason is that one fatal dose may be absorbed out of such a large quantity within a few seconds. In the case of man, however, such a relatively large dose can never be received, so that there is much longer time for action, how long can only be determined by further experiments on animals. Nevertheless, I think that the results I have given you are sufficient to warrant the use of this method in practice, especially as it is efficient against all kinds of snake venoms. At the suggestion of Sir Lauder Brunton an instrument has been made consisting of a lancet covered with a sheath, in a small space at the base of which permanganate crystals are kept, the whole being but one and a half inches in length, so that it can easily be carried in a corner of the waistcoat pocket always ready for instant use. This will shortly be sold at a very low figure so as to bring it within the reach of even the poorest classes in India and elsewhere.

In conclusion, I have to express my best thanks to Dr. A. W. Waller and to Dr. T. G. Brodie and Dr. N. H. Alcock for much very valuable advice and assistance in the course of my researches here.

Some Observations

ON

MEDICAL EXAMINATIONS FOR LIFE ASSURANCE.

Being the Presidential Address delivered before the Life Assurance Medical Officers' Association on Jan. 27th, 1904,

BY SIR DYCE DUCKWORTH, M.D. EDIN., LL.D.,

PRESIDENT OF THE ASSOCIATION; PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL.

GENTLEMEN,—The honour which you have conferred upon me in electing me to the presidency of this society is one which I fully appreciate and I can do no more than try during my term of office to emulate the efforts of the distinguished men who have preceded me here. It will not be contested that during the few years of the existence of this association the work already accomplished in it has fully justified the expectations of its originators and earned credit from all who have taken part in it. The association is truly representative of a large body in our profession which before our foundation was loosely, if at all, bound together and devoid of any means of conference. There was abundant experience at hand, all unrecorded and lost as time passed on, but there was no organised body of reapers to gather in the harvest of it. We are now engaged in utilising this experience for the benefit of the general public as well as for ourselves. We constitute no kind of trade union here but we bring the best traditions of our catholic profession to bear on all our relations with the public and the several bodies which we represent or act for. The results of our efforts here are, I repeat, for the general credit and benefit of the different life assurance associations which we serve, and they assuredly tend to more exact and uniform performance of our duties.

I have long been of the opinion that the habitual examination of lives for assurance purposes constitutes one of the most useful and thorough methods of training for the daily work of the clinical physician. Such work is a constant check upon mere routine Each case presents a new problem and requires the full appreciation of the personal factor which is so necessary, and, alas, not always observed, in practical medicine. It is a daily study in physiognomical diagnosis—a subject too little taught in our schools in these days. It tests and sharpens our wits in framing prognosis. Again, how great is the advantage of reviewing, as we often have to do, the perfectly normal and healthy bodies of our candidates. We have so constantly the frail and the abnormal before us that we do well to be often in face of the sound and robust to recall us to the recognition of healthy standards. And here I would make this further remark, that in our daily duties as physicians we are apt, as we gather experience, to think better of many of the frail and abnormal subjects that we encounter and to project for them a fairer forecast than is possible for the average actuary or insurance office director to do. We follow the progress of individuals who present defects and manifest here or there inadequacy of one or more organs of the body, and know how much can be done for them, how they may be protected from their untoward tendencies, and how much recuperation is to be hoped for. But while we sometimes feel perplexity from this source we are bound to have regard to the business side of the transaction which is in progress in each case and to look at it from the view of men of business with large responsibilities. This calls often for the nicest determination and it is for us to form clear and decided opinions which we must be prepared firmly to stand by.

It must be confessed that we are sometimes startled by the confident opinions which are formed upon the facts disclosed in the papers which come before us, cases being placed in a category of excellence which is in no way justified. Such opinions emanate at times from men of good position in the profession and not only from inexperienced examiners. They are largely due, as I believe, to the habit of filling up papers assiduously without due regard to the facts set down and to the dangerous habit thus entailed of disregarding the manner and aspect of the individual under examination. When the questions were fewer and less searching it was formerly the practice to pay closer attention to the examinee and thus to see into the real inwardness of the individual. We must not be slaves to the papers only. And here I would remark that some of these are over-elaborated and almost absurd, especially in the case of the American offices Those of the best British offices are, I consider, all that they need to be and any requirements beyond those laid down in them will tend to error rather than to exactitude for the reasons I have just mentioned.

Some of the most profitable discussions that we have had related to the subjects of albuminuria and glycosuria and we have learned better how to gauge such symptoms. The former subject, I may mention, received masterly treatment from the late Professor Stokvis of Amsterdam in a communication to the Congress of Life Assurance Medical Officers held at the Hague in 1901 and it left little or nothing to be added to the problem. Each of the conditions just mentioned calls for the greatest skill and experience in dealing wisely with them and we are now better than ever qualified to frame prognoses respecting them. We have discussed many other conditions causing anxiety to us in our duties. Amongst these are tuberculosis and the malign influence of alcoholic intemperance. As you are aware, the latter subject comes before us to-night [illegible] one who is well equipped to speak [illegible] we welcome the presence of a [illegible] advocate of temperance in the [illegible]irman of the United Kingdom Temperance and General Provident Institution, who does us the honour to unfold his views before us. For myself, I maintain the views impressed upon me as a clinical physician in respect of the employment of alcoholic liquids for both the healthy and the sick, and I am anything but a *persona grata* to those who inculcate total abstention for everybody. The opinions which I hold and teach are derived from full experience, without any bias in the matter, and with an equally full aversion from the degrading and devilish vice of intemperance in any degree whatever. As hospital physicians for the most part we know too well the ravages wrought by misuse of alcohol in all forms, but we also know well the beneficial uses of it which as honest and level-headed men we are bound to recognise and avail ourselves of in practice. No statistics should shake our convictions or efface our carefully gathered experience in regard to this matter. They will most certainly not shake mine.

We take note of a recently adopted practice in respect of life assurance business whereby lives are now accepted, as is alleged, without any medical examination. It may be surmised that in pursuit of this method more than ordinary care is exercised in considering the fitness of such lives for acceptance and that in conducting this class of business directors take good care to be fortified as far as possible by the opinions of their medical officers in each case. This practice appears to me to be both precarious and troublesome and is certainly designed to attract persons who have no just claim for exemption from the ordinary and proper examination. It probably has its origin in the same causes which so gravely affect the conduct of all business transactions in these days, to wit—hurry, pressure, and furious competition. I venture to believe that this association cannot but discountenance this scheme as little, if at all, justifiable on any merits which it may appear to possess. It does not materially concern any of us and indeed is no business of ours. But we are entitled to our own opinions on the matter. Where we are concerned our duties are made plain for us. We have always to be careful, shrewd, and tactful. We have to be precise and accurate, to do our best for each case, never to be hurried in our work, and to maintain our complete independence. May such principles guide all of us in our daily life assurance work and may our proceedings and efforts here win further triumphs for this important branch of our professional duties.

Some Remarks

UPON

THE MIDWIVES ACT IN ITS BEARING UPON THE WORK OF GENERAL PRACTITIONERS.[1]

BY PERCY ROSE, L.R.C.P. LOND.

THE Midwives Act, 1902, which depends for its successful working on the occasional coöperation of the medical profession, nowhere states who is responsible for the payment of services rendered in connexion with that Act nor what pecuniary value is to be attached to those services. Formerly, while some medical practitioners have flatly refused to attend a midwife's case on any condition, others would give assistance, charging a full fee, or a modified fee, and very often receiving neither. The parish medical officer by reason of the necessary preliminary formalities was but seldom called in. The position of medical practitioners to midwives is distinctly altered by this Act. The midwife now is a different woman. Formerly the practice of the large majority of midwives was guided solely by tradition and cleanliness was optional. Now the Act insures that midwives shall have had some training and experience and any want of cleanliness on the part of the midwife may lead to her suspension by the local supervising authority (Rule F. Central Midwives Board and Midwives Act, Sec. 8, 3) and possibly the removal of her name from the midwives roll (Sec. 3, v.). The reputation of medical practitioners, therefore, who come to the assistance of midwives is now not so likely to be involved in the discredit of a case which has gone to the bad by previous incompetence and dirt.

Having rendered assistance the medical practitioner can only ask for payment from the patient, the midwife, or the public through one of its representative bodies. To look to the patient will in the majority of cases be hopeless. The fees earned, for reasons to be stated later, are above the average medical fees; the patients will certainly belong to the poorer classes, for though this Act was conceived in a West-end drawing-room the women of the West end will be the very last to employ midwives. It is certain that the patient will not be in a position to pay. It would be both absurd and disagreeable to have to look to the midwife for payment and her name is only introduced because some patients consider her responsible for the medical man's fees. The logical but ungrateful husband has already said to the medical man asking for payment: "I shall not pay you. I did not send for you. The midwife sent for you and she must pay you. Besides, if she could not manage the job herself she should not have taken it on." It must be remembered that the parliamentary representatives of the public pushed forward and carried this Act in opposition to the opinion of the majority of the medical profession and that, therefore, the medical profession could disclaim all responsibility for the working of the Act. What now happens is that when certain very well defined abnormalities occur in a midwife's case the midwife by law has to fill up a printed form in duplicate to the effect that the patient "requires medical assistance *at once* on account of," &c. The time of sending the message is recorded in the form and signed by the certified midwife. The medical man receives the requisition, "at once" stares him in the face, and he starts off probably knowing nothing of the patient's pecuniary position and leaving his payment absolutely to pure chance. On his entering the room the midwife pulls out her watch and probably notes the time of the medical man's arrival. A copy of the requisition with the name of the medical man called upon is also forwarded to the local supervising authority and supposing the medical man doubtful of payment does not attend it would not be pleasant for any medical practitioner to have his name publicly served up to his town or county council as refusing medical assistance. The public must see to it that it does not occur.

To insure the successful working of this Act the coöperation of the medical profession and of the public is necessary. If the public wish the medical profession to do the work they must see that the profession are paid. The public guarantee that these midwives are reliable, they guarantee also that if medical help is required the midwife will send for assistance; they must also guarantee the payment for that assistance. This must be done through one of its representative bodies. The Poor-law authorities rightly have many rules and restrictions before they allow expense to be incurred on this behalf. The relieving officer has first to be found, and he may take some finding, before a medical order can be obtained. A Poor-law medical officer without a medical order attends at his own risk and afterwards may have to fight for his money, particularly as these midwives' cases may not be paupers or even poverty stricken. The Central Midwives Board or any central Government department is too far removed from the scene of the active work done to make suitable or efficient "checkers" or paymasters. It is the local supervising authority that everything points to as the most suitable body. The local supervising authority is in most cases the county or town council. These councils are already in touch with all the medical men of their respective districts. They now receive all notifications of infectious diseases, including puerperal cases, and they are in the habit of asking the assistance of all the medical practitioners and issuing circulars from time to time to them on prevailing epidemic diseases; also, they are in close touch with the midwives, inspecting their case books, bags of appliances, &c., and even inspecting their very home. They know the medical men and they know the midwives, and it is to the local supervising authority that the midwives have to send within 12 hours a copy of their requisition for medical help. No other public body is so well placed to deal with these cases. They see the requisition, they know the people, and in the interests of the public they should, if desirable, be able to secure a fuller report from the medical practitioner. In the same public interest they could themselves, or through the local sanitary authority, inquire into the whole case and deal with any collusion, incompetence, or imposition.

It is impossible to estimate with mathematical accuracy the precise pecuniary value of the various services medical practitioners may be called upon to render in connexion with this Act. An average must be taken and the best devised scheme will only be a compromise founded on precedent and common sense. The closest precedents are the fees of 3s. 6d. or 7s. 6*d*. paid by the police for medical aid and the fee of

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[1] Being the substance of the opening speech at a discussion by the Plaistow and Canning Town Medical Society, Jan. 21st, 1904.

£2 paid by the guardians in difficult labour cases. Our ordinary minimum visiting fee of 2*s.* 6*d.* and confinement fee of one guinea cannot apply here In the first place these midwives' calls are emergencies and "at once" is printed on the requisition form. Therefore a special fee is justified. Secon[illegible] the average case, [illegible] es have only to se[illegible] h a medical practitioner forewarned would not accept at an ordinary fee. In some cases the fees, according to the subjoined scale, might appear to be easily earned, but in others, such as eclampsia and dangerous post-partum hæmorrhage, a fee of £5 might be but a poor payment for the work entailed in endeavouring to save life. A distinction is drawn in this scale between those cases where there is time for the patient to make other arrangements for her attendance or for the care of her child and those cases where immediate treatment is required. In the first class payment for a single opinion and advice is asked for. In the second a larger fee, up to £2, is put down which, of course, includes after-attendance up to the tenth day. Every local supervising authority should be asked to guarantee the payment of some such fees when incurred in giving assistance to the cases of certified midwives in private practice. This, of course, does *not apply to the midwifery practice of hospitals or training* institutions.

Subjoined is the list of conditions, copied from Rule E, 17, Central Midwives Board, as examples of circumstances in which the "midwife must decline to attend alone, and must advise that a registered medical practitioner be sent for." For the purposes of this article a suggested scale of minimum fees has been placed alongside.

SUGGESTED SCALE OF MINIMUM FEES.

(*a*) In the case of a pregnant woman:—	
(1) Where she (the midwife) suspects a deformed pelvis, (2) where there is loss of blood; and (3) where the pregnancy [illegible] condition	[illegible] and advice: [illegible] all, 3*s* 6*d.*; [illegible] ht call, [illegible] *s.* 6*d.*
(*b*) In the case of a woman in labour:—	
(1) In all presentations other than the uncomplicated vertex or breech	£2
In all *cases of breech presentation* in primiparæ	£1 10*s.*
In all cases of flooding and convulsions	£2
Also whenever there appears to be insufficient room for the child to pass or when a tumour is felt in any part of the mother's passages	£2
(2) If the midwife when the cervix has become dilated is unable to make out the presentation	Opinion and advice day call, 3*s.* 6*d.*; night call, 7*s.* 6*d.*
(3) If there is loss of blood in excess of what is natural, at whatever time of the labour it may occur	*Up to £2.*
(4) If an hour after the birth of the child the placenta has not been expelled and cannot be expressed (that is, pressed out), even if no bleeding has occurred	Manual removal, 10*s.* 6*d.*, in addition to the day or night fee of 3*s.* 6*d.* or 7*s.* 6*d.* Instrumental, £2.
(5) In cases of rupture of the perineum or other serious injuries of the soft parts ...	Operation £1 1*s* in addition to the day or night fee of 3*s.* 6*d.* or 7*s.* 6*d.*
(*c*) In the case of lying in women and in the [illegible] Whenever [illegible] he woman [illegible] but in all [illegible] the sub- [illegible]	
I. The mother:—	
(1) Abdominal swelling and signs of insufficient contraction of the uterus... ...	Day, 3*s.* 6*d.*; night, 7*s* 6*d.*
(2) Foul-smelling discharges	£2.
(3) Secondary post partum hæmorrhage ...	£1 1*s.*
(4) Rigor	£2.
(5) Rise of temperature above 100·4° F. with quickening of the pulse for more than 24 hours	£2.
(6) Unusual swelling of the breasts with local tenderness or pain	Day, 3*s.* 6*d.*; night, 7*s.* 6*d* Operation and dressings, £1 1*s.* in addition.
II.—The child:—	
(1) I[illegible] eyes, eyelids, and [illegible]; (5) syphilitic appearance of the skin in certain parts; (6) illness or feebleness arising from prematurity; (7) malignant jaundice (icterus neonatorum); (8) inflammation about the umbilicus (septic infection of the cord)	Opinion and advice day, 3*s.* 6*d*; night, 7*s.* 6*d.*
(*d*) In all cases of the death of a woman during pregnancy, labour, or lying-in	Inspection: day, 3*s* 6*d.*; night, 7*s.* 6*d.*

Anæsthetist (if required), not being the assistant or employer of [illegible] paid according to the time [illegible] 10*s.* 6*d.*; over 30 minutes, £1.

In country districts mileage to the nearest available medical man to be taken into account.

Barking-road, E.

THE SURGICAL TREATMENT OF PERIGASTRIC ADHESIONS.

BY E. PERCY PATON, M.D., M.S. LOND., F.R.C.S. ENG.,
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THE surgical treatment of diseases of the stomach has come very prominently before the profession during the last few years and it has been found possible to give relief to many patients who had previously been the subjects of dyspepsia incurable by other means. Among the various causes amenable to operative treatment may be mentioned adhesions between the stomach and some other neighbouring organ. Although this cause is not forgotten by those who have written on gastric surgery it does not seem always to have received that attention which its importance in some cases deserves, for as operative experience accumulates it becomes more and more evident that in certain cases adhesions, and they alone, may be the cause of abdominal pain and digestive disturbances of a more or less severe kind, when all other disease of the stomach has been for a long time a thing of the past. Some idea of the frequency with which adhesions about the stomach may be expected to be present may be obtained from the following figures. It has been shown by post mortem records that in about 5 per cent.[1] of examinations evidence of an active ulcer of the stomach or a scar of an old one is present; it is also stated by Fenwick[2] that in 40 per cent. of such ulcers there are adhesions, so that these figures seem to show that in about 2 per cent.[3] of persons adhesions will be found to be present if the gastric region be carefully examined after death. Of course, here, as in other regions of the abdomen, for example about the appendix, it is only a small residuum of cases in which any symptoms arise in connexion with these adhesions. The following causes may be assigned for these perigastric adhesions in addition to ulceration of the stomach and duodenum. gall-stones in the gall-bladder or in the common or cystic bile duct, traumatism, malignant disease, pancreatic disease, umbilical hernia,[4] and possibly tubercle and syphilis. Of these various causes, however, only those [illegible] or duodenal ulceration or of [illegible] e at all common and, speak[illegible] h from a practical point of [illegible] e situation of these adhesions is of some importance and it has been found by Fenwick[5] that in 123 cases the adhesions were to the pancreas, the liver, or to both these organs in 92 cases; in the remaining 31 cases the stomach was attached to the colon, the liver and colon, the spleen, the mesentery, or to three or more organs at once. Adhesions to the anterior wall seem to have been absent in all the abdomens he examined. The situation of the adhesion is important in view of what appears to be the fact that when symptoms are due to adhesions only it is usually in cases where the attachment is to one of the more mobile organs, and so is more likely to be dragged upon, that these arise. The nature of the connexion with other parts may be roughly classified into two varieties: (1) those in which the attachment is close and the connexion broad and covering a wide area, in which case the organs to which it is usually fixed are either the liver or the pancreas; or (2) the adhesion may be long and slender, or cord or wire-like, this variety being more usual to the colon, gastrohepatic omentum, gall-bladder, or to the anterior abdominal wall; this last point of attachment, however, is not at all common.

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[1] Bird. [illegible] Dec. 20th, 1900.

A very unusual variety of fixation is that which occasionally occurs to the anterior abdominal wall, forming with the infiltrated stomach wall and the thickened abdominal parietes a marked abdominal tumour which may easily be mistaken for a new growth. The condition has been described as one of plastic perigastritis, and such cases have been put on record by Billroth,[6] Mikulicz,[7] Fenwick,[8] Terrier,[9] Hofmeister,[10] and Mayo Robson,[11] and they have even been treated with success. The production of these extensive adhesions may not improbably be caused by a local perforation of the stomach, the extravasation having been limited by adhesions; the result has been the setting up of a chronic inflammation producing infiltration of the abdominal wall as well as the surrounding parts and so causing the mass which could be felt. In several cases the mass has been thought to be malignant disease until operated upon and the microscopic finding and the ultimate result of the case have shown this to be an error.

The changes which the stomach may undergo as the result of its attachment to other parts may be very marked or they may be slight. The pylorus may be very narrowed by adhesions which when separated allow it fully to attain its normal lumen. In the one or two cases that I have seen this has usually been the result of antecedent trouble in the gall-bladder, though I have seen a similar condition apparently due to a healed gastric ulcer. In other cases described the stomach has been nearly divided into two parts about its middle by an adhesion and has returned to its normal shape on the division of a simple band, as in a specimen described by Fenwick. It is in such cases that the best results may be expected from operation. Other effects produced are dilatation by traction or interference with the motility and power of contraction of the organ, or possibly by the prevention of contraction of an ulcer, which may by this means be hindered from healing. As, however, in the last-mentioned condition of parts the adhesion will be in the great majority of cases on the posterior aspect of the viscus, and to such an organ as the pancreas, there will be little likelihood of surgery being of any use here by division of the adhesions, though relief may sometimes be given to the symptoms to which the adhesions give rise by a gastro-jejunostomy, as will be mentioned later.

The history of cases suffering from trouble due to adhesions is usually a long one and many varieties of treatment have been tried only to find that no relief has been obtained. The symptoms which the patient finally complains of have not infrequently been preceded by those which are more characteristic of gastric ulcer or gall stone colic These more acute symptoms have passed off and have left the chronic trouble upon which no treatment seems to have more than a very temporary effect. Of this residual trouble pain is the most common and characteristic symptom. Sometimes this pain is almost constantly present to a greater or less extent; in other patients it is only present at times. One of its most marked features is the way in which this pain is not infrequently almost confined to one location; it is also of very variable severity, being sometimes so bad as to double the patient up, at other times and in other cases only amounting to very considerable discomfort. It is not infrequently not at all influenced by taking food, indeed in some patients eating seems to relieve the trouble, possibly by filling the stomach, so that the fixing band is no longer dragged upon. It is not uncommonly greatly influenced by the position of the patient, lying down sometimes giving very great relief; perhaps in such cases the adhesions which fix the stomach are only pulled upon in the erect posture. Exertion of a more or less violent character seems in some persons very liable to bring on the pain, sometimes quite suddenly and in great severity. Occasionally the pain is much relieved by firm pressure over its seat or by tightly bandaging the abdomen, in which case it bears some resemblance to that caused by enteroptosis. Local tenderness to a greater or less extent is a very frequent, indeed it appears to be an almost constant, feature of the trouble; this tenderness is sometimes confined to quite a limited area, which area may be the chief seat of the pain, though this is not always so. The points above referred to with regard to the pain are well described in two papers, one by Caldwell[12] and the other by Bird,[13] to which reference will again be made in connexion with the cases which will be cited. Vomiting does not seem to be very frequently present, though it is occasionally troublesome; it usually seems to occur at irregular intervals and for no very special cause that can be discovered; it may or may not bring relief to the pain. The sickness in typical cases is not usually severe enough to interfere to any great extent with the general health of the patient. In those cases in which the adhesions connect the stomach and gall-bladder jaundice may occur and may be persistent for a long period, as in one case of mine, but as a rule it is only a fugitive condition coming and going in an irregular manner. A very noticeable feature is commonly the very slight influence that careful dieting seems to have on the pain and discomfort; this in itself is suggestive of the true cause of the trouble, as in most digestive disturbances some relief can usually be got by careful feeding, even if the case cannot be cured in this way. It is also noteworthy that in spite of the long continuance of the trouble the general health as a rule does not suffer to the extent that might be expected; there are, however, not infrequently exceptions to this statement. Physical examination will as a rule reveal nothing beyond the tenderness to which reference has already been made; the gastric juice is normal and there are in general no signs of gastric dilatation. At other times, however, evidence can be obtained of an increase in size of the organ and this may be very marked and is due to some interference with the motility of the viscus or to some narrowing of the pylorus or narrowing of the stomach at some other situation. Local areas of dulness have been described as occurring in this trouble, but this must be very uncommon, for as a rule there is nothing present that can give rise to this dulness. In the rare cases in which a tumour is present this may be of considerable size and be so firm to the feel as to lead irresistibly to the belief that the trouble is malignant with possibly some adhesions to the anterior abdominal wall in addition In such circumstances the age of the patient, and more especially the long continuance of the illness without a very serious influence on the general health, will be of very great use as an aid in arriving at a correct opinion as to the nature of the trouble.

A careful consideration of all the features of any particular patient's troubles may lead to the conclusion that these troubles are almost certainly due to adhesions, but in most cases only a tentative diagnosis can be made which will be sufficient to warrant strongly urging an exploratory operation on a patient who has been for, perhaps, a very long time a sufferer from the symptoms detailed above without obtaining any relief from medicine and dietetic treatment. The following cases illustrate this condition; of these, the first four were under my own care or observation, while reference is given to the sources from which the others are taken.

CASE 1.—A woman, aged 30 years, had suffered on and off for several years from pain and discomfort in the upper part of the abdomen, a little to the right of the umbilicus being its main seat; this pain was of a gnawing character and did not seem to have any direct reference to food though care in diet assisted the trouble to some slight extent There were no vomiting and no evidence of dilatation of the stomach; there had never been any jaundice. There was nothing to be felt in the abdomen but there was a little tenderness a little below and to the left of the region of the gall-bladder. There was no wasting and the general health, except in so far as it was interfered with by the pain, was fair. The patient was, however, obviously rather neurotic. An incision was made over the seat of the pain and nothing abnormal was found save a few thin adhesions between the pylorus and the liver and the gall-bladder which were separated; the organs themselves seemed in every way normal. The interference greatly relieved the patient's troubles.

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[6] Billroth. [illegible] p 803

[7] Mikulicz Deut[illegible] 1892, No. 49.

[9] Terrier. [illegible] p 676.

[10] Hofmeister: Beitr[illegible] Chirurgie, vol xv., 1895, p. 351.

[11] Mayo Robson: Brit. Med. Jour., vol. i., 1903, p. 951.

[12] Caldwell: Brit. Med. Jour., 1899

[13] Loc. cit.

CASE 2.—A man, aged 48 years, had for years suffered from dyspepsia which had rendered him unable to do his work as a clerk on account of the attacks of vomiting and pain to which he was subject; the pain in this case was certainly aggravated by want of care in diet and relieved, though not cured, by careful feeding. On examination there was nothing abnormal to be felt in the abdomen but the stomach was found by percussion to be somewhat dilated. He was carefully treated by dieting and washing out the stomach for some time and was by this means considerably improved and went out of the hospital only to return shortly as bad as ever. During treatment he put on weight but as soon as this was stopped he again began to lose weight. He was readmitted and the abdomen was opened in the middle line; the stomach was found to be somewhat, but not very markedly, dilated, the pylorus was firmly adherent to the under aspect of the liver, and these adhesions caused a considerable narrowing of its lumen. The cause of the adhesions was an old ulcer of which a scar could be felt, but the narrowing seemed clearly to be due to the adhesions and not to the scar. As it seemed certain that if the adhesions were separated they would be sure to re-form a pyloroplasty was performed; this entirely relieved the patient's symptoms for the time, though five months later he began to have some recurrence of a milder sort than had previously been the case. Possibly it would have been better to perform a gastro-jejunostomy for this man in the first instance, but if his troubles should recur further it is proposed to do this then.[14]

CASE 3.—A woman, aged 51 years, had been subject for some years to attacks of violent pain in the epigastrium which lasted for a few hours and then disappeared; they were usually accompanied by vomiting. For the last year she had been jaundiced more or less and she had been losing a little flesh, but not to a marked extent. On examination she was markedly jaundiced. There was nothing to be found abnormal except in the abdomen which was distinctly tender in the epigastrium under the right rib margin; here, too, was to be found a patch of dulness extending down towards the umbilicus; the fæces were clay-coloured. The case was thought to be one of gall-stones and an incision was
was at once
to the stoma
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could be explored thoroughly but they were found to be clear of stones; the gall-bladder was not distended; the abdomen was therefore closed, only adhesions having been separated. The patient, after causing some anxiety for a day or two owing to the fact that she vomited a good deal and that there was a considerable amount of blood in the vomit, did very well; she gradually lost her jaundice and never had any more attacks of pain. I saw her a short time ago, eight years after the operation, and she is still in good health and with no return of her previous troubles.

CASE 4.—This case seems to show how, at any rate in some cases, the pain of malignant disease of the stomach may be due to adhesions. A man, aged about 50 years, was sent to me by Mr. J. R. Johnson of Richmond on account of pain in his abdomen. He had been gradually losing flesh and his medical attendant and I both agreed that it was almost certain that he had malignant disease of the cardiac end of the stomach as the pain was seated in this region and it was doubtful if a mass could not be felt there. The man was told that nothing could be done for him but an operation and that it was in the highest degree improbable that this would do him any real good; but he was very anxious to have anything done that offered him the least prospect of relief from his pain. The abdomen was opened in the middle line and it was at once found, as was expected, that there was a considerable mass of malignant disease extending up under the left rib margin; there were also some adhesions to the anterior abdominal wall; these were separated and the abdomen was closed. The patient ultimately did well in spite of a very sharp attack of pneumonia, the interesting point for the present purpose being that from the time of the operation to the time of his death about two months later he had no return of the severe pain to which before the operation he had been subject. It seems likely that this had been due to the pulling on the adhesions though, of course, it is well known that merely opening the abdomen will sometimes relieve the pain of a patient with abdominal new growth when no adhesions have been separated.[15]

F. D. Bird[16] relates nine cases which were under his care and in which the symptoms were entirely relieved by the separation of adhesions. The following is a brief summary.

CASES 5, 6, and 7.—Three patients had been chronic invalids for years. They had all at one time had clear symptoms of gastric ulcer; this had left them with chronic pain which incapacitated them from working; they were found to have adhesions fixing the posterior aspect of the stomach and were practically cured by the division of these adhesions.

CASES 8 and 9.—In two cases there were jaundice and extensive adhesions around the gall-bladder and the stomach, but no evidence of a stone was present at the time; the division of the adhesions also proved satisfactory.

CASE 10.—Another case had in addition to the pain a distended gall-bladder; wire-like adhesions between it and the stomach were divided with complete relief.

CASES 11, 12, and 13.—In three other cases the adhesions were of a wire-like character between the stomach and lesser omentum and in one of them a previous operation had failed to discover these. Bird believes this to be due to the fact that the bands did not become obvious until the stomach was drawn down in such a way as to make them tense and so it was not at all difficult for them to be overlooked. In these cases, too, the result of division of the bands was all that could be desired.

Hale White[17] recounts five cases of which the following abstract may be made.

CASES 14 to 18.—Three occurred in women and two in men. All had been sufferers for a very long time; two of them were very much reduced by their illness and these two died as the result of the operation. The other three were marvellously relieved by the separation of various adhesions which seem in all these cases to have been due to old gastric trouble. He points out that in a patient who has been long the subject of local pain from a cause such as we are discussing the "pain habit" becomes so established that the best result may not be seen at once, even when the cause has been removed, but that time will sometimes show an improvement later. This was clearly so in one of his cases and something of the same sort was noticed in a case that I have heard about from another source.

CASES 19 to 28.—Mayo Robson[18] gives ten cases, five in men and five in women, most of whom had been sufferers for a considerable number of years from gastric trouble of a more or less severe kind. They were all greatly relieved and in most of the cases quite cured by the separation of adhesions around the stomach, but in one case it was found necessary to perform gastro-jejunostomy as the adhesions were too extensive to be separated. The most prominent symptom in general was pain with sometimes vomiting and occasionally jaundice.

CASE 29.—Rosenheim[19] gives a case in a man, aged 27 years. He had been a sufferer from discomfort and pain after almost every meal for a long time. Exertion also gave him epigastric pain. He had a good appetite and was well nourished; the kind of food which he took did not seem to have any influence on the amount of trouble from which he suffered. There was a little ter
He had been carefully treated
At the operation he was found
of the stomach to the liver
these were separated and a complete cure followed.

In a paper by Lauenstein[20] seven cases are recounted of which brief abstracts are given below.

CASE 30.—A woman, aged 22 years, had suffered for a long period from severe epigastric pain and occasional vomiting; the pain was somewhat relieved by pressure over the stomach, but nothing did it really much good and it was only controlled by morphine. An exploratory operation revealed extensive adhesions between the stomach, the gall-bladder, and the duodenum; these were separated and re-adhesion was prevented by inserting a piece of sterile oil-silk between the parts for 48 hours; no cause was found in the organs for the adhesions but she was completely cured of her pain.

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[14] This has since been done with a perfectly satisfactory result.

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[17] Hale White THE LANCET, Nov. 30th, 1901, p. 1471.

[18] Mayo Robson. Transactions of the Clinical Society, vol. xxvii., 1894, p. 1; THE LANCET, Feb. 28th, 1903, p. 570; and Diseases of the Stomach and their Surgical Treatment, p. 222

[19] Rosenheim. Deutsche Medicinische Wochenschrift, 1895, p. 47.

[20] Lauenstein: Archiv für Klinische Chirurgie, Band. xlv., 1895 p. 121.

CASE 31.—A female, aged 30 years, had 15 years before swallowed some caustic fluid, since which time she had been subject to frequent attacks of violent pain, some distension over the stomach with great tenderness, a feeling of fulness, and vomiting. The operation showed adhesions between the stomach and the large and small intestines; division of these resulted in a complete cure.

CASE 32.—A woman, aged 66 years, had at the age of 27 years symptoms of ulcer of the stomach. She had since then been apparently well till the last few years, during which time she had been an almost constant sufferer from epigastric pain, for which she had used a good deal of morphine. She vomited occasionally but there was no loss of flesh. Hydrochloric acid was absent from the vomit. An exploration brought to light an adhesion between the transverse colon and the small omentum, which passed over the pylorus in such a way that its lumen was very much narrowed. On division of this adhesion the lumen of this part of the alimentary tract was restored to normal and the patient was quite relieved. Unfortunately, the trouble recurred in a month or two but the patient was again operated on with success, though when the case was reported no very long time had elapsed since the second operation.

CASE 33.—Early in life a woman, aged 45 years, had been a sufferer from gastric trouble. Since then she had been free until a year previously. She then began to have stomach pain which drug treatment tried for several months did nothing to improve. The pain was of a dull aching kind; the general condition remained good. Bands connecting the stomach and the colon, and also passing between the different parts of the colon, were found and divided, resulting in complete relief.

CASE 34.—The next case is that of a woman, aged 28 years, who had suffered for several years from pain in the back and the stomach which was often so severe as to prevent her from getting about; she also had a good deal of epigastric tenderness; there was no jaundice. Treatment by drugs for six months was tried without result. At the operation many connexions between the gall-bladder, the pylorus, and the colon were divided and some gall-stones were removed and ultimately a cure resulted. In this case it is not at all improbable that the stones were the real cause of the pain and not the adhesions, though Lauenstein does not seem to think so.

CASE 35.—A woman, aged 40 years, had been the subject of pain and tenderness located in the left half of the epigastrium for about 13 years; there was some tenderness over the painful spot and she was sometimes sick. All kinds of medical treatment had been tried with no satisfactory result and she had now taken to morphine to relieve her troubles. At the operation there was found a long band passing from the liver to the anterior abdominal wall and running in such a direction as almost to divide the stomach into two parts; this was divided. There were also some broad attachments of the stomach to the posterior abdominal wall and to the under aspect of the liver but these were not interfered with. The result was quite satisfactory.

CASE 36.—Lauenstein also recounts a similar case in a man, aged 52 years, but this patient was in a much reduced condition at the time of the operation and also had some lung trouble and died shortly after the division of extensive adhesions, so there was no opportunity of seeing if any relief would have resulted. This case is referred to to show that in much reduced subjects the operation may not be devoid of risk.

The six cases of which brief notes will now be given are all examples of the presence of a distinctly palpable mass due to what has been termed plastic perigastric inflammation. The importance of these cases lies in the difficulty of diagnosing them from new growth, more particularly in view of the fact that new growth is common, while this class of case is distinctly rare.

CASE 37.—Hofmeister[21] recounts a case in which there had been long-standing abdominal pain and gastric trouble. On examination of the epigastrium a distinct tumour could be felt but it was thought doubtful if this was in the anterior abdominal wall or whether it was a malignant growth. At the operation it was found to be a mass formed by adhesions of the stomach to the liver, the spleen, and the anterior wall. In separating these connexions the stomach was torn and it became necessary to finish the operation as a pyloroplasty. The patient did well and was quite cured of all gastric trouble

CASE 38.—Billroth[22] gives a case in which for many years a patient had suffered from pain in the stomach and other digestive troubles; a mass was felt in the epigastrium which on exploration was found to be formed by a chronic ulcer of the stomach which had attached itself to the anterior abdominal wall, a considerable inflammatory thickening having formed around it. The whole mass with the ulcer was excised by an operation of considerable difficulty; the patient did well and was completely cured of all his previous troubles.

A case is described by Terrier[23] as follows:—

CASE 39.—A woman, aged 62 years, had been losing flesh and suffering from abdominal pain and occasionally passing blood in her motions for a considerable period. On examination a mass was felt in the abdomen just below the rib margin. An exploration revealed adhesions between the stomach, the liver, and the anterior abdominal wall and also some enlarged glands at the greater curvature of the stomach. The adhesions were separated and the abdomen was closed, the case being thought malignant. A year later the patient was quite well and had put on 10 pounds in weight.

CASE 40.—Terrier describes also an almost exactly similar case treated in the same way in which the patient had occasionally some pain after the operation for about six months and then got quite all right. In this case some of the thickening which formed the mass was removed and was found by the microscope to consist of fibrous tissue only.

CASE 41.—Klausner[24] gives the following description of the case of a servant girl, aged 21 years. Her history was that she had had two attacks like those caused by an ulcer of the stomach, the last being three years before she came under observation. Since the last attack she had never been properly free from pain, but sometimes her attacks were worse than at others and she occasionally vomited, but she did not appear to be at all ill-nourished. On examination there was found to be marked tenderness under the left rectus which was kept somewhat rigid; beneath it was an ill-defined mass the nature of which seemed very doubtful. As it was thought that it might be syphilitic she was treated with iodide of potassium without any benefit. An exploration showed the mass to be due to the inflammation from a gastric ulcer extending to the anterior abdominal wall. The ulcer and the adhesions were excised and the opening was closed. The patient did well and six months later was seen in good health, having lost all her previous pains.

CASE 42.—The last case to be referred to is one by Mikulicz[25] as follows. A servant girl, aged 24 years, had been anæmic for many years but her present illness dated from five months before she came under Mikulicz's care; during that time she had suffered from all the symptoms of gastric ulcer—pain after food, vomiting, with occasionally blood in the vomit, and loss of appetite; she had also lost a good deal of flesh. On examination she was found to be very anæmic and badly nourished; through the upper part of the thin abdominal wall under the left rectus was to be felt a rather tender mass of about the size of a goose's egg. The abdomen was opened in the middle line and the general peritoneal cavity was only entered by prolonging the incision down to the umbilicus; it was then found that the stomach, which was large, was here free from the abdominal wall, but was elsewhere widely attached to it. The attachment was divided with scissors. It was now easily demonstrated by invaginating the healthy stomach wall that in the centre of this mass of adhesions was an excavated ulcer. The whole mass was therefore excised and the gap thus made in the stomach wall was closed with sutures. The patient did well and was seen three months later in good health and completely free from any gastric trouble. Mayo Robson[26] has also just recently published some further cases of a very similar character.[27]

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[21] Loc. cit.

[22] Loc. cit.

[23] Loc. cit.

[24] Klausner: Munchener Medicinische Wochenschrift, 1896, p. 37.

[25] Loc. cit.

[26] Mayo Robson: Brit. Med. Jour., 1903, vol. i., p. 951.

[27] Since the above was written I have had a case under my care in which a palpable mass in the region of the pylorus was present in a

The treatment of these cases resolves itself in the first instance to verifying the diagnosis by an exploratory incision, which, as has been already indicated, should in most cases be strongly recommended to patients with the symptoms which have been referred to above and in whom a fair trial of dietetic, drug, and general hygienic treatment has not proved successful. If adhesions are found they should be carefully separated or divided if this is possible; if none is at first detected the stomach should be dragged downwards and in other directions so as to make visible bands which might, as has been noted by Bird,[28] have been otherwise overlooked. The difficulty now presents itself of preventing the adhesions from re-forming and various methods have been suggested. I think that there can be little doubt that the most important is the absolute exclusion of sepsis, but this may perhaps be taken for granted. It is also of the greatest importance that no antiseptic should be used within the abdominal cavity in the course of the operation; if any fluid at all is to be introduced it should be sterile normal saline solution. The interposition of a piece of omentum between the separated surfaces has been advised, but it seems doubtful if this is really of any use except as allowing the formation of a looser sort of adhesion, but if it is possible it is important to cover in any large raw surfaces by drawing together the peritoneum around with a stitch or two in such a way as to cover such surface in with smooth peritoneum. In one of the cases recounted above it will have been noted that the separated surfaces were prevented from coming together by inserting a piece of sterile oil-silk between them, but it seems usually better not to insert any foreign body in this way, as such substances in most cases seem rather to act as an irritant and to promote rather than to prevent adhesion.

A series of most careful and interesting experiments have *been made by Karl Vogel*[29] *on the formation and prevention* of intraperitoneal adhesions in which in addition to the means already mentioned the following conclusions were come to after the trial of a large number of different substances to separate raw surfaces of peritoneum which were [illegible] them was of very much [illegible] t results were obtained [illegible] introduced in some quantity into the abdomen or the use of a small quantity of sterile solution, of one part of gum arabic in two parts of saline solution. He found, however, that of much more importance in the prevention of re-adhesion was the promotion of movement among the viscera by allowing the patient to move from side to side in bed more than is usual after abdominal section, by employing gentle massage to the abdomen, and particularly by promoting peristalsis, so that the parts liable to adhere are not likely to lie at rest in contact with one another for long together. For this purpose he found that mild laxatives and the use of atropine, physostigmine, and also salicylates seemed of considerable assistance. *Some of these means seem* hardly suitable to some of the cases with which one has to deal but the principle which they try to carry out is clearly a good one and the old treatment of keeping cases of abdominal section too rigidly at rest with the bowels confined has almost given way now to the much better plan of opening the bowels at a very early date except when there is some indication very definitely against this measure.

In a certain number of cases it may be found that the separation of adhesions may be clearly not feasible, or they may be so extensive that it may seem practically certain that even if they were divided re-formation would be practically certain. In this case there are two other means that may be resorted to, especially in those cases where the trouble seems to be due to narrowing of the pylorus or interference in any other way with the stomach emptying itself; these means are pyloroplasty and gastro-jejunostomy. Of the two the latter is usually the better operation, as its results seem to be the more certain, but in some cases, especially when the adhesions are very extensive, the former may be more adviseable. The way in which these two procedures act is by allowing the stomach to empty itself more easily and so preventing distension or the traction on the adhesions which may occur when the stomach is over or even moderately full. When adhesions on the posterior aspect are the reason, or partly the reason, which prevents an ulcer from cicatrising, the rapid emptying of the stomach which the latter of these two operations allows, by permitting contraction and at the same time rapidly getting rid of the food which by its residence in the stomach may irritate the ulcer, will often be of material assistance in getting a chronic ulcer to heal.

As to the results of the operation little need be added to what is said above in recounting the cases, but it would be a mistake to think that every case is likely to be as successful as those referred to here, as it is not impossible that cases are operated on and when not successful nothing more is heard of them, but even should this be the case the results here shown are sufficient to indicate the really brilliant successes that in suitable cases may be obtained. Patients whose lives have been for years a misery and who have been rendered unfit for any sort of employment and have therefore been made chronic invalids may in some cases be restored to complete health again.

Park street, Grosvenor-square, W.

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man, aged 50 years. There were some gastric pain, dilatation of the stomach, and loss of flesh. Operation showed the mass to be adhesions about the pylorus, which were separated with satisfactory result.

[28] Loc. cit.

[29] Karl Vogel: Deutsche Zeitschrift für Chirurgie, April, 1902, p. 296.

ON CONGENITAL OCCLUSION OF THE ŒSOPHAGUS.[1]

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CONGENITAL occlusion of the œsophagus has not had much attention given to it in text-books devoted to diseases of children nor is there much said about it in works on pathology and morbid anatomy, in which it is usually dismissed in a few lines under the head of congenital abnormalities. This probably arises from its rarity or perhaps from the practitioner failing to recognise it, not suspecting such a condition. I hope this short communication may be the means of directing attention to it and also of suggesting some successful method of treatment as in all the cases hitherto recorded the patients appear to have died.

In October, 1901, my attention was called to an infant, two days old, who was constantly sick and who was said to have vomited all that had been given it since birth. The nurse also told me that the sickness was of an unusual character and seemed rather to be due to inability to swallow properly than to any gastric trouble. The child looked strong and healthy. When the finger, the nipple, or the teat of a bottle was introduced into the mouth the child seized it and sucked strongly and eagerly and would take a few teaspoonfuls of liquid until it seemed to excite coughing and signs of suffocation with return of apparently all that had been taken. I thought that a little of the food was retained and therefore ordered the child to be fed at intervals with very small quantities at a time. On the next day the patient was no better. The vomiting and choking continued much as before. I attempted to pass a bougie but the point returned into the mouth. I then explored the pharynx with my finger and found that the lower part was considerably dilated and still contained about a tablespoonful of the fluid that had been given. There appeared to be no continuation beyond a point about the junction of the pharynx and the œsophagus, the finger easily reaching to the extremity of a cul-de-sac about that situation. It was pitiable to see the child struggling for life and food and the eagerness with which an attempt was made to swallow, but there was nothing to be done and on the fourth day death ensued. I could not obtain a post-mortem examination and therefore I am unable to say what was the condition of the œsophagus beyond the cul-de-sac or whether the rest of the alimentary canal was normal or otherwise. I had never even seen such a case before and could not find much information in any text-book of surgery or of diseases of children. (The most complete account is Holmes's) I concluded that it was one of those very unusual abnormalities which one only sees once in a lifetime.

Some months ago, whilst looking over the stock of a second-hand bookseller, I came across a copy of Gibson's

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[1] A paper read before the Birmingham Branch of the British Medical Association, November, 1903.

"Anatomy." Evidently this work had been a favourite text-book, as it had passed through several editions in a few years—the third in 1688, the fifth in 1697, and the sixth in 1703. This last is in the library of the Birmingham Medical Institute. In the fifth edition and later there is a case described so similar to the one which I have mentioned that I hope I may not be considered tedious if I give it in full. Dr. Gibson had the opportunity of making a post-mortem examination, which he rather quaintly describes. His account is as follows:—

> About November, 1696, I was sent for to an infant that could not swallow. The child seemed very desirous of food and took what was offered it with greediness, but when it went to swallow it, it was like to be choaked, and what should have gone down returned by the mouth and nose, and it fell into a struggling convulsive sort of fit upon it. It was [illegible] was two days old when I was called to it, but [illegible]
>
> The par [illegible] e it opened I took two physicians and a surgeon with me.
>
> On opening the abdomen first, the guts had some of the meconium remaining in them, though the child had gone two or three times to stool. The stomach had in it a pretty deal of a slimy sort of liquor (or gelly rather), somewhat like thick (strained) water-gruel. [I shall not mention any observations upon other parts of the abdomen, as being not to our present purpose.]
>
> Then we cut open the thorax and taking out the gullet with the wind-pipe, lungs, &c., continued to the stomach. Then we made a slit in the stomach and put a pipe in its upper orifice, and blowing, we found the wind had a vent, but not by the top of the gullet. Then we carefully slit up the back side of the gullet from the stomach upwards, and when we had gone a little above half way towards the pharynx we found it hollow no further. Then we began to slit it open from the pharynx downwards, and it was hollow till within an inch of the other slit, and in the imperforate part it was narrower than in the hollowed. This isthmus (as it were) did not seem ever to have been hollow, for in the bottom of the upper and the top of the lower cavity there was not the least print of any such thing, but the parts were here as smooth as the bottom of an acorn cup.
>
> Then searching which way the wind had passed when we blew from the stomach upwards, we found an oval hole (half an inch long), on the fore side of the gullet opening into the Aspera Arteria, a little above its first division, just under the lower part of the isthmus above mentioned.

The remainder of the history of this case does not much affect the question of treatment, so I omit it.

A further search in the library of the Birmingham Medical Institute disclosed a series of cases. They are contained in a paper presented as a thesis for the degree of Doctor of Medicine by H. Hirschsprung, Copenhagen, a *résumé* of which was published in the *Medico-Chirurgical Review* in 1862. 14 cases are mentioned, in 11 of which there is a complete report of the post-mortem appearances. In all the cases the upper part of the œsophagus was found expanded into a large sac formed of its normal membranes and terminated in a rounded shape at different distances from the mouth. In cases in which the upper end of the œsophagus was patent for the greatest extent the occlusion was half an inch from the bifurcation of the trachea.

There would appear to be two forms of congenital occlusion, one in which the upper and lower portions are united by a fibrous cord, and another in which the lower part opens into the trachea or into one of the bronchi. This latter seems to be the condition in by far the greater number—in fact, it would appear to me to be the usual state. It also happened in several cases that other abnormalities were present, as atresia ani, rectal deficiency, abnormal termination of the rectum, or imperfect development of the pelvis.

It is not my intention to discuss the causes of the malformation. I have formed no settled conviction whether it is due to arrested development or to a pathological process in the fœtus. On the whole I think the balance of evidence is in favour of arrest of development.

Before proceeding to consider the treatment of this condition I should like to mention the conclusions which I have come to after a study of the various cases that I have found recorded. These are about 19 in number—namely, Dr. Gibson's, my own, 14 described by Dr. Hirschsprung, three mentioned in the Transactions of the Pathological Society, and one operated on by Mr. F. J. Steward at the Hospital for Sick Children, Great Ormond-street, London, last year. It is probable that the condition is more frequent than has been thought, the comparative rarity causing it to be overlooked or the symptoms attributed to some other cause; but as Dr. Hirschsprung remarks, "If in an institution like the Copenhagen Lying-in Hospital, where 1100 or 1200 parturient women are annually taken in, seven cases of a congenital malformation may be met with in the space of 16 years we are forced to deny its excessive rarity." The most frequent pathological condition is that in which the lower part of the œsophagus opens into the trachea; the absorption of a small amount of food through this communication may possibly reach the stomach. In one case in which rectal feeding was adopted the child lived 11 days, but otherwise four days seems to be at most the longest period and it is inconceivable that an infant's life could be long maintained on nutrient enemata.

Can anything be done in such cases? Nothing but some surgical operation which will enable the child to be fed. Holmes even thinks there is no objection if the parents wish it, after the inevitably fatal nature of the case has been explained to them. And he suggests a method of operating by which he thinks permanent success might possibly be obtained. First, we must be certain of the diagnosis. This is not difficult. The peculiar character of the vomiting and its persistence should naturally lead to an examination of the œsophagus. The abortive attempt to pass a bougie and the examination with the finger would, unless the upper pervious portion of the œsophagus were unusually long, at once settle the matter. In my case the bottom of the sac was truly, as Dr. Gibson remarks, as smooth as the inside of an acorn cup and no depression of any sort could be felt which might suggest an exit or communication. There is not much time for deliberation. The condition is hardly likely to be noticed until the second day after birth and few of the infants have survived more than four days. It is a question whether the child should be allowed to die or should have the slight chance afforded by operative treatment. Gastrostomy seems to afford the most advantages. Its performance would not be difficult, in fact the simplest that could be done. The opening should be comparatively large and at once firmly united to the skin so that feeding might be commenced immediately. The selection of food and its administration should be carefully attended to and this ought to be watched by the surgeon on every occasion. I do not think the operation suggested by Holmes would be feasible—i.e., to try to bring the two blind extremities into contact. It would be particularly difficult in a baby two days old. There is so little room.

There is one route by which the stomach might be reached and which might be available in a few cases. In the majority the lower part of the œsophagus opens into the trachea just below the larynx. Might it not be possible to open the trachea and in the event of a high opening of the œsophagus to pass food into the stomach by this route, and for a while, to gain time, an indiarubber tracheotomy tube in the trachea would prevent food passing down it, and nourishment might be passed into the œsophagus above it? I simply throw this out as a hint for discussion.

I only know of one case which has been operated on—i.e., Mr. Steward's, to whom I am indebted for particulars. The child did not recover but lived for 14 days, the longest time on record. Perhaps in the future, when these conditions are discovered early, greater success may be attained. Rectal feeding has prolonged life in at least one case and might with advantage accompany other treatment, and careful examination should be made to insure that there is no congenital deficiency of the rectum or other part of the alimentary canal.

Birmingham.

A CHART OF STATIC MODALITIES.

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I have been induced to draw up the accompanying chart, not because there is anything particularly new in it, but because I can find no similar information put in a concise way in any published work on static electricity. In some text-books there is a list, more or less complete, of the various static currents, and it may be the indication for some of them, but the technique of each—i.e., the arrangements of the electrodes, the spark gap, and the presence or absence of Leyden jars—is either not there at all or only to be found after a tedious and often unsatisfactory search. Another reason why I venture to bring this forward is that with the present partiality for coil work there seems to be a possibility that the very useful static machine may be neglected, and while it is not my present intention to weigh the relative merits of coil and static work I should like to mention that in New York and several large cities of the United States, where physicians have both coil and static machines in use, it is the latter

A CHART OF STATIC MODALITIES.

Class	Name.	Connexions for poles and electrodes.	Leyden jars.	Insulation of patient.	Requisite electrodes.	Spark gap.	Physiology and therapeutics (after Snow).	Special indications.	Remarks.
Conductive.	Static induced.	Both to Leyden jars and both to patient.	Yes.	No.	Metal to bare skin or to mucous membrane.	Closed to begin with and gradually widened until the tolerance of the patient is exhausted.	Subjective: (1) Induces muscular contraction; (2) physiological tetanus; and (3) local vibratory effect. Clinical: (1) Relieves local pain; (2) relieves local congestion and (3) increases secretion.	Obstinate constipation and painful neuroses.	The constitutional effects of this current are practically *nil*.
	The wave current.	Positive to the patient and negative to the ground.	No.	Yes.	Block tin or metallic cloth to bare skin.	As static induced.	Subjective: (1) Local vibratory effect; (2) induces muscular contraction; and (3) physiological tetanus. Clinical: (1) Diminishes local swelling and congestion; (2) local pain relieved; (3) acute muscular spasm relieved; and (4) increase of local metabolism.	Insomnia, facial neuralgia, gout, sprains, asthma, rheumatism, pelvic congestion, lumbago, dysmenorrhœa, impotency, prostatitis, dyspepsia (nervous), gleet, constipation, and goitre.	During the application of this current to extra sensitive areas—e.g., forehead, eye, ear, nose, and throat—it is advisable to do away with the negative grounding. The two forms of the intensification of this current have been omitted; they are more local and less constitutional in their effect. When this (the unmodified) cannot be used, then the static induced current is indicated.
Disruptive.	Sparks, indirect, and friction.	Positive to patient or to platform, negative to ground, and electrode to ground.	Optional but as a rule too severe.	Yes.	Brass balls.	Wide open.	Subjective: (1) Stinging sensation; (2) muscular contraction; (3) blanching, followed by redness, wheals, and even blisters by successive applications; and (4) increase of local secretion. Clinical: (1) Relaxation of muscular spasm; (2) relief of pain; and (3) hyperæmia and swelling lessened.	Muscular, subacute, and chronic rheumatism, locomotor ataxia, rheumatoid arthritis, all deep-seated nervous structural lesions and deep-seated pain, sciatica. Of all local currents the spark is the best diaphoretic.	There is also the direct spark; it is very severe and only of use in humid weather. In other respects it resembles the ordinary spark, but the positive connexion is to the patient and the negative to the electrode. The currents in order of preference for the relief of pain are (1) wave, (2) brush, (3) high-frequency, (4) sparks, (5) breeze, (6) spray, (7) static bath, and (8) static induced.
Disrupto-convective.	Brush discharge.	Positive to ground, negative to patient or to platform, and electrode to ground.	No.	Yes.	Made of wood of various sizes and shapes	Wide open.	Subjective: (1) Increases local secretion; (2) rubefacient, if pushed; and (3) local antisepsis. Clinical: (1) relieves local congestion; (2) lessens local swelling; (3) diminishes local pain; (4) promotes local metabolism; and (5) destroys superficial septic processes.	Early acute rheumatism, sprains, abscess, swelling in fractures, early stages in any acute inflammation, lumbago, gout, otitis media, lupus, tubercle, and any congestion or stasis, with or without germ life.	—
Convective.	Breeze and spray.	Positive to patient or platform, negative to ground, and electrode to ground.	No.	Yes.	Usually brass, point, single or multiple crown, or broom.	Wide apart.	The same as the brush discharge but more irritating and less effective.	—	The positive breeze is stimulating; the negative is sedative. The negative breeze is where the negative pole and the electrode are both grounded and the positive pole is connected with the patient.
	High-frequency.	Positive to ground and *negative to electrode.*	No.	No	Special glass *vacuum.*	Begin with half *an inch and* gradually regulate to capacity of patient.	—	Increases voice range. Piles, *rectal ulcer, fissure, tonsillitis,* catarrh, hay fever, lupus, tubercle, and acne and other skin affections.	Ozone evolved. Vacuum *electrodes without wire are preferable* because they are less liable to puncture, cheaper, and equally efficient.
	High-frequency, specially interrupted.	Both to series interrupter and negative current to electrode, positive current to ground.	Yes.	No.	As ordinary high-frequency.	Wide open.	—	The same as for the ordinary high-frequency current.	Even more ozone is evolved. Note that the positive current comes from that Leyden jar attached to the negative prime conductor and *vice versâ.*
	Potential alternation.	Positive to patient and negative to ground.	No.	Yes.	Water, block tin, wooden, or brass, depending upon work required.	Wide apart (see remarks).	—	Painless, simple, and fairly effective. The indications are the same as for the spark.	Note that the interruption is effected with the stand ball electrode and the prime conductor to which the patient is connected.
	The static bath or general electrification.	Usually positive to patient or platform and negative to ground. *Note.*—These are the usual connexions. It sometimes happens that the reverse may suit certain cases. This does not apply to the high-frequency currents, where the connexions cannot be changed.	No.	Yes.	None.	Wide open.	*All static modalities.*—Circulatory system: (1) Lessen arterial tension; (2) lessen heart frequency; (3) lengthen diastole; and (4) increase pulse volume. Respiratory system: (1) rapid and laboured breathing relieved; and (2) deepened breathing, with increase in elimination of CO_2. Nervous system: (1) relieve irritability; and (2) induce soporific effect. Vaso-motor system: (1) induce diaphoresis; and (2) induce diuresis, with increased elimination of urea. Increase of general metabolism.	Where a general sedative is indicated; congestive headache; as a prelude to, or in conjunction with, other static modalities.	—

upon which they chiefly rely not only for many classes of x-ray work but also for the therapeutical effects of the high-frequency and other currents.

For the column headed "Physiology and therapeutics" I am indebted to Dr. Benham Snow of New York; it is an abstract of one of his lectures and it is with his kind permission that it appears here. The column headed "Special indications" is by no means complete, for while many diseases are benefited by the several currents and many more by general electrification to put such down arbitrarily in a chart as a definite indication might be misleading.

In conclusion, I would say that this chart is not intended to replace text-books and practical instruction but rather to codify and to simplify the knowledge thus acquired and afterwards to be used as a means to refresh the memory.

Honolulu.

AGGLUTINATION AND SEDIMENTATION IN HUMAN GLANDERS.

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As long ago as December, 1896, Dr. J. McFadyean of the Royal Veterinary College made the observation that the serum of glandered horses caused marked agglutination of the bacillus, while that of two normal horses had no such effect.[1] Later Mr. A. G. R Foulerton, using bacilli isolated from the case, observed that the serum of a stable boy suffering from glanders showed marked agglutination in ten minutes in a dilution of 1 in 20 in hanging-drop preparations. In test-tube experiments, using dilutions of 1 in 10 and 1 in 20, a change was observed in six hours and sedimentation was complete in 24 hours. Several samples of normal human serum did not show the reaction but it was given by four cases of typhoid fever and by antidiphtheric serum.[2] Wladimiroff, using bouillon cultures, emulsions of bacilli in bouillon or normal salt solution, and insemination of the bacilli in a sterile mixture of broth and the blood to be tested, in a series of observations obtained a positive reaction with a dilution as high as 1 in 300 from the serum of non-glandered horses and a thoroughly characteristic reaction with 1 in 1600 from some horses with glanders. Cabot reports that Bourges and Méry found that the serum of guinea-pigs inoculated with glanders showed after three hours in the thermostat with 1 in 10 dilution clumps which were very different from anything that could be obtained from normal serum. Two horses affected with acute glanders reacted at 1 in 1000 and 1 in 2000 respectively. Another horse with chronic glanders and a fourth in an acute exacerbation of a chronic affection showed a potency of 1 in 1000 in their sera; these results were all obtained by the microscopic test at room temperature and within half an hour. The serum of sound horses had no clumping action on the glanders bacillus. The serum of horses immunised against diphtheria or against tetanus often clumped the glanders bacillus at 1 in 50 or higher dilution and "un cheval fébricitant" showed reaction at dilutions as high as 1 in 300. They propose 1 in 500 as the proper standard test for glanders in horses. Reaction obtained with less dilution they consider unreliable. Muir and Ritchie, commenting on Dr. McFadyean's later experiments, say that in the great majority of glandered horses a 1 in 50 dilution of the serum produces marked agglutination in a few minutes, whilst in the great majority of non-glandered animals no effect is produced under these conditions. Exceptions occasionally occur in both directions if the test is performed in the ordinary way and a more delicate and reliable method is to grow the bacillus in broth containing a small quantity of the serum to be tested. Bourges and Méry[3] tested the serum of 30 horses which were afterwards slaughtered and were proved to be free from glanders and they found that, as a rule, the blood would give an agglutinative reaction with a culture of bacillus mallei with a dilution of 1 in 200; in some exceptional cases reactions were obtained with dilutions of 1 in 300, 1 in 400, and 1 in 700. With glandered horses a reaction was usually obtained with a dilution of 1 in 300 or 1 in 500—sometimes with 1 in 1000. On the other hand, the serum of [illegible] fail to give the specific reaction [illegible] as 1 in 200. The authors conclude that if the reaction occur with a dilution of 1 in 300 or more the presumption is that the horse is glandered but that there is no certainty and that agglutination with a dilution up to 1 in 300 only does not necessarily imply that a horse is not glandered.

It may be said that the serum reaction has been found useless for the diagnosis of glanders in horses and we have the far better mallein test. The diagnostic value of the serum reaction in human glanders has yet to be shown. The matter is of greater importance because the mallein test is not available.

I am indebted to Dr. J. Biernacki for permission to investigate the serum reaction in two cases of glanders under his care at Plaistow Hospital in the laboratory of which the work was done. One case had a previous duration of 13 months and the other of six months. The diagnosis in each instance had been verified by guinea pig inoculation. The bacillus used for the tests was one which had been grown saprophytically for several months; it was obtained from St. George's Hospital but its previous origin I could not trace. An emulsion of bacilli was made from a growth on sloped glycerine agar by half filling the tube with previously boiled normal salt solution and gently agitating for a few minutes. In one series of observations a 36 hour culture was used and the serums and emulsion were mixed on a slide and covered by a cover-glass. Serum from the case of six months' duration was diluted with nine times its volume of normal salt solution and then 10 of bacterial emulsion were added, making a dilution of 1 in 20. Serums from two diphtheria patients were treated in the same way and a control without serum was also made. The preparation containing the glanders serum, when observed immediately after, showed some bacilli adhering together in twos and threes; after half an hour clumps of up to a dozen bacilli were present in many fields, but even after two and a half hours more bacilli were free than clumped. A repetition of the experiment gave a like result. The control without serum showed no clumping. The two preparations containing serum of diphtheria patients showed immediate and well-marked clumping. The reaction was almost complete in 15 minutes, very few bacilli being left between the clumps. Dilutions of 1 in 20 and 1 in 15 were made with serum from the other case of glanders, using a culture five days old and hanging-drop preparations. Controls were made with diphtheria antitoxin 1 in 10 dilution and with emulsion of bacilli without serum. In the preparation containing diphtheria antitoxin clumping occurred immediately and in an hour was practically complete. The two preparations from the cases of glanders could not be distinguished from the control which remained almost unchanged even after two hours. Further, it was noticed that diphtheria antitoxin, 1 in 20, caused large clumps to form in less than 15 minutes and clumping of almost all the bacilli in half an hour. Serum from a normal human subject, 1 in 10 dilution, caused a few clumps to form in half an hour without the clearing of the field between the clumps. Serum from a case of typhoid fever, 1 in 20 dilution, caused clumps to form in less than 15 minutes.

The following sedimentation tests were performed. One part of glanders serum was diluted with 109 parts of normal salt solution and 110 parts of emulsion of glanders bacilli in normal salt solution were added. The same was done with two samples of serum from diphtheria patients. When observed ten hours afterwards the glanders specimen showed definite sedimentation, the others had not. A repetition of the experiment gave the same result and a dilution of glanders serum 1 in 505 also gave it. Typhoid and normal serum showed no sedimentation but serum from both cases of glanders did so. The glanders serum could be differentiated from the others in about four hours, but the reaction became more obvious later, and three observers were able to pick out the unmarked tubes without hesitation. Again, 11 tubes containing blood were numbered and given to me, another person keeping a key; they included blood from one normal person and two enteric fever, two scarlet fever, two glanders, one tuberculosis, one mixed scarlet fever and diphtheria and two diphtheria cases. Dilutions of 1 in 505 were made at night and the two glanders specimens were picked out from the others without difficulty in the morning. In another experiment samples of blood from two cases of enteric fever, two of scarlet fever, two of diphtheria, two of variola, two of glanders, and from two normal persons were numbered and given to me. Dilutions of 1 in 220 were made, when four tubes showed sedimentation. Dilutions of 1 in 505 were then made in these four cases; all showed sedimentation and the experiment was not then carried further. These four cases included the two cases of glanders, one case of variola, and one of scarlet fever. Some further experiments, in which the scarlet fever and variola cases were compared with the glanders of six months' duration, showed that in dilutions of 1 in 1000 there was sedimentation in all, but it appeared sooner and was more complete in the glanders specimen. With dilutions of 1 in 2500 the glanders specimen showed a distinct reaction in 12 hours and the others did not show it. The other glanders case was tested at another time and showed a distinct reaction in dilutions of 1 in 2200. The above specimens of blood were collected from the cleaned ear. No precautions were taken to insure sterility of the leucocytometer pipettes or sedimentation tubes, though the salt solution was previously boiled. The fact that sedimentation was generally visible in six hours and at room temperature was held to obviate the necessity for sterility. Some serums mentioned above as showing well-marked agglutination by the microscopic test were readily differentiated from the glanders serum by the macroscopic test.

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[1] Journal of Comparative Pathology, December, 1896.

[2] THE LANCET, May 1st, 1897, p. 1201.

[3] Archives de Médecine Expérimentale, 1900.

Middlesex Hospital, W.

A CASE OF ACUTE LYMPHATIC LEUKÆMIA.

By H. SAVORY, M.B., B.C. CANTAB.,
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ACUTE lymphatic leukæmia is so rare and so few cases have been published in the English journals that I venture to place this case on record. Da Costa,[1] in 1902, stated that probably fewer than 75 authentic cases had been published at that time. None were published in England before 1898, when Dr. Rose Bradford and Dr. Batty Shaw[2] described five cases. Among others a case published by Rocaz[3] presents a remarkable similarity to the present case, as also does one recorded by S. Welt Kakels,[4] in a child, aged 18 months, where the per centage of lymphocytes was the same, 96 per cent of all leucocytes, but the small lymphocytes were three times as numerous as the large ones. This case also ran an acute course.

The patient was a boy, aged four and a half years. In July, 1902, he was circumcised and as far as his parents observed was in good health till the following December, when he became peevish, out of sorts, and off his food. On Dec. 9th he walked with his parents to my house, a distance of nearly a mile. I found him a trifle pale, with furred tongue, foul breath, a few impetiginous sores round his mouth, a rather quick pulse (90), but no bruit or other physical signs of anæmia or other disease. I prescribed an aperient and some citrate of iron. A week later he again walked to my house to report progress; I mention this to show that the child wa[illegible] though he must then [illegible] disease which was to p[illegible] visit I found the pa[illegible] dyspnœa and some sor[illegible] whilst several of his teeth were decayed and abscessed; he also had adenoids and hypertrophied tonsils and was a mouth-breather; this might have been due to swelling of lymphoid tissue. I advised rest in bed and made an attempt to obtain a less septic condition of his mouth. When I examined him in bed I found a few very slightly enlarged glands in the right axilla and above the right clavicle but none elsewhere. No enlargement of his liver or spleen could be made out then or at any subsequent time. His bones were not tender and I failed to make out any enlargement of his thymus. He was not wasted, his skin was sallow and very rough, but there were no eruptions of any kind. There was no œdema of his extremities. His urine was pale and free from albumin. As he did not improve under treatment, but got paler and more breathless, I made an examination of his blood which at once cleared up the diagnosis. The hæmoglobin, as estimated by Haldane's hæmoglobinometer, was 35 per cent. There were 2,157,000 red corpuscles and 356,000 leucocytes per cubic millimetre, the red being 43 per cent. of normal and the colour index $\frac{8}{10}$. The leucocytes were about one to every 6 erythrocytes. Subsequent counts were rendered valueless by the extremely nervous condition of the patient, but in some of the later stained slides the ratio seemed even lower. Slides stained with eosin and hæmatoxylin showed the red cells practically normal and only two nucleated red cells were observed in counting 611 white cells; both were normoblasts. The leucocytes gave the following differential count: polymorphonuclear neutrophiles, 12,282, 3·45 per cent.; large and small lymphocytes, 342,009, 96·07 per cent.; eosinophile leucocytes, 1174, 0·33 per cent; and myelocytes, 569, 0·16 per cent. The large lymphocytes greatly predominated but there was no line of demarcation between the large and the small, so they were counted together; the majority seem about from 12 to 14 micromillimetres in diameter. During January, 1903, the patient gradually assumed a lemon-coloured aspect and his sclerotics a pearly whiteness, his dyspnœa increased, and he had fever often reaching 104° F. and seldom being less than 100°. His pulse became rapid and often could not be counted, but there were no hæmic murmurs over his cardiac area. He did not perspire visibly. His gums continued sore and they bled readily, producing a very foul condition in his mouth. He had several attacks of epistaxis and there were numerous hæmorrhages into his retinæ but no subcutaneous or arthritic bleeding, no hæmatemesis, melæna or hæmaturia, and no swellings which could suggest chloroma. At various times I administered arsenic, mercury with chalk, salol, and oxygen, but no remedies appeared to have any effect, and he became drowsy, had occasional violent attacks of convulsions, and died on Jan. 29th, which was seven weeks after first coming under medical observation. A post-mortem examination was unfortunately refused.

Osler[5] in his last edition states that he had only 24 cases of leukæmia in his wards and of these 15 were splenomedullary and nine lymphatic; of these nine three only ran an acute course. According to the same authority the large lymphocytes are the more characteristic of the acute form and the small lymphocytes of the chronic one. The lymphocytes in my case were chiefly from 12 to 14 micromillimetres in diameter and as the patient died in seven weeks the nomenclature seems orthodox.

Bedford.

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[1] Da Costa: Clinical Hæmatology, p. 261.

[2] Transactions of the Royal Medical and Chirurgical Society, 1898, vol. xliv., p. 343.

[3] Revue Mensuelle des Maladies d'Enfance, vol. xx., No. 3.

[4] Archives of Pediatrics, June, 1902.

[5] Osler, Principles and Practice of Medicine, 1901, p. 802.

A CASE OF OVARIAN "FIBROID" TUMOUR REMOVED BY POSTERIOR COLPOTOMY; SUBSEQUENT PREGNANCY.

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MUCH attention has recently been paid to the study of fibroid tumour of the ovary and the elaborate paper by Dr. Reuben Paterson, entitled "A Consideration of Ovarian Fibromata based on a Study of Two Recent Cases and 82 collected from the Literature,"[1] tells us all that is practically known on the subject. As it seems important to put on record as fully and accurately as possible any additional instance of the kind I have ventured to relate the following case as bearing on the matter under consideration.

A woman, aged 28 years, who had been married a year, considered herself to be four months pregnant. Up to that time nothing beyond amenorrhœa, morning sickness, and

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[1] American Gynæcology, July, 1902, p. 45.

some mammary distension had attracted her attention. She was then suddenly seized with violent pain in the right iliac region after dinner in the middle of the day. She had been doing nothing to account for its occurrence. She was very sick and was obliged to go to bed; there was no hæmorrhage. She was seen by Mr. C. W. Grant-Wilson who found a fixed swelling of the size of the closed fist blocking the upper third of the pelvis. The uterus, showing all the physical signs of a four months gestation, was pushed upwards and forwards by the growth which was apparently attached to the lower and posterior segment. The conjugate diameter of the pelvic inlet was reduced to a size just sufficient to pass two fingers by the obstruction. Under an anæsthetic an attempt was made to push up the growth above the brim, but this failed and as the patient declined to submit to a Cæsarean section induction of abortion was performed and the uterus was emptied. Three weeks subsequently the growth was found to be somewhat smaller in size, fixed, and attached to the lower uterine segment. A diagnosis was made of subserous fibroid tumour and it was decided to attempt its enucleation by a vaginal operation. On April 14th, 1900, the patient was anæsthetised and placed in the lithotomy position. The cervix was pulled downwards and forwards by means of a vulsella. A transverse incision was then made into Douglas's pouch and several spouting vessels were secured. On incising the peritoneum about a tablespoonful of clear fluid escaped; on inserting the finger the tumour was felt closely attached to the posterior and right wall of the uterus and the posterior portion of Douglas's pouch. The adhesions were gradually broken down and a lump of creamy white colour was freed; a vulsella was attached to the lower portion and it was delivered slowly through the vaginal opening. The tumour was found to be attached by a pedicle consisting of right broad ligament and Fallopian tube to the right uterine cornu. This pedicle was ligatured and the mass was cut away. The edges of the vaginal wound were brought together and a small gauze drain was inserted into the peritoneal cavity. Convalescence was quite uneventful. A few months later the patient became pregnant and was delivered easily and naturally of a full-time child. The puerperium was normal in every way. She has since remained quite well.

Description of parts removed.—Hanging from the outer end of the Fallopian tube was a pyriform swelling which in section was seen to be made up partly of the remains of the ovary and partly of new growth. The length of the swelling was three and a quarter inches, the width being two and a half inches; the lower two and a half inches were occupied by a fibroma and in the upper portion which formed the apex of the tumour were seen the remains of the ovary containing a Graafian follicle and also a small cyst. Microscopical examination of the new growth showed it to consist of pure fibrous tissue.

I have been enabled to find three other cases of pregnancy complicated by ovarian fibroma. Kleinwächter's patient[2] was aged 31 years and a primigravida. Nothing had occurred to excite attention during the pregnancy. At labour the tumour, of the size of a clenched fist, was felt apparently arising from the anterior surface of the sacrum; no descent of the head could take place. Cæsarean section was performed without any difficulty but the patient died 24 hours afterwards from acute peritonitis. At the post-mortem examination the right broad ligament was found stretched and the ovary was occupied by a hard, solid tumour of the size of a fœtal head lying at the back of the uterus; calcification was going on in its substance.

Henry Carstens[3] records a case of successful removal of a fibroma of the right ovary during pregnancy. He could find no similar instance on record up to 1889. The patient was aged 26 years. She had been married four years and had had no children or miscarriages. For a year she had noticed trouble with micturition, there being a frequent desire to evacuate the bladder and also a partial loss of power of the sphincter vesicæ. At an examination made under chloroform a hard tumour filling up the right and anterior part of the pelvis with a two months gestation was found. When three months pregnant the abdomen was opened and a right ovarian fibroid was removed after separating adhesions with the bladder and the bowel. No mention is made of the presence or absence of ascites. The left ovary was left *in situ* as it was healthy. At the time of recording the case the patient was seven months pregnant and probably a living child was born. The tumour was hard and nodular, 20 centimetres long, and 12 centimetres in diameter. Microscopical examination showed it to consist of purely fibrous structure. "The ovary had entirely disappeared in the growth." Whitridge Williams[4] mentions another case which came under his care in which he operated during pregnancy and removed a calcified ovarian fibroid. The patient did well and was delivered at term.

The above cases seem to confirm all that has been written on the subject by Paterson.

The vaginal operation was performed under a misapprehension as to the nature of the growth but it illustrated how much more easily such a tumour can be removed by the vaginal route as compared with the abdominal. Indeed, had I been aware of what I actually had to deal with I should not have altered the method of procedure.

Brook-street, W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

THE MEMORIAL HOSPITAL, BULAWAYO.

(1) A CASE OF INTERSCAPULO-THORACIC AMPUTATION; AND (2) A CASE OF CÆSAREAN SECTION.

(Under the care of Mr. W. G. CLARK.)

CASE 1. *Interscapulo-thoracic amputation in a Matabele woman for a rapidly growing sarcoma of the head of the humerus, involving both the scapula and the clavicle.*—The patient, aged about 18 years, was admitted to hospital on Oct. 17th, 1903, suffering from a sarcomatous growth of the left shoulder. The growth was said by the patient and by the white man on whose farm her husband was working to be of only three months' duration and to have been treated in the usual Kafir way by incisions. Two days previously to admission, in showing how large a weight she could lift, the humerus broke.

On Oct. 19th chloroform was administered and with the assistance of Mr. W. T. Pauling Mr. Clark removed the outer two-thirds of the clavicle, the arm, and the scapula. The clavicle having been bared of periosteum for the greater part of its length the chain-saw was used to divide it at the junction of the inner and middle thirds. The outer part of the clavicle was then divided by the hand-saw at the junction of the outer and middle thirds. After dividing the periosteum the main vessels were ligatured, and this part of the operation presented considerable difficulty, owing to the great size of the vein, the prominence of the tumour, and the overlapping of the artery by the vein. The artery was with some considerable trouble secured first. Although there was a history of loss of flesh the ligature of the vessels was also rendered troublesome by the amount of adipose tissue, which is always considerable in the young Matabele girl. It was necessary to fashion flaps entirely with reference to the size of the growth, but as it happened there was little difficulty in bringing them together. The operation lasted one and three-quarter hours. Recovery was uneventful, the highest temperature reached being 100° F. and this was clearly due to mastitis of both breasts. The wound when dressed on Oct. 26th was quite dry and almost healed.

CASE 2. *Cæsarean section in a Matabele woman; recovery.*—An achondroplasic dwarf was admitted to hospital on Sept. 12th, 1903, from the mission station at Hope Fountain, being at the end of her eighth month of pregnancy. At birth she was an infant above the normal in size. When her growth failed she was taken care of at the mission station. Eight years previously she was attended in her only other pregnancy; the infant failed to be delivered by nature and the after-coming head was retained for 24 hours before a medical man could be obtained The head was delivered by "irons" Recovery resulted with, however, a vesico vaginal fistula No further history was obtainable, but from the absence of lineæ gravidarum it seems certain that her confinement took place before term The following was her condition when admitted She was 3 feet 11 inches in height She had a true conjugate of two and a quarter inches The abdomen had the appearance of a full term pregnancy owing to the small space between the ensiform cartilage and the pubes Urine leaked into the vagina and it was impossible to pass a catheter from the urethral orifice into the bladder By the speculum an opening into the bladder could be distinguished It was decided to operate almost immediately for the following three reasons —First, the fear of infection from the urethra should the cervix become too dilated; secondly, the comparatively small space between the ensiform cartilage and the pubes, and thirdly, the habit that natives have of changing their minds and so placing themselves beyond the reach of medical aid Delivery per vias naturales was manifestly impossible

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[2] Archiv für Gynäkologie, 1872, Band iv., S. 171.

[3] Transactions of the American Association of Obstetricians and Gynæcologists, vol. ii., 1889, p. 151.

[4] American Gynæcological Transactions, vol. xxvii., 1902, p. 293.

Operation was performed on Sept 17th Accordingly chloroform was administered and with the assistance of Mr Pauling Mr Clark performed laparotomy Mr Clark was prepared to perform Porro's operation if necessary but he intended to perform Sanger's operation if possible With some difficulty he was able to make a sufficiently long incision to turn the uterus out of the abdomen This course was pursued in case there should be a placenta prævia and there was only one assistant. On examination the placenta appeared to be felt near the left cornu of the uterus, but this appearance proved to be completely fallacious On incising the uterus in the middle line Mr Clark twice cut into the placenta and there was a considerable amount of hæmorrhage which was checked with sponges He therefore incised the uterus at and just below the fundus, ruptured the membranes, and delivery was accomplished in a few seconds The child cried at birth and the uterus contracted well, the placenta being completely detached in the course of delivery The uterus was readily stitched in the usual way but during this part of the operation there was a great tendency to hæmorrhage from the placental site and the elastic ligature round the uterus proved extremely useful An attempt to pass a drain through the cervix into the vagina failed, although previously to the operation the cervix had been tested and the uterus was showing good contractions The tubes were ligatured and a piece of each was excised The operation occupied one and a quarter hours The child, who weighed three and a half pounds, died three hours after birth The recovery of the mother was uneventful. The highest temperature reached was 99° F The wound when dressed on the tenth day was quite dry The uterus appeared to be adherent to the parietes The lochia were moderate in amount

The following are the measurements obtained Height, 3 feet 11 inches Length of leg from the anterior superior spine to the internal malleolus, 19 inches Dimensions of the pelvis conjugate vera, 2¼ inches, diameter of Baudelocque 5½ inches, distance between anterior superior spines, 7⅞ inches, distance between iliac crests, 8½ inches, and intertrochanteric, 9⅝ inches

Remarks by MR CLARK —During the past 18 months an average of 40 natives have been under my care daily and Case 1 is the only malignant tumour that I have seen in the native race of Matabeleland The medical men who have been accustomed to treat the natives for some years also testify to the rarity of malignant disease among them, so much so, that they even connect its occurrence with the introduction of civilisation The girl was five months pregnant at the time of operation, but the pregnancy remained undisturbed and convalescence was rapid The growth was undoubtedly a myeloid sarcoma commencing in the head of the humerus

The interest in Case 2 lies chiefly in the condition occurring in a Matabele woman In this race it seems to be an invariable rule to destroy any individual deformed at birth Further it appears that any dwarf or deformed person is similarly corrected out of existence Whether the custom prevails to the same extent since the British occupation of Rhodesia is a doubtful point That the present individual should exist depends on the facts of her appearing to be normal at birth and later having been removed to a mission station The Matabele race numbers, roughly speaking, a quarter of a million and it is *most* exceptional to meet with any dwarf or other kind of deformity among its members, apparently for the above reasons I have met with no case of achondroplasia, or any sign of cretinism, or any other cause of diminutive stature amongst them, although my opportunities have been ample for so doing

As far as the operation is concerned, firstly with reference to the condition of placenta prævia, I was enabled to deal with this with the greatest ease owing to the uterus having been turned out of the body, which method I resorted to owing to a somewhat similar experience which I had when intern midwifery assistant to Dr F H Champneys On that occasion I saved the life of a child by a post mortem Cæsarean section, meeting then with a placenta prævia, when the hæmorrhage was enormous I was duly impressed with the fact that there might be great difficulty in dealing with such a case during the life of the mother I also experienced the advantage of the elastic band, because bleeding tended to continue during the physiological relaxations of the uterus The band, however, was never urgently needed Secondly, I found no difficulty in avoiding the bladder in spite of the limited room and the impossibility of passing a *bladder sound* *Thirdly, I was impressed with the ease* of rapid delivery without soiling the peritoneum which required neither sponging nor draining

It seems almost superfluous to add that cases of difficult labour are practically unknown amongst the natives of Matabeleland and Mashonaland

Medical Societies.

OPHTHALMOLOGICAL SOCIETY

Proptosis —Asthenopia —Eye Symptoms of Rheumatoid Arthritis —Tuberculosis of the Choroid —Exhibition of Specimens and Cases

AN ordinary meeting of this society was held on Jan 28th, MR CHARLES HIGGENS Vice President, being in the chair

Mr W H

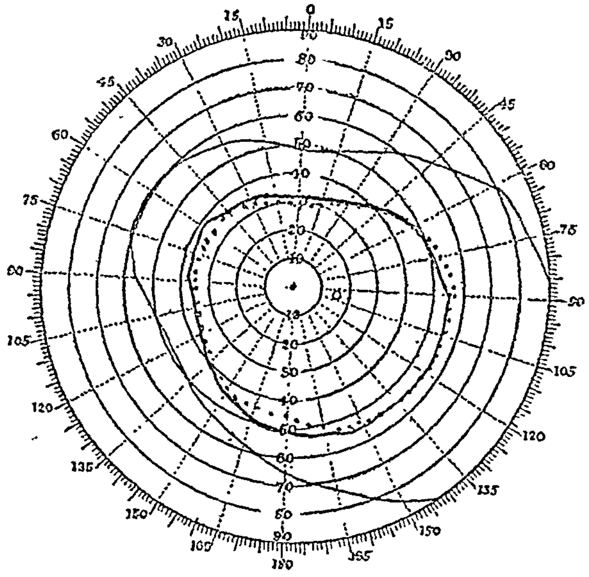
two cases

being a man

ing in the right temporal region and protrusion of the eyeball He was treated with potassium iodide but without much relief The vision was reduced to counting fingers at 12 inches there was slight ptosis the pupil measured four millimetres in diameter and was inactive, the optic disc was pale, and there was a discharge from the nostril An incision was made into the swelling and dead bone was discovered This gave slight relief but the pain soon returned and Mr H J Waring then undertook a very extensive operation and removed a great deal of necrosed bone including the great wing of the sphenoid The patient recovered from the operation and was much benefited The second case was that of a woman who had normal acuteness of vision when first seen but subsequently developed retrobulbar neuritis and supraorbital neuralgia The symptoms increased proptosis was developed, and tumour of the optic nerve was diagnosed Sir Victor Horsley operated and found the growth which was proved to be an endothelioma The patient was much relieved Mr Jessop referred to other cases and emphasised the great relief afforded by the operations

Mr G T BROOKSBANK JAMES read a paper detailing a plan of treating some cases of Asthenopia He had noticed how rare it was to see myopia in watchmakers and those who used a single eyeglass for magnifying their work, applying the same principle to other cases he had come to the conclusion that the development of myopia might be arrested by similar means He mentioned the case of a patient who had — 1 5 D myopia and for this he ordered a glass of + 1 5 to be used for one eye only so that convergence might be prevented The myopia did not increase during many months while using this method though it increased 0 5 when ordinary glasses were used —Mr C A WORTH thought that in cases in which pain and fatigue were prominent hyperphoria was present —Mr N BISHOP HARMAN did not consider that the mere closing of one eye would prevent convergence when looking at a near object and thought it would much interfere with education if this plan were adopted

Mr W M BEAUMONT (Bath) read a paper on the Eye Symptoms of Rheumatoid Arthritis with especial reference to the Field of Vision. He said that whether they accepted the bacillary view of Dr G A Bannatyne and Dr Wohlmann or the cerebro-spinal toxæmia theory of Dr. Llewelyn Jones there was much in the pathology of this disease which was obscure. After alluding to the transient obscurations of vision, to the ephemeral palsies of the external ocular muscles, and to the frequency of conjunctival, and even corneal, anæsthesia in rheumatoid arthritis, he referred more particularly to the decided contraction of the field of vision which often occurred in that disease. In a compound chart made up of the average field of 24 male patients suffering from rheumatoid arthritis he showed the similarity of the field to that of 50 women suffering from the same disease (vide chart). These average charts were arrived at by what he believed to be a novel method. The number of degrees from the fixation point outwards was noted in each of the 24 male patients, added together and divided by 24, in order to get the mean. The other meridians were then treated in a similar way and so an average field of vision was constructed. That of the 50 females cases was constructed in the same manner. The uniformity of the fields of vision in male and female, he thought, quite excluded hysteria as a factor in the causation of the contraction. There were no central scotomata in rheumatoid arthritis, there was no evidence of optic nerve atrophy, and there was not usually more than a proportionate contraction of the colour field. He remarked upon the Raynaud-like symptoms which sometimes occurred in rheumatoid arthritis, as pointed out by Dr. Llewelyn Jones, and he said that Dr. Samuel Lodge had observed contraction of the field of vision in connexion with Raynaud's phenomena. It might be that the small field of vision in rheumatoid arthritis was due to the syncopal condition of the terminal vessels of the retina. Diagrams of the field of vision in rheumatoid arthritis were shown in which decided expansion occurred during the inhalation of nitrite of amyl, whereas in healthy persons no such expansion took place.



Mr. J. R. LUNN described a case of Tuberculosis of the Choroid. The patient, who was six years of age, was suffering from symptoms of general tuberculosis and was in a typhoid condition. There was a discharge from the left ear. Optic neuritis was present and there was a swelling in the choroid. In spite of the disease the child got quite well, but the oval area in the choroid was still present though the optic neuritis had subsided. He thought the case was doubtless tuberculous.—Mr. JESSOP mentioned a case of allied character.

The following cases and specimens were shown:—

Dr. S. JOHNSON TAYLOR: A Swelling of Unusual Size, probably inflammatory, in the Ciliary Region.

Mr. E. TREACHER COLLINS: An Unusual Superficial Circumferential Opacity of the Cornea, symmetrical in the two eyes.

Mr. G. W. THOMPSON: An Unusual Form of Central Choroiditis in a young man.

Mr. G. W. ROLL: Unusual Changes in the Macular Region.

Dr. D. MOWAT: Paralysis of the Inferior Recti Muscles.

Dr. RAYNER D. BATTEN: Subretinal Hæmorrhages.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Concealed Accidental Hæmorrhage.—Thrombosis of the Superior Mesenteric Vein.—Puerperal Eclampsia.—Uretero-lithotomy.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Jan. 22nd, Mr. O. RICHARDSON, the President, being in the chair.

Mr. G. P. ANNING related a case of Concealed Accidental Hæmorrhage. The patient was a married woman, aged 35 years, who was on April 9th, 1903, delivered of a seven and a half months female child, stillborn; this was the eighth pregnancy. It was a vertex presentation. The uterus was almost as large as at full term; it was hard, tender, and bossed over the placental area. No labour pains were present. The os was undilated; there were severe pain, restlessness, and vomiting. The pulse was 90. Active treatment was deferred for 18 hours. The pulse was now 120 One-tenth of a grain of strychnine was administered. The membranes were ruptured with Lister's sound. Labour pains occurred an hour later. The os was fully dilated in four hours, the pulse being 144. Chloroform was given to full anæsthesia and forceps was applied. No hæmorrhage took place until the placenta was expressed. Retroplacental clots were present which weighed two pounds. No saline infusions were used. The pulse rate on the following evening was 111 and the temperature was 100·8° F. The patient recovered. convalescence being normal. The differential diagnosis of the varieties of accidental hæmorrhage was discussed. The treatment was as follows: 1. Where there were vigorous contractions and the os was dilating, by rupture of the membranes, introduction of the Champetier de Ribes's bag, and delivery by forceps under chloroform. 2. In severe cases where the uterus was paralysed, by plugging the vagina and the application of a binder and a perineal bandage as described by W. J. Colclough.—Dr. J. B. HELLIER, Dr. C. OLDFIELD, and the PRESIDENT discussed the paper and Mr. ANNING replied.

Dr. E. WARD related a case of Thrombosis of the Superior Mesenteric Vein in which the symptoms simulated intestinal obstruction.

Dr. A. A. MCNAB read a paper on Puerperal Eclampsia illustrated by nine cases without a single death. He advocated the administration of chloroform with digital dilatation of the os and speedy delivery as soon as labour commenced; otherwise he was against operative treatment. In a case where chloroform was inadmissible he administered chloral and bromide per rectum. He thought that rectal saline injections were to be preferred to intravenous infusion.—Dr. S. JOHNSTON, Mr. J. W. DRAPER, and Dr. HELLIER took part in the discussion and Dr. MCNAB replied.

Mr. J. F. DOBSON read notes of a case of Uretero-lithotomy. The patient, a man, aged 25 years, had suffered from renal colic for four months and during the later attacks the kidney had become enlarged. Hæmaturia and pyuria were absent but the urine contained albumin. The patient was thin and on palpating the abdomen a calculus was felt in the ureter just over the common iliac artery. Retroperitoneal exposure of the ureter was made by an incision internal to the spine of the ilium and the calculus, which was rough, angular, and imbedded in the wall of the ureter, was extracted through a longitudinal incision one centimetre in length. The permeability of the ureter was assured by passing a bougie up into the kidney and down into the bladder; no sutures were placed in the ureter but the wound was drained. The escape of urine ceased on the fifth day and the patient made a good recovery.—Dr. WARD and Mr. H. COLLINSON discussed the paper and Mr. DOBSON replied.

The following cases and pathological specimens were shown:—

Mr. E. HAWKESWORTH HACKETT: A Skiagram of a piece of steel removed from the eye seven days after the accident; also the piece of steel removed.

Mr. B. G. A. MOYNIHAN: (1) A series of specimens from cases of Cholecystectomy; and (2) a specimen of Imperforate Ileo cæcal valve.

Dr. T. CHURTON: (1) A case of Recovery from Spinal Meningitis in which Lumbar Puncture was performed and pus cells were found in a drop of the fluid; and (2) a case of Adiposity with Nervous Symptoms.

Dr. WARD: (1) Parts from a case of Gastric Ulcer with Severe Hæmatemesis in which death from recurrence of hæmorrhage ensued 36 hours after gastro-enterostomy; and

(2) a case in which the Staple Operation for Femoral Hernia had been performed.

Mr. H. SECKER WALKER: Some Ophthalmic Cases.

Dr. A. G. BARRS: A case of Cirrhosis of the Liver occurring in Diabetes.

Mr. COLLINSON: A case of Double Congenital Equino-varus treated by Cuneiform Osteotomy.

Mr. G. CONSTABLE HAYES: Some Skiagrams.

Dr. HELLIER: (1) Ruptured Tubal Pregnancy; and (2) the Bossi-Trommer Uterine Dilator.

Mr. R. LAWFORD KNAGGS (with Mr. CONSTABLE HAYES): A case of Atrophic Scirrhus of the Breast under treatment by the X Rays with amelioration of the condition.

Dr. E. F. TREVELYAN: A case of Peculiar Tremor with an involvement of speech in an elderly woman.

Mr. H. LITTLEWOOD: (1) a Fracture of the Femur after five and a half weeks' treatment with massage; and (2) Gangrenous Vermiform Appendix with large masses of fat in the mesentery.

THERAPEUTICAL SOCIETY.—A meeting of this society was held in the Apothecaries' Hall on Jan. 19th, Sir W. Thiselton-Dyer presiding.—Professor J. B. Farmer spoke on Some New Discoveries respecting Cancer, saying that the causation of cancer by parasites or stray cells was not proved, but that he, with Mr. J. E. S. Moore and Mr. C. E. Walker, had found that the development of cancer cells differed from that of the cells of other tumours and closely resembled that of reproductive cells. In both animals and plants the nuclei of the somatic cells divided longitudinally into rods or chromosomes, but reproductive cell nuclei divided more transversely into oval or ring-like chromosomes, forming only half the number of the chromosomes of the somatic cell nuclei, and cancer cells divided like the latter, and similarly had the power of destroying any somatic cells in contact with them, as occurred in the embryo sac of plants. This division was found in some cells of all malignant growths but not in any benign tumour cells. The somatic [illegible] ductive cells by [illegible] s were not yet [illegible] The frequent [illegible] ths while they [illegible] characteristic heterotype mitosis; they were probably related with nutritional and other disturbances that were known to affect similarly the nuclei of normal tissues.—Dr. T. N. Kelynack then spoke of the Hygienic Treatment of Pulmonary Tuberculosis based on inspection of many establishments. He indicated how pioneers like Parrish, Bodington, and Richardson had anticipated hygienic measures in the treatment of phthisis and also the need for a systematised "after-cure" of consumptives. He showed that wide differences existed in clinical methods and therapeutical practice in sanatoriums and urged that efforts should be made to secure scientific uniformity in their clinical procedure and combination in investigation and a system of recording returns which would allow of a comparison of results. In sanatorium management it was most desirable that a narrowing of outlook should be avoided and a scientific spirit strictly maintained.—Dr. J. Gray Duncanson then spoke of the Suprarenal Gland Products and described the medicinal preparations of them. Dry powders were best for internal administration and liquid extracts for hypodermic use. The active principle adrenalin, first isolated by Takamine, a Japanese chemist, has the empirical formula $C_{10}H_{13}NO_3$. Dr. Duncanson described the use of the preparations in private practice in ecchymosis and other conditions of the eye and their hæmostatic qualities when applied to a bleeding surface either directly or even indirectly. He warned against their administration in hæmoptysis and diabetes, citing cases which became worse under their use, and he concluded with an appeal for the recognition of suprarenal gland products as therapeutical agents.—Sir W. Thiselton-Dyer, Sir Hugh R. Beevor, Dr. H. D. Rolleston, Dr. Wild, and Dr. C. W. Glassington spoke in the discussions.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held on Jan. 20th, Dr. A. F. Street (Westgate-on-Sea), the President, being in the chair.—Dr. W. S. Hedley read a paper on Physical Therapeutics. He first referred to Professor Dewar's discovery of the presence of helium when examining the gases collected over the King's bath at Bath and to the fact that Sir William Ramsay and Mr. Soddy had seen the spectrum of helium develop in a vacuum tube into which nothing but the radiation and "emanation" of radium had been admitted. Radium, in fact, developed helium by a spontaneous change; and a sample of the deposit from the Royal bath at Bath was found to contain radium in appreciable quantity. Such substances being in a nascent form might help to explain the comparative inefficacy of the waters of certain springs when removed from their source, and the same fact might perhaps supply a reason for the recognised difficulty of making successful artificial imitations of the waters of mineral springs. The radiations of radium were then considered, the "alpha" rays being shown in the spinthariscope and those from polonium on a screen. The bactericidal properties and therapeutical applications of radio-active substances were then considered, and "applicators" for throat, nose, and gynæcological work were shown, as well as thorium, pitchblende, and other plasters made up by Mr. Martindale for the occasion. The "N" or Blondlot rays were then discussed, their place in the scale being apparently between the infra-red of the spectrum and the shortest wave length of the Herzian waves. The therapeutic action of heat was then dealt with as well as light of various colours, and the necessity for the use of the actinometer to secure definite and accurate dosage. The importance of measurement of the quality and quantity of the x rays was also insisted upon and a new method of effecting it by means of a milliampèremeter was demonstrated. High frequency currents were then considered and a reference was made to the tendency to desert the methods of the condensation couch and auto-conduction for bipolar effluvation, the latter being demonstrated.—Dr. A. E. Sansom narrated his experience of the high-frequency currents at Aix and mentioned that a very great authority there thought little of them.—Dr. George Herschell said that he could not agree with Dr. Sansom that the results of high-frequency applications were mainly due to suggestion. Administration of a current from a small solenoid with a spark gap in the circuit gave rise to muscular contractions equalling those produced by the induced current or by the Morton current. There could be no suggestion about that. The effect upon hæmorrhoids also was a visible one for a pile an inch in diameter might shrink to half the size as the result of two or three applications of a condenser electrode.—The President, Dr. E. Symes-Thompson, Dr. Joseph Groves, Dr. Septimus Sunderland, Dr. Sansom, Dr. Leonard Williams, Dr. J. Braithwaite (Buxton), and Dr. C. H. Gage-Brown also took part in the discussion.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—The quarterly meeting of this society was held on Jan. 29th, Mr. J. Bark of Liverpool, the President, being in the chair.—A case of Intermittent Nasal [illegible] Progressive Deaf- [illegible] President said [illegible] in connexion [illegible] with Mr. Collier's paper later.—Dr. W. H. Kelson showed a case of Laryngitis in a girl.—Dr. J. Dundas Grant asked if there were any signs of hysteria and remarked on the enlarged tonsils and ventricular band phonation.—Dr. J. E. McDougall (Liverpool) suggested that the tonsils should be removed.—Dr. Kelson, in reply, said that he intended to remove the tonsils.—Mr. W. Stuart-Low showed a series of cases of Aural Sepsis treated by means of kelvolin vapour and the local application of pure kelvolin.—The President regarded these cases as very satisfactory and encouraging.—Dr. Dundas Grant, Mr. E. D. Vinrace, Dr. W. Jobson Horne, Dr. Kelson, and Mr. W. J. Chichele Nourse discussed the cases.—Mr. Stuart-Low, in reply, thanked the President and Fellows for their kind reception of the subject. All the cases shown had been under the usual methods, some for years before coming under the treatment. Two of the cases shown were Dr. P. S. Jakins's patients and both were instances of intractable discharge. Cultures were always taken before using the vapour and then it was pushed until the culture was negative. There was no doubt about the germicidal power of kelvolin vapour, even the staphylococcus succumbed to its influence. There had been no failures but when many granulations were present shielding the seat of the mischief the treatment was necessarily more prolonged.—Mr. Stuart-Low also showed a case of Nasal Polypi in a boy seven years of age. Professor Hajek of Vienna had visited Dr. Dundas Grant's clinic and seen this case. He had never seen polypi in so young a subject and said that sarcoma was likely.—Dr.

A. Wylie showed a case of Primary Hard Sore on the lip of a woman.—The President said that it was the first he had seen.—Dr. Jobson Horne said that such cases were uncommon but he had seen three in five years.—Dr. Wylie showed a case of Neoplasm, probably malignant, of the Œsophagus causing Paralysis of both Vocal Cords.—Dr. V. H. Wyatt Wingrave showed a case of Laryngeal Disease (Tuberculosis) in a man, aged 30 years.—Dr. Kelson showed a case of Eruption on the Fauces.—Mr. H. S. Barwell showed a case of Syphilitic Laryngitis —The President showed a case of Growth in the Anterior Commissure above the Vocal Cords.—Mr. Collier then read a paper on Latent or Intermittent Nasal Obstruction.—The President thanked Mr. Collier and said that the discussion on the paper would be taken at the next meeting.

HUNTERIAN SOCIETY.—A pathological evening of this society was held at the London Institution on Jan. 27th, Dr. S. H. Appleford, the President, being in the chair. The following specimens were shown and discussed:—Dr. E. W. Goodall showed the Intestines with a drawing and photograph from a case of Dysentery in a girl, 17 years of age. The relation of acute ulcerative colitis to asylum dysentery and tropical dysentery was discussed.—Dr. W. Langdon Brown stated that the late Dr. Washbourn had failed to find the amœba coli in any of a very large number of cases of dysentery examined by him in South Africa.—Dr. Goodall also showed a case of Ulceration of the Tongue and Pharynx after Measles.—Dr. W. H. Kelson showed a large Mucous Polypus removed from a man whose post-nasal space it had completely filled.—Dr. Henry Russell Andrews showed a very beautiful specimen of a Lithopædion of six years' duration which he had removed from the abdomen with an ectopic gestation of the other tube. He called attention to the remarkable fact that this woman had conceived but twice, each gestation had been tubal, and the first had produced a lithopædion.—Dr. Lewis A. Smith exhibited an Acute Gastric Ulcer which had ulcerated through the coronary artery of a young woman and led to her death by a profuse hæmorrhage. He discussed the importance of recognising whether the ulcer was (1) chronic and indurated, (2) a round ulcer eroding a large artery, or (3) a mere erosion. The second of these was alone suitable for immediate surgical interference with the ulcer itself. Dr. Smith also showed a characteristic specimen of the contracted leather bottle form of Carcinoma of the Stomach. He pointed out the insidious character of the symptoms and the fact that the mucous membrane was not ulcerated in these cases.—Mr. J. H. Targett pointed out that this form of carcinoma found its homologue in atrophic scirrhus of the breast.—Dr. W. H. Kershaw (introduced by Dr. F. J. Smith) and Mr. Hugh M. Rigby showed a specimen of Diaphragmatic Hernia of the Transverse Colon and Omentum into the Left Pleura The aperture resulted from a stab wound two years before. Mr. Rigby strongly supported the view that these herniæ as soon as they were diagnosed should be attacked by the transpleural method.—Mr. Harold L. Barnard showed a specimen of a Hernia into a Duodeno-jejunal Fossa. It was remarkable for the reason that the aperture was to the right of the root of the mesentery, but the sac passed below the superior mesenteric artery into the left. side of the abdomen; and, secondly, because the lower jejunum was the gut strangulated in the sac.

ROYAL MEDICAL SOCIETY OF EDINBURGH.—A meeting of this society was held on Jan. 22nd, Dr. D. C. L. Fitzwilliams, the President, being in the chair.—A paper on Massage by Dr. R Dods Brown was read in his absence by Dr. G. A. Paulin. Dr. Brown classified the various manipulations employed in massage under the four titles, effleurage, pétrissage, tapotement, and friction; and indicated under what conditions one or more of these methods should be employed. In removing effusions—e.g., in sprains—vigorous handling was required and this should be in the direction of the flow in veins and lymphatics; in treating constipation by abdominal massage the direction of the colon was to be followed; while in cases of insomnia massage of the forehead along the lines of the nerve trunks was indicated, and in this case the manipulations must be of the nature of effleurage—i e, very light, stroking movements.—Dr. D. M. Callender read a paper on the Borderland of Gynæcology in which he discussed the differential diagnosis of difficult abdominal cases where a gynæcological condition was one of the possibilities. Ovarian tumours had, for instance, been confounded with renal and splenic tumours and with cases of tuberculous peritonitis. Again, in acute abdominal cases the diagnosis was often extremely difficult between such gynæcological conditions as, on the one hand, ruptured ectopic gestation or an ovarian cyst rendered purulent by twisting of the pedicle and, on the other hand, non-gynæcological conditions like ruptured gastric ulcer, fulminating appendicitis, or strangulated hernia.

Reviews and Notices of Books.

Diseases of the Ear: A Text-book for Practitioners and Students of Medicine. By EDWARD BRADFORD DENCH, Ph.B., M.D., Professor of Diseases of the Ear in the University and Bellevue Hospital Medical College; Aural Surgeon, New York Eye and Ear Infirmary, &c. With 15 Plates and 158 Illustrations in the text. Third edition, revised and enlarged. London and New York: D. Appleton and Co. 1903. Pp. 696. Price 21s. net.

IT is an aphorism that the rapid reappearance of a medical work is some criterion of its merits and as the volume which we are now about to consider has entered upon its third edition within seven years from the appearance of the first a better index of its appreciation could hardly be desired.

To the first section, which treats of the Anatomy and Physiology of the Ear, there have been practically no additions made since the first edition. We, indeed, find no material alteration until the end of the first half of the book, in which some minor changes have been made in the discussion of the treatment of ceruminous impaction and the careful cleansing of the parts after rupture of the meatus—a proof of the careful way in which Professor Dench prepared his first volume for the press.

In the preliminary observations on diseases of the middle ear some very useful considerations are added, especially with regard to the precautions to be observed in detecting the various micro-organisms which are responsible for any particular case of inflammation in this part. And again, in acute catarrhal otitis media the advantage of this knowledge is shown in the influence which it has on the prognosis. In the treatment of acute purulent otitis media, when the mastoid is involved, we find that the practice of local abstraction of blood is still objected to by Professor Dench. As a means of dilating the Eustachian tube the electrolytic method is very carefully and fully described, though it is attributed to Dr. Duel in 1897, whereas it had been in use at least ten years previously, and probably before. Professor Dench also still holds the opinion that the injection of fluids into the Eustachian tube and tympanum is never wise but we may remark that this view is entirely at variance with the teaching of many European aural surgeons, of whom Politzer may be quoted as an example; in the next paragraph but one to that in which this opinion is expressed the injection of astringent solutions through the Eustachian tube after the membrana has been incised for the removal of fluid is given as an alternative treatment. We are glad to see that there is a paragraph under the heading of "Catarrhal Otitis Media" devoted to oto-sclerosis, the omission of which in the first edition is not easily explained, though the space devoted to this condition is neither in proportion to its importance nor to the size of the volume, and the same applies, but with greater force, to the brief remarks with reference to its diagnosis. Professor Dench is not at all an advocate of oto-massage, although he is still very much in favour of, and obtains extremely useful and beneficial results from, those operations devoted to the mobilisation of the stapes. The remark that secondary involvement of the mastoid process constitutes the most grave complication from which patients with purulent otitis media suffer might be altered with advantage in the next edition. It is in the description of the graver or intracranial complications following suppurative otitis media that Professor Dench has made the greatest improvements in the volume under consideration. Valuable additions have been made in the symptomatology and diagnosis both of meningitis and of sinus thrombosis, though in the latter instance the description is still a little meagre, while the subject of cerebellar abscess, which was omitted entirely from the first edition, now receives consideration. Some prominence is given to Ballance's method of skin grafting after operations on the mastoid and there are two new and excellent coloured plates showing the anatomy of the internal jugular vein, together with the areas exposed when searching for cerebral or cerebellar abscesses and in exploration of the lateral sinus. These are from dissections made by the author.

This volume, with the solitary exception of the rather scanty consideration given to otosclerosis, is of considerable excellence and maintains both the standard of thoroughness and the credit of being up to date established on its previous appearances. We are convinced that it deserves, and will amply repay, careful perusal.

Die Krankheiten der Oberen Luftwege. (Diseases of the Upper Air Passages.) By Professor MORITZ SCHMIDT. Third enlarged and improved edition, with 182 Illustrations and 7 Plates. Berlin: Julius Springer. 1903. Pp. 750. Price 18 marks.

THIS treatise on the Diseases of the Upper Air Passages covers a very large number of pathological conditions which, in the widest interpretation, cannot be said to be the particular property of the specialist; indeed, it has been Professor Schmidt's object to treat his subject not from the point of view of the specialist but from that of the general physician. In conformity with this method of treatment his book will doubtless be found to be of the greatest value to the practitioner who takes a wide view of his cases. That there are in Germany many readers to whom a book of this kind appeals is testified to by the fact that this is the third edition which Professor Schmidt has been called upon to publish. In his latest revision the author has introduced the recent and important work of Grabower and Edinger on the innervation of the larynx, tongue, and neighbouring structures. He has also introduced into his work some original schematic diagrams to illustrate the somewhat involved distribution of the hypoglossal, glosso-pharyngeal, pneumogastric, and sympathetic nerves which control the motor and sensory functions of the upper air passages. A careful study of the chapters which are devoted to general physiology and anatomy will enable the reader to appreciate the essential pathology and the rationale of the treatment of the diseases which the author describes in the sections which deal with special conditions. This general introductory portion we consider the most instructive part of the book. The general arrangement of the treatise is excellent but, as is so often the case with German works of this kind, the paragraphs are far too long and the illustrations for the most part are on a very meagre scale. A few of them, especially those which we have mentioned as appearing in the portion which describes the nervous distribution, are highly original and are first-class of their kind but for the rest they look as if they had been taken from the catalogues of instrument makers. As we have already mentioned, Professor Schmidt carefully avoids approaching the subject from what may be called a specialist's point of view. He lays the greatest stress on the influence of constitutional dyscrasiæ in the determination of local disease and the truth of this is at once manifest when we come to read that considerable portion of the book which is devoted to the inflammatory conditions of the upper air passages. For instance, in discussing the etiology of chronic laryngitis Professor Schmidt suggests that there is a strong family relationship between this condition and the early symptoms of glycosuria and of adiposis (*Fettleibigkeit*). And in accordance with this view of the pathology the author suggests a rational therapeusis which is little concerned with the local treatment which is so often applied in these cases. Hyperæmia and catarrh are in Professor Schmidt's opinion so closely associated that it is often impossible to differentiate where one begins and the other ends. He believes that the most common causes which produce both the one and the other are alcohol, hot and strongly spiced foods and drinks, and the ill-ventilated and heated conditions of sleeping and dwelling rooms. The best protection for the throat is never to wear a scarf round the neck; in fact, he is a strong advocate of the hardening system, cold air in the rooms, and exposure out of doors. In a work which is supposed to be confined to the diseases of the upper air passages it is natural to expect that considerable attention would be devoted to the exceedingly common condition of adenoids. It is therefore somewhat surprising to find that this subject is very cursorily dismissed In a very short account of the etiology the author considers that nervous disorders generally, and rickets in particular, are responsible for the development of these hypertrophic growths, and in this connexion we notice the somewhat curious statement that Barlow's disease, as an acute variety of rickets, may indirectly lead to the production of adenoids by interfering with the normal development of the jaws.

Although we consider that this book is invaluable for enlarging our views on the general pathological conditions which cause symptoms in the upper air passages we do not think that it will prove of much practical use to the specialist or to the practitioner who refers to it for information with regard to the specific treatment of disorders arising in these areas.

Atlas der Krankheiten der Nase, ihrer Nebenhohlen, und des Nasenrachenraumes (Atlas of Diseases of the Nose, its Accessory Cavities, and of the Naso-pharynx.) By Privatdocent Dr. P. H GERBER, Königsberg. Parts V., VI., and VII, pp. 28 Berlin: S. Karger. 1901. Price 6*s.* each part (separate parts not sold).

THE parts of Dr. Gerber's atlas under consideration contain 13 plates. The first (Plate XXII.) continues the series which deals with nasal suppuration and besides eight coloured figures there is a very characteristic lithograph of a man suffering from acute maxillary antrum disease in which the treatment adopted consisted of "hot compresses, cocainisation, rarefaction of the air, and iodide of potash." Plate XXIII. carries on the same series, dealing chiefly with ethmoidal and sphenoidal sinusitis. Plate XXIV. consists chiefly of black and white lithographs of cases of mucocele and empyema of the frontal sinus with dilatation taken chiefly from published cases by other observers. Plates XXV. and XXVI., also not coloured, are of simple and malignant nasal tumours. Plates XXVII. to XXX are of the varied forms of lupus and tuberculosis and are most beautifully executed and complete, Dr. Gerber having selected an excellent series of cases for the purpose of his Atlas Plates XXXI. to XXXV. are devoted to syphilis. Amongst the figures to which we would draw particular attention are those on Plate XXXI., which depict tertiary ulceration in the vault of the naso-pharynx. Plate XXXVI. shows forms of leprosy affecting the nose and palate and an example of malignant carbuncle of the nose. The coloured plates especially are all extremely well rendered; they leave nothing to be desired in their colouring and draughtsmanship and, as we have remarked before, the outline keys will render them of very considerable value to those who are not thoroughly familiar with the parts either when viewed directly through a speculum or when reflected in a mirror.

LIBRARY TABLE.

Army Inefficiency; its Greatest Cause. By A. C. PROFEIT, M B. Aberd. London: J. and A. Churchill. 1903. Pp. 57. Price 1*s.* net.—This is a pamphlet giving an account of the deplorable ravages caused by venereal diseases in the British army. It discloses a state of things calling for serious reflection. Its author, who writes after having had ample experience and opportunities of studying the subject, trusts that the facts being brought to the knowledge of the public may lead to some attempt being made to remove a set of conditions which he contends is not only a disgrace to the army but a menace to the empire. The matter is one to which attention has frequently been directed by ourselves and others and has again and again been made the subject of official and Government inquiry, but, we regret to say, with relatively little practical effect in the way of preventing or mitigating an evil the terrible nature and extent of which cannot be denied. It is confessedly a question of exceeding difficulty. Still, the author thinks that even were the limited means at our disposal thoroughly organised and every advantage taken of them much good might be done and he indicates various directions in which this should be attempted.

Cusack's Biology. Part I., Plant Life; Part II., Animal Life. By WILLIAM E. CLARKE. London: City of London Book Depôt. 1903. Pp. 268. Price 2*s.* 6*d.* net.—This book we learn from the preface has been specially written to fulfil the requirements of the biological syllabuses for the acting teachers and the King's scholarship examinations issued by the Board of Education. It will, we think, be found of great use, for it is very plainly written and does not assume, as do too many text-books, that the pupil knows something about the subject of his studies before he commences to learn. We may suggest, however, to the author that in Lesson xlvi. he should make it more clear that he does not mean that animals can live upon solid food unless it has been rendered soluble by means of digestion. In some of the drawings, too, it might be shown, for the benefit of those who do not know, which structures belong to the rabbit and which to the human being. But these are minor faults in a good book.

Transactions of the Society of Anæsthetists. Vol. VI. Session 1902–03. London: John Bale, Sons, and Danielsson. 1903. Pp. 86.—Several matters of great interest are included within the 86 pages of this modest volume of transactions. A case was reported by Dr. E. A. Starling in which arrest of respiration and of the heart's action occurred during the administration of ether. The heart was directly compressed through the diaphragm and eventually the patient recovered. At the third meeting of the society Mr. A. Vernon Harcourt gave an account of his apparatus for the administration of definite percentages of chloroform, and at the fourth meeting Mr. Foster Cross read a paper on Somnoform, a comparatively new anæsthetic.

Transactions of the American Pediatric Society. Fourteenth session. 1902.—This volume is a reprint from the *Archives of Pediatrics* and contains a number of interesting papers and discussions. The fourteenth session was held at Boston, from May 26th to 28th, 1902, and at its close a loving-cup was presented to Dr. T. M. Rotch. Among the papers included in eports we may mention one as being of interest to mothers as well as to physicians—namely, that by Dr. A. C. Cotton on the Effects of Tight Diapers. The paper is illustrated by diagrams which show well how an infant's thorax and pelvis can be compressed by a tight diaper.

Elementary Dispensing Practice for Students of Pharmacy and Medicine. By JOSEPH INCE, F.C.S. London: *The Chemist and Druggist.* 1903. Pp. 141. Price 3*s.* 6*d.* net.—This, it seems to us, is an admirable book. Unlike many written by those who know for those who do not know it is simple, clear except in one place, and does not assume knowledge where there is probably none. Now that so many medical men dispense their own medicines with their own hands (and we suppose that despite a recent proposal they will continue to do so) a book like this should find great favour with the country practitioner in remote districts, for it is full of useful hints. As an example of the clearness with which the book is written we may refer to the directions given on p. 88 for freeing the yelk of a raw egg from the white. There is nothing more easy to do when the doer knows how and nothing more difficult for him who has never done it before. There is surely a misprint on p. 113 where the following words occur: "Hydrarg. nitr. oxid.," or are they a contracted form of the obsolete name for the red oxide of mercury—namely, hydrargyri nitrico-oxidum? Anyway, the mystery should be cleared up in another edition. Mr. Ince, we learn from an editorial note, is nearing his eightieth year but we hope that while he is still with us he will write a simple cookery book on the lines of the work now before us, for it would be a boon to many a young housekeeper.

JOURNALS AND MAGAZINES.

School: a Monthly Record of Educational Thought and Progress. No. I., January, 1904 London: John Murray. Price 6*d.* net.—The sub-title of this new journal sufficiently describes its aims and objects and we can vouch that in this, the first number, they are excellently carried out. The Rev. T. L. Papillon contributes an article on Impressions and Results of the Mosely Commission wherein he praises American ideas as to education, the education itself being eminently practical and popular. Professor John Adams writes on the Training of Teachers and Sir John Lubbock gives an account of his early years which should interest all Etonians. Herbert Spencer is the subject of the leading article which points out how he insisted upon the fact that education is really self-instruction. The reviews, which are signed with initials, are particularly interesting and altogether the new magazine should prove a success. We are the more interested in it for by this first number it appears that its conductors have a true idea of what education really is—that is to say, not cramming knowledge into a child but the developing of what is already there in embryo. Only by acting on these lines can teachers hope for permanent success in their arduous and responsible office.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—Mr. Tree is organising a matinée which will be given on March 18th at His Majesty's Theatre for the benefit of the National Hospital for the Paralysed and Epileptic, Queen-square. The part of the programme already decided on includes the screen scene from *The School for Scandal*, *The Man Who Was*, *The Pantomime Rehearsal*, and Mr. Carton's duologue, *The Ninth Waltz*. The following actresses and actors have promised to appear: Mrs. Patrick Campbell, Miss Mary Moore, Miss Julia Neilson, Miss Violet Vanbrugh, Miss Irene Vanbrugh, Sir Charles Wyndham, Mr. Tree, Mr. George Alexander, Mr. Cyril Maude, Mr Fred. Terry, and Mr. D. G. Boucicault. It is believed that several other well known names will be announced later. Sir Lawrence Alma Tadema has promised to design a souvenir programme. Seats may be booked at the theatre.

Analytical Records

FROM

THE LANCET LABORATORY.

(1) "TABLOID" ZINC VALERIANATE; AND (2) "TABLOID" TRI-BROMIDE (EFFERVESCENT).

(BURROUGHS, WELLCOME, AND CO., SNOW HILL-BUILDINGS, LONDON, E.C.)

(1) THE sugar-coated tabloid of valerianate of zinc affords an excellent way of administering this unpleasant but useful drug. Each tabloid contains two grains of the valerianate and we found that the yield of zinc oxide on careful incineration corresponded with the amount of salt stated. The tabloids are quite free from smell or taste until the sugar coating is dissolved. The contents then break up readily in slightly acidified fluids. (2) The tabloid of tri-bromides contains approximately 15 grains of mixed bromides which are associated with an effervescent basis. We have confirmed the dosage of the respective bromides—namely, that of potassium six grains, that of sodium six grains, and that of ammonium three grains. As is well known, the administration of such a combination of bromides is in many cases more satisfactory than when an equivalent dose of a single salt is used.

"ALLENBURYS" MILK FOOD CHOCOLATE.

(ALLEN AND HANBURYS, LIMITED, BETHNAL GREEN, LONDON, E.)

This preparation is both confection and food and it is evidently made from well-chosen materials containing in addition 25 per cent. of the "Allenburys" Milk Food No. 1. Our analysis gave the following results: moisture, 0·95 per cent.; mineral matter, 1·62 per cent.; sugar, 56·41 per cent.; proteid, 7·62 per cent.; and fat, 33·40 per cent.

SPECIAL DIETETIC WINES.

(M. SCHREIBER, BADEN, NEAR VIENNA; AGENCY, C. H. BEAUMONT AND CO., 19, ST. DUNSTAN'S-HILL, LONDON, E.C.)

We have received two varieties of wine from the above firm. They are respectively "Special Marke Diätetischer Rothwein" and "Rauheneck" white wine. Both wines are the produce of Austrian vineyards and have been brought to our notice because they are said to present certain dietetic advantages. The Rauheneck, for example, "is the wine recommended during the cure in Carlsbad and Marienbad and is free from acid and consequently very suitable for the use of those suffering from gout and obesity, as solely used by his Majesty the King during his stay in Marienbad." Similarly the red wine (special mark) "is a natural wine, absolutely free from sugar (withdrawn by M. Schreiber's patent process), and is consequently safe as a beverage for diabetics." How far these claims are justified will be gathered from the following results of our analysis. Rauheneck wine (white): extractives, 1·55 per cent; mineral matter, 0·20 per cent.; alcohol, by weight 10·08 per cent., by volume 12·49 per cent., equal to proof spirit 21 89 per cent.; volatile acidity reckoned as acetic acid, 0·06 per cent.; fixed acidity reckoned as tartaric acid, 0·45 per cent.; and sugar, 0·14 per cent. It will be seen that this wine was in sound condition and practically free from volatile acidity and sugar. It is rarely that a white wine shows such an infinitesimal amount of sugar and acid as does this wine. The flavour is excellent and delicate. It should be added that the figure for sugar given above represents the reduction equivalent obtained with an alkaline copper solution. It is quite probable that the reduction effected is not due entirely to sugar. Diätetischer Rothwein (special mark), extractives, 2·11 per cent.; mineral matter, 0·25 per cent.; alcohol, by weight 10·85 per cent., by volume 13·43 per cent., equal to proof spirit 23·54 per cent.; volatile acidity reckoned as acetic acid, 0·09 per cent.; fixed acidity reckoned as tartaric acid, 0·18 per cent.; and sugar, 0·11 per cent. This is also a practically non-acid wine and free from sugar. It is a delicate red wine and pleasing to the palate. These results of analysis may therefore be said to confirm the claims made in favour of these wines for special dietetic purposes.

HERRINGS IN TOMATO SAUCE.

(J. M. DAVIDSON, GLASGOW, AND MOIR, WILSON, AND CO., ABERDEEN; AGENT, WILLIAM MACKINTOSH AULD, 151, HOLM-STREET, GLASGOW.)

On opening the tin containing this preparation the fishes were found to be whole and in perfectly sound condition. There was no sign of action upon the tin and an examination of the liquor gave negative results as regards the presence of injurious metal. The herrings used are small and are said to be taken from Loch Fyne. As is well known, the herring is excellent food and more particularly, perhaps, on account of the digestibility of the fatty portion. There is, however, no reason for believing that fishes of any kind are necessarily so-called "brain food," although the presence of glycero-phosphates in the form of lecithin, a substance which is known to improve the general nutrition of the nervous system, may be remarked.

STRECKEISEN'S FOODS.

(1) OAT MILK COCOA; AND (2) INFANTS' AND INVALIDS' FOOD.

(FRY AND CO., LIMITED, PENINSULAR HOUSE, MONUMENT-STREET, LONDON, E.C.)

The nutritive and general character of these foods may to some extent be estimated from the fact that the first is made with oats, milk, and cocoa, and the second with oats, milk, and flour. Both foods are carefully prepared and microscopic examination confirmed the description as to their general composition. The preparation of oat milk and cocoa gave the following results on analysis: moisture, 5·3 per cent.; mineral matter, 4·90 per cent.; proteid, 18·43 per cent.; fat, 18 00 per cent.; and starch, cellulose, &c., 53·37 per cent. The food is thus seen to be rich in nutritious elements. The preparation of oats, milk, and flour gave the following results on analysis: moisture, 3·10 per cent.; mineral matter, 2·00 per cent.; fat, 8·10 per cent.; proteid, 13 40 per cent.; and starch and cellulose, 73·40 per cent. This food is described as an infants' and invalids' food. According to this analysis it contains a higher proportion of carbohydrates than does the previous preparation and there is a corresponding reduction in the amount of both proteid and fat. The proportion of fat might from the point of view of the special requirements of infants be increased, judging at any rate from the amount of fat present in their natural food.

(1) RESORBIN; (2) PERUOL; AND (3) CHLOROFORM-ANSCHUTZ.

(CHARLES ZIMMERMANN AND CO., 9 AND 10, ST. MARY-AT-HILL, LONDON, E.C.)

These preparations are amongst the new pharmaceutical products of the Berlin Aniline Dye Co. (1) Resorbin is said to consist of an ointment vehicle "made by emulsifying almond oil and water by means of yellow wax and gelatin to which is added some lanolin." Its special feature is that it is readily absorbed by the skin and thus serves as an excellent vehicle for those drugs used in dermatological practice. Moreover, it is soothing and not at all irritating and contains a certain amount of water. Resorbin is combined with zinc oxide, mercury, and other drugs used in the treatment of diseases of the skin. Resorbin appears to form an excellent ointment basis for the metallic salts such as those of mercury and bismuth. (2) Peruol is a 25 per cent. solution in castor oil of benzoic acid benzyl-ester which is the active therapeutic salt of balsam of Peru. It is a colourless and odourless oil which is said to be employed with advantage in the same way as balsam of Peru in scabies and eczema. (3) Chloroform-anschutz is of decided interest, since it is prepared from a compound of chloroform with the anhydride of salicylic acid which is crystalline. The chloroform may be drawn off from these pure crystals in an absolutely chemically pure state. Anæsthesia is therefore induced by the chloroform so prepared with the risk of distress arising from the impurities of ordinary chloroform considerably diminished.

MONTI PIANO WINE.

(Morison, Pollexfen, and Blair, 34, Leadenhall-street, London, E.C.)

This is an excellent light, non-acid red wine from Castello, Italy. On analysis the following results were obtained: alcohol, by weight 8·64 per cent., by volume 10·73 per cent, equal to proof spirit 18·81 per cent.; extractives, 2·07 per cent.; mineral matter, 0·19 per cent.; fixed acidity reckoned as tartaric acid, 0·33 per cent.; volatile acidity reckoned as acetic acid, 0·072 per cent.; sugar, 0·116 per cent. According to these results, and they conform exactly to the impression recorded by the discriminating palate, the wine is of low alcoholic strength, contains practically no sugar, and is free from volatile acidity—in short, it is a genuine, pleasing wine.

NATURAL SODA-WATER.

(Cutlack and Co., Phœnix Brewery, Peterborough.)

The interesting feature of this water is that it contains naturally certain saline ingredients in important quantity, chief of which are the bicarbonate, chloride, and sulphate of sodium. The water is drawn from a well at the above brewery. According to our analysis the water yielded on evaporation 101·50 grains of mineral matter per gallon, consisting of carbonate of sodium, 40·06 grains (equal to 63·50 grains of bicarbonate); common salt, 45·04 grains; sulphate of sodium, 12·26 grains; and carbonates of magnesium and lime, 4·14 grains. There was no evidence of any organic impurity. The water contains ammonia in traces in the saline form. The taste is pleasant and "soft," which makes it admirably adapted for the purposes of an aerated water.

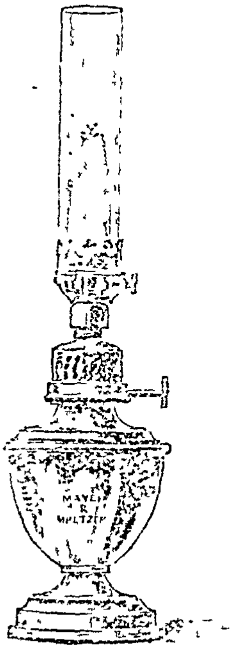
CIGARETTES OF SPECIAL MANUFACTURE.

(Louis Coen, 83, Piccadilly, London, W.)

There is no doubt that the tobacco leaf suffers considerable deterioration on its way from the plantation to the manufacturer. It easily absorbs foreign flavours and is also the subject of attack by moulds and insects, the ravages of which are calculated to impair the flavour of the tobacco when smoked in the pipe, cigarette, or cigar. This impairment is claimed to be rectified by a process introduced by the above manufacturer. Instead of using ordinary water for damping the leaves in order to prepare them in a convenient state for cutting he sprays over the dry leaf certain natural mineral waters which he asserts have a freshening or ozonising effect upon the tobacco. However that may be, the result is certainly very satisfactory from the smoker's point of view. There is a sweetness about the flavour and fragrance of the smoke which recalls that of very choice tobacco which has been most carefully handled. It is well known that the aroma and fragrance of tobacco smoke develop considerably in fresh air or in contact with ozone. This ozonising process, as the inventor claims it to be, would appear to have a similar effect. The flavour of both Dubec and Virginia tobacco is considerably improved. It is also claimed that this treatment destroys grubs or insects in the leaf by virtue of the insecticidal action of the oxygen contained in the water employed in the way described. Of course, mineral salts would have a tendency to neutralise any acids that may be present in the tobacco, although according to our analysis the process adds very little to the mineral contents of the tobacco, while its combustibility is certainly not interfered with. It is not pretended that the process makes bad tobacco good but that it removes unpleasant adventitious flavours when they are present.

New Inventions.

A PORTABLE LAMP FOR LARYNGOSCOPIC PURPOSES.



The lamp shown in the accompanying figure has proved itself very useful to me for carrying to patients' houses. It is an incandescent lamp burning methylated spirit and in case of injury to the mantle a spare one is carried in the box, also a small reserve of spirit. The whole fits into a wooden box measuring 13 × 5½ × 8½ inches and it is not at all heavy. With ordinary care there is no risk of the spirit contained in the lamp spilling. The lamp gives out a bright white light and is useful not only for examination of the throat, the nose, and the ear, but for other surgical work. The want which exists for a portable, and at the same time powerful, light is my excuse for drawing attention to this simple lamp. It is moderate in price and may be obtained of M. Vaast, 22, Rue de l'Odéon, Paris, or of Messrs Mayor and Meltzer, 71, Great Portland-street, London, W.

E. Cresswell Baber.

Brighton.

A NEW INCH MEASURE.

We have received from Mr. F. W. White of 26, Browning-road, Manor Park, Essex, a simple, ingenious, and novel inch measure which Mr. White calls the "inch wheel." It is a six-pointed star made of aluminium and the distance between the points of any two adjacent spurs is exactly one inch, so that each revolution measures six inches. In the centre of the star is an eyelet around which the star revolves On using the measure the eyelet is held between the forefinger and the thumb and the star is run along paper and similar substances like a wheel. The points of the spurs will upon slight pressure leave a dent on paper and similar substances when being measured. By marking these dents a piece of paper or a lath of wood can be readily transformed into a measure of any length. The inventor says that slippery surfaces, such as glass, marble, and the like, can be measured easily by placing a sheet of paper over them first. The "wheel" is especially useful in map measuring where it is necessary to follow the course of a winding road. It would also, we think, prove of service to the surgeon who needs to measure the length or circumference of a limb, say, for a splint. The points cause no pain when the measure is applied to the skin. Of course, there is a slight inaccuracy in measuring curved surfaces, for the measure gives us the lengths of a number of chords instead of the arcs which they subtend, but the difference would be slight and hardly of practical importance. We might suggest that a similar star measuring centimetres might also be of value. The price of the inch wheel in a neat pocket case is 3*d*., or 4*d*., post free, from the inventor and patentee.

Royal Botanic Society of London.—A Horticultural and Gardening Exhibition will take place in the month of June this year under the auspices of this society. The exhibition will be held in the new exhibition grounds of the society situated in the centre of its beautiful gardens in Regent's Park and will be open for one week or possibly longer. The proposed scheme embraces horticulture, forestry, botany, educational methods, nature study, and a special section for colonial produce. In addition to the exhibition, lectures, conferences, and conversazioni are in course of arrangement. All communications respecting the exhibition should be made to Mr. J. Bryant Sowerby, the secretary.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 6, 1904.

Medical Examinations for Life Assurance.

THE medical examination of individuals applying for life assurance presents many problems of interest and the medical advisers of life assurance societies work under conditions different from those which are the rule in dealing with patients. Instead of having to meet the frail and the abnormal their interviews in the majority of instances are with the sound and the robust. Occasionally cases of latent disease are encountered, more particularly phenomena associated with arterio-sclerosis and glycosuria. The powers of observation and the ability for estimating differences in temperament are taxed to the uttermost, the great element of success in this branch of medical practice being the capacity to make correct forecasts and a sound prognosis. A thorough knowledge not only of his profession but of human nature and mankind in general is therefore a most valuable qualification for a medical examiner for life assurance. Until a comparatively recent period there has been no organised endeavour to utilise the wealth of experience gradually accumulated by medical practitioners who have especially studied the medical side of life assurance. Fortunately, however, this defect no longer exists, for the Life Assurance Medical Officers' Association now provides opportunities of collating and discussing the many questions constantly presenting themselves in this branch of professional duty. Sir DYCE DUCKWORTH in delivering the presidential address before that society on Jan. 27th, a report of which will be found in another column, referred to the valuable work which the association has already accomplished and which has fully justified the expectations of its originators. He pointed out that some of the most profitable discussions that have taken place related to the subjects of albuminuria and glycosuria and much information has been elicited which has enabled the members to gauge the significance of such symptoms in a more precise manner than had previously been the case. He also touched upon other subjects of medical interest in connexion with life assurance.

One of these seems to us to deserve very careful consideration—namely, the practice recently adopted by certain societies of accepting applicants for assurance without medical examination. From a professional point of view there can scarcely be two opinions on this point. Dr. E. SYMES-THOMPSON writing in Professor CLIFFORD ALLBUTT'S "System of Medicine" (vol. i., p. 476) states that the medical selection of lives was not attempted in the early days of life assurance. The first society, the Amicable, was founded in 1706 and existed for some years before a medical officer was appointed. The same premium was paid by each applicant, whatever his age or apparent health. He was, however, called upon to state on oath that he believed himself to be a "good life." In process of time it was found desirable to exclude manifestly unhealthy applicants; hence the proposer was required to appear before the board. Some directors were shrewd in their judgment as to the value of a life but it soon became apparent that a medical inspection was required for the selection of "first-class" lives. According to Dr. SYMES-THOMPSON the first medical officer was appointed to the "Amicable" in 1855 and to the "Equitable" in 1858, but we believe that other offices had made similar appointments previously to that date. We have before us the proposal form of one of the societies which adopt the system of dispensing with the medical examination of applicants for policies. The sum assured must be £500 and upwards. The questions do not materially differ from those asked by other companies except that descriptions of previous illnesses and the details of the family history have to be given by the proposer instead of by the medical examiner. The disadvantages of this procedure are obvious. The applicant has then to sign a declaration to the effect that the statements in the proposal form are true and correct and that if any untrue averment is contained in the said statement, or if it is afterwards shown that any material information has been withheld, then the contract shall be void and all moneys which shall have been paid on account of the assurance shall be absolutely forfeited to the society. As Sir DYCE DUCKWORTH said, this practice is both precarious and troublesome and is certainly designed to attract persons who have no just claim to exemption from the ordinary and proper examination. If an individual is aware that he has some organic defect which may render him ineligible for assurance at ordinary rates in other societies it is a great temptation to him to go to a society which offers him assurance without medical examination. He will then, of course, find it impossible to avoid making false statements in filling up his proposal form and if it is afterwards discovered that he has knowingly committed a fraud he meets with just punishment in having the contract annulled with the loss of the premiums which he has already paid. Instead of running this risk it would have been wiser of him to have applied for a policy as a sub-standard life and to have submitted to a medical examination, for many assurance companies now accept such lives under certain conditions Another excuse for wishing to escape a medical examination is the trifling loss of time which is entailed by a visit to the medical examiner. We cannot, however, consider it as time misspent, for it insures a policy granted in circumstances which in certain offices render it practically unassailable. There is a further objection and a very strong one to assuring without medical examination—namely, that if the applicant should die from disease during the first year following the date of assurance the amount payable is only one-third of the sum assured, if he should die during the second year two-thirds of the sum, but on a claim occurring at any time after two years from the date of assurance the full sum assured is payable. If death is due to accident of course no deduction is made. In the case of assurance with medical examination if death takes place at any time after the policy is issued the claim is paid in full. We cannot understand therefore where the advantage to the general public, whether as holders of assurance policies or as eventual beneficiaries, is to be found under the conditions of the practice which we are *discussing*.

With regard to the society itself, also, it is difficult to see where the benefit can lie. Doubtless a large number of applications might be received but the risk of fraud and deceit must be constant and if many claims are contested this method of insurance would quickly become unpopular. Sir DYCE DUCKWORTH suggested that the practice had its origin in the same causes which so gravely affect the conduct of all business transactions in these days—namely, hurry, pressure, and furious competition. The business aspect of this question has little concern for us as members of the medical profession but we shall watch with interest the results of a step which we can only consider as retrograde.

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"Eye-strain."

OUR esteemed colleague Dr. G. M. GOULD of Philadelphia, editor of *American Medicine*, in further pursuit of his strenuous endeavours to arouse the medical profession to a complete consciousness of the frequency, the nature, and the consequences of "eye strain," has sent us a paper upon the subject which is appearing in the current number of that journal. In this he repeats many of the assertions with which his former writings have rendered us more or less familiar, although they have not as yet come to command the entire assent of which their writer no doubt believes them to be worthy. Dr. GOULD tells us that a large number of cases of neurotic character, defects of temper, defects of digestion, incapacity for sustained work at near objects, migraine, and a large catalogue of the peculiarities which have been sometimes described as the defects of genius, are mainly due to unrecognised "eye-strain" produced by astigmatism, generally of the hypermetropic character, and he gives us quite a long catalogue of illustrious sufferers, including people of characters so diverse as the CARLYLES, GEORGE ELIOT, HUXLLY, DARWIN, and NIETZSCHE Our readers will remember that Dr. GOULD contributed a lengthy article to our columns last autumn,[1] in which he endeavoured to prove by extracts from the life of WAGNER, and by photographs *showing an outward deviation* of his left eye, that he also should be added to the long list of illustrious sufferers from eye-strain, and he dwelt upon the assertion that the pains and troubles of genius, with which all the world becomes familiar, are daily passing unrecognised among thousands of the obscure. Not very felicitously, perhaps, he assures his readers that the evil to which he desires to call attention is rampant and unchecked, that "*the vast majority of so-called refractions is worthless*," and that in Europe "all refraction (? refraction testing) may be said to be unscientific, inaccurate, and without power to cure the symptoms and sequels of eye-strain." In the opinion of our friendly monitor Europe is clearly called upon to take a back seat.

We have been at *some pains to ascertain the views* of London ophthalmologists upon the questions to which Dr. GOULD directs attention. It must be remembered that "eye-strain" or, as he called it, weak sight or asthenopia, was quite clearly known to, and described by, MACKENZIE in 1830, but that he knew it only as an ultimate fact, had no conception of its nature, and had no other treatment than the abandonment of near work to suggest. Its cause was first made known when DONDERS discovered the existence and the frequency of hypermetropia, and was still further elucidated by his subsequent discovery of the frequency of astigmatism—a condition which, although it had been discovered by YOUNG and again by AIRY, in their own persons, had not been generally recognised by surgeons. A few years were required before the fruits of these discoveries were at all generally realised; but the possibility of curing asthenopia by spectacles was fully present to the minds of English ophthalmologists in the early "sixties," and the careful use of spectacles for visual discomfort has never since been neglected in this country. Some of the examples of real or supposed eye-strain selected by Dr. GOULD had endured their fate, whatever it might be, before the time for scientifically selected spectacles had arrived; and it is now but a vain speculation to consider whether he may have lighted upon a correct interpretation of their symptoms. At the present day, unquestionably, both physicians and the public are fully aware of the occasional, or even frequent, dependence of various forms of headache upon errors of refraction; and there is no ophthalmologist who is not constantly consulted upon the questions hence arising both in children and in adults, sometimes spontaneously by the patient, more frequently at the suggestion of physicians or teachers. So much is this the case that the ophthalmic consultant is often compelled to give the eyes a clean bill of health, and to say that the causes of the trouble must be sought elsewhere. Nor is it found, generally speaking, that the symptoms attendant upon proved astigmatism are so serious as Dr. GOULD would have us believe. DONDERS was probably not far wrong when, after pointing out the almost universality of the condition, he said that a degree of less than a dioptre was rarely disturbing to vision. Nothing is more common in presbyopic hypermetropes than to see astigmatism first become manifest at the age of 40 years or thereabouts, and then to call for correction *not so much* for the relief of discomfort as for the improvement of sight. In *London* consulting rooms and hospitals, at least, refraction is tested with a degree of care and accuracy which could *not* be surpassed, either in Philadelphia or anywhere else, and we are quite unable to accept Dr. GOULD'S opinion to the contrary. We recognise that he has done good work in calling the attention of the profession in America to conditions which there may possibly be as much neglected as he believes them to be; and we cordially endorse his opinion that the eyes should be examined by an expert in every case of migraine. In London this condition is generally fulfilled; and, if Dr. GOULD'S opinions be correct, it is certain that our future CARLYLES and DARWINS *and ELIOTS will* be able *to pursue their* work in life without hindrance from the painful difficulties which he describes.

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[1] THE LANCET, August 1st, 1903, p. 306.

The Revaccination Bill, 1904.

WE publish in another column the text of the Revaccination Bill, 1904, the title of which is "An Act to Provide for the Revaccination of Children after the age of 12." The names on the back of the Bill are those of Sir MICHAEL FOSTER, the Right Hon. R. B HALDANE, Dr. FARQUHARSON, Captain JESSEL, Mr. HEYWOOD JOHNSTONE, Sir JOHN BATTY TUKE, Sir CHARLES DALRYMPLE, Mr. IAN MALCOLM, Sir JOHN DORINGTON, Sir ANDREW AGNEW, Sir RICHARD JEBB, Mr. T. P. O'CONNOR, Dr. E. C. THOMPSON, and Mr. B. L. COHEN. The result of the ballot for the reading of new Bills will not be known until next week, so that it is impossible at the present moment to predict the chances that the Bill has of becoming law. The wording of the Bill is so plain that no exposition of the various clauses is required. If it becomes law it will make the revaccination of children at the age of 12 years compulsory. The provisions of the existing Vaccination Acts, as they relate to the appointments, duties, and remuneration of public vaccinators and vaccination officers, are to be construed as applying to the new legislation, while nothing in the new Bill, if it should become law, is to be taken to repeal or to modify any of the provisions of existing vaccination legislation. In the Revaccination Bill the conscientious objector is to be relieved of the penalties incurred by infringing the Vaccination Act of 1867 upon lines similar to those laid down in the "conscience clause" of the Vaccination Act of 1898. Within four months from the time of his child attaining the age of 12 years the parent or guardian has to satisfy two justices in petty session that he conscientiously believes that revaccination would be prejudicial to the health of the child. Within seven days from making this statement he is to deliver to the vaccination officer for the district a certificate by such justices of his conscientious objection, when he will be free from penalties. It is not proposed to include Scotland and Ireland in the working of the Bill.

All medical men will join with us in hoping that so reasonable a piece of legislation will obtain the support of the House, and if those in charge of the Bill secure a good place in the ballot there seems to us no reason why a very valuable and necessary addition to the statute book should not immediately take place. The Government, as is well known, is virtually pledged to bring in a measure of revaccination. It is true that since those pledges were given much has happened to the Government. It is no longer relying on the strong and coherent support of a large majority; upon the fiscal question the party appears to be divided quite sharply and on other matters, of great if not of such extreme import, differences of opinion exist between Members sitting on the same benches. But the party position of Mr. BALFOUR'S administration ought to make no difference to the fortunes of the Revaccination Bill. Upon such a question as revaccination there is no need for acrimonious discussion. Scientific opinion is unanimously in favour of such a measure, and the proofs in support of the benefit to the nation of revaccination are enormous. Time after time experience has shown that the revaccination of children confers practically complete immunity against epidemic small-pox. The Bill is a necessary complement to our existing vaccination legislation. Whatever be the fault of the "conscience clause" of the Act of 1898—and experience of the working of the clause cannot have made thoughtful people very enthusiastic about it—it at least had the advantage that it opened wide the door for the measure which we hope may become law this session. No "conscience clause" should ever have been proposed and passed without the accompaniment of a revaccination clause, and Lord LISTER'S support of the last measure—a support which won the approval of a House of Lords which had previously shown a hostile face—was only given on the distinct understanding that legislation for revaccination would be considered by the Government in the recess and introduced when Parliament next met. That happened four years ago and the country still waits. The Government should, we think, seize the first opportunity of redeeming its promise, while opponents to the Government can surely see nothing in the Bill to oppose.

Annotations.

"Ne quid nimis."

STREET AMBULANCES FOR LONDON.

WE have on various previous occasions commented upon the crying need which exists in this overgrown city of London for an efficient system of ambulances for the conveyance of those injured in the streets to a hospital or to their own homes Letters have recently appeared in the *Times* calling attention to the matter, so that it will be particularly opportune to remind our readers of the work of the Metropolitan Street Ambulance Association. This association has recently been formed, with Mr. Reginald Harrison as president and Dr. Arthur W. James as secretary, and members of the medical profession are invited to join it. Dr. James, in a letter to us, mentions that there is no subscription as sufficient funds are in hand. The association is composed entirely of medical men, presumably London medical men, and all members are asked to work during the coming London County Council elections to impress upon candidates the need for forwarding the adoption of an efficient system of street ambulances for London. At present the only horsed ambulances in London are those provided by the St. John Ambulance Association, one or two belonging to certain hospitals, and those provided by the Metropolitan Asylums Board. Hand ambulances and stretchers are placed in a few streets and they are procurable for use by a series of processes which remind us of the finding of the giant's heart in the familiar fairy tale. The person in need has to break a glass and to take out a key, with the key to unlock a cupboard, in the cupboard is a box, and in the box is a stretcher; but it must be allowed that some such machinery is required in the absence of proper ambulance stations. The London County Council has been considering a scheme for street ambulances for some time, but nothing has yet been done and at present the citizen who falls or injures himself in the street is in far worse case than an omnibus horse, for the two great omnibus companies keep ambulances for the use of their injured equine servants, although none, we think, for either drivers or conductors. We recommend our readers to communicate with Dr. James, 69, Gloucester-terrace, Hyde-park, W., to join the Metropolitan Street Ambulance Association, and to worry their representatives upon the London County Council in accordance with the objects of that association.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

Dr. Horace Dobell of Parkstone Heights, Dorset, formerly of Harley-street, London, has presented £500 in Consols (cumulative) to the Royal College of Physicians of London, for the promotion of original research into the ultimate origin, evolution, and life-history of bacilli and other pathogenic micro-organisms. The conditions are that the President and Censors of the College shall select a lecturer once in every two years who shall give a lecture recording original researches on the above subject made by himself and others and that he shall receive a fee of £50 for so doing. These lectures are to be continued biennially so long as a sufficient amount of the £500 and its accumulated interest remains. The first lecture will be delivered in November, 1904, by Dr. E. Klein. The Milroy lecturer for 1905 is Dr. Thomas Morison Legge, one of His Majesty's inspectors of factories, who has taken as his subject Industrial Anthrax.

THE ADULTERATION OF COD-LIVER OIL.

WE are indebted to Mr. E. J. Parry, B.Sc., F.I.C., for a communication in which he states that the great scarcity of cod-liver oil during the past year or so, accompanied by famine prices on the market, has been responsible for an enormous amount of adulteration in this product. Various adulterants have from time to time been recorded but at the present time "low-grade" fish oils other than the genuine cod-liver oil are almost universally found in adulterated samples. There is at present, Mr. Parry states, and he is a well-known authority on the subject, a very brisk demand for empty cod-liver oil barrels and he has been able to trace enormous numbers in one place. The original marks are obliterated and the barrels are re-painted and re-marked and eventually three barrels of genuine cod-liver oil re-appear on the market as five and the stock of shark oil is correspondingly diminished. Such transactions he has been able to trace from beginning to end. As regards examination a trained nose is of considerable help. The tests given by the British Pharmacopœia are practically useless except in so far as they bring the adulterants within a certain group on account of a specific gravity limit and they exclude oils which freeze at 32° F. in two hours. Again, the specific gravity, the saponification value, and the iodine absorption figure give no useful indications except when taken in conjunction with other figures. The amount of free acid present in the samples, the index of refraction, and certain colour reactions do give in some cases most valuable information. Mr. Parry has found that of the 58 samples examined by him during the past year 21 proved to be pure, nine doubtful, and 28 were clearly adulterated. Altogether the results show that there is an enormous amount of adulterated cod-liver oil on the market and Mr. Parry's experience is in complete agreement with that of other analysts. A large proportion of this adulterated oil is undoubtedly used in preparations of cod-liver oil, such as cod-liver oil and malt extract and emulsions. The percentage of cod-liver oil in such preparations has been found to be as low as from 7 to 9. Mr. Parry suggests that this adulteration of cod-liver oil gives an admirable opening to physicians to consider, in view of the difficulty of depending on the supplies of cod-liver oil, whether its virtue as a medicine is really existent in any special sense, or whether it is more or less traditional and therefore much exaggerated, or, in other words, whether it is not as a fat of animal origin that cod-liver oil enjoys a reputation which it ought to share with other animal fats. It is open to question, we think, whether cod-liver oil has any specific virtues other than those of an easily digested fat. All the same, we trust that our authorities who are responsible for the practical application of the Sale of Food and Drugs Act will make a prompt inquiry into this matter and take steps to stamp out yet another barefaced imposition.

THE TEACHING OF HYGIENE IN SCHOOLS.

A CIRCULAR letter signed by most of the leaders of the medical profession in Great Britain and Ireland has been issued to the medical practitioners of these islands inclosing a petition for signature. The petition is to the central education authorities of the United Kingdom and asks them "to consider whether it would not be possible to include in the curricula of the public elementary schools and to encourage in the secondary schools such teaching as may, without developing any tendency to dwell on what is unwholesome, lead all the children to appreciate at their true value healthful bodily conditions as regards cleanliness, pure air, food, drink, &c." The petition goes on to state that in the opinion of the petitioners the most prominent subject is "the question of the nature and effects of alcohol." We are quite at one with the signatories of the circular as to the necessity for teaching children these matters, for the children of the present day will be the fathers and the mothers of the next generation, and it is well to make a beginning, but the task at present seems rather hopeless. Those classes of society which at the present time are most injuriously affected by unhealthy conditions are the very classes which are most prolific. They live in the most unhygienic circumstances, they sleep seven or eight of all ages and sexes in one small room, and as for alcohol, who can wonder that they try to drown sorrow for at least a few hours in the temporary euphoria which gin produces? We wish all success to the petition and hope that the educational authorities will take favourable notice of it. But we must own that we are not sanguine of any good results at least in the lifetime of this generation.

THE METROPOLITAN ASYLUMS BOARD AND ITS ASSISTANT MEDICAL OFFICERS.

WE commented in our issue of Jan. 16th, p. 175, upon the abrupt dismissal by the Metropolitan Asylums Board of certain of its assistant medical officers. That the Board in its action has in the main been actuated by motives of economy we do not doubt, but even if these motives were reasonable and pure—and we are not certain that this is the case—they would be inadequate. The assistant medical officers were invited to serve the Board when the Board was in sore need and should not have been dismissed without proper consideration unless the expense of retaining them bore some impossible relation to general expenditure, while their inutility was also not to be denied. The Board ought to be in a position, before taking drastic and ungracious action, to show that it has at the present moment a plethora of medical officers, a thing which does not seem at all clear to those who know the public health of London. It should also be able to foretell that it will not in the near future require again emergency assistants and there is no reason to regard the members of the Board as sound prophets in the least. A complication has now arisen in that certain of the assistant medical officers who have been dismissed with grave want of courtesy at a month's notice are actually in possession of agreements which may make the action of the Board illegal. Certain of the dismissed officers have taken legal advice on their position under their contracts with the Board, with the result that they are, we believe, prepared to test the course pursued by the Board in a court of law. If they are driven to this extremity they will be right to exact from the Board everything to which they are legally entitled for wrongful dismissal and for public discredit, while the public will turn an observant eye on the manner in which the affairs of the Metropolitan Asylums Board are managed. We all know of the grave waste of money that has taken place in certain of the building operations of the Board and can quite understand that economy is a necessity, but we do not appreciate in what way the cause of economy will be served by under-staffing the hospitals of the Board or by attempting to obtain the unpaid assistance of young gentlemen who cannot have had any opportunities of learning their duties. The economy of the Board will appear very doubtful when, as may be likely if the present course is persisted in, it is again compelled to invite the assistance of the medical profession, only to find that no one cares to go to the aid, at any rate without very high pay, of a body the gratitude of which is so fleeting. The Board will presumably take legal advice about the claims of those of its assistant medical officers who know that they have been treated illegally as well as meanly. Even if the Board should be recommended by its lawyers to contest the claims we hold that it would be wiser to reinstate the dismissed officers. For otherwise we foresee that the Board will find it very difficult to obtain medical service.

THE SURGERY OF CEREBRAL TUMOURS.

The reaction which followed the indiscriminate resort to operation for cerebral tumours 15 years ago which was stimulated by the publication of the successful cases of Horsley and Godlee, has led to an ultra-conservative attitude towards operation by many neurological surgeons and physicians. The proportion of cases of cerebral tumour suitable for radical surgical treatment has been estimated by various writers at from 2 to 12 per cent. According to Allen Starr about 7 per cent. of all cases of cerebral tumour are operable. With improvements in the methods of cerebral localisation and of technique during recent years operation has become safer and the proportion of operable cases has increased to a slight extent. In the *American Journal of the Medical Sciences* for December, 1903, Dr. George Woolsey of New York gives an account of the lessons to be drawn from the recorded cases of cerebral tumours (including five cases personally observed) operated on and reported during the past five years—a total of 101 cases—with a view to determine whether the results do not justify a less conservative attitude towards their operative treatment. The cases reported in the five years (since 1898) indicate, adds Dr. Woolsey, "that a more hopeful view may be taken of the surgery of cerebral tumours." In the series of 101 collected cases 12 showed the presence of cerebral tumours in the frontal region, including the so-called motor area. In eight of these the tumours were in the prefrontal lobe and presented the characteristic group of physical and mental symptoms, of which a special account was given in The Lancet[1] some years ago. Since then Schuster has published an analysis of 775 cases of tumour of the brain accompanied by psychic disturbances and has shown that tumours of the pre-frontal lobe produce dementia and moral deterioration more often than tumours elsewhere in the cerebrum Gianelli and von Bruns have also referred to the special mental disturbance accompanying such lesions of the brain. All of the eight cases of tumour limited to the prefrontal lobe only, which were collected by Dr. Woolsey, showed, irrespectively of the side involved, symptoms of mental disorder and moral perversion. In the parietal region five cases of tumour were recorded. All these presented definite localising symptoms and in four of them these symptoms included astereognosis. Three cases of tumour occurred in the occipital lobe of the brain. In all three there was homonymous hemianopsia which, says von Bruns, alone or associated with signs of visual irritation or hallucinations or of word-blindness is characteristic of tumour of the occipital lobe. This is confirmed by the cases collected by Dr. Woolsey who sums up his conclusion in terms to the effect that tumours in the prefrontal, parietal, and occipital areas are as localisable and operable as tumours of the Rolandic or "motor" area, and that the results of operation in the former have been quite as good as in the latter. The number also of operations on tumours in regions other than the motor area has largely increased in the last five years and the results justify the extension of surgical operation to regions outside the motor area. Summarising the diagnostic features of cerebral tumours Dr. Woolsey states that persistent headache is the most constant symptom and that it occurred in 90 per cent. of the collected cases. Early optic neuritis ("choked disc") was mentioned as present in 84 per cent. Vomiting and vertigo were present respectively in 33 per cent. and 22 per cent. of the cases. In addition to these general symptoms and to the special localising symptoms—local paralysis and tenderness to local pressure on the scalp—the importance of the x rays in diagnosis is insisted on. In many cases the results have been positive and justify the use of this method. The indications for operation are imperative, says Dr. Woolsey, when the tumour can be satisfactorily located in a region accessible to surgical operation and when there is no evidence that the growth is multiple or malignant in nature. The weight of evidence was also in favour of operation upon gummata of the brain, since antisyphilitic treatment might temporarily improve the symptoms but rarely, if ever, caused the entire absorption of the gumma. When severe headache and rapid loss of vision were noted, but localising symptoms were absent, trephining was advised as a palliative measure to give relief, which was often considerable, to the patient. But the temptation to make exploratory incisions or punctures in search of the tumour should, says Dr. Woolsey, be resisted. As regards prognosis the mortality in all cases operated on for cerebral tumour, according to the statistics of Chipault and of Allen Starr, was about 56 per cent. Selecting the cases in his records where an exact localisation was made Dr. Woolsey finds that the mortality was 22 7 per cent, as against 46 per cent. among the cases not exactly localised. In palliative operations and where the tumour cannot be found it is advised that the bone should be removed from the flap to relieve intracranial pressure and that a thin plate of celluloid should be introduced to prevent union of the scalp with the dura mater. The results varied, concludes Dr. Woolsey, from a nearly complete cure to the relief of the distressing pressure symptoms but in 6 per cent. of the cases no improvement followed.

ARSENIC IN BEER: ACTION FOR DAMAGES.

In the action brought by Messrs. Bostock and Co. of Liverpool (the firm who supplied sugar contaminated with arsenic to brewers for making beer which caused an epidemic of arsenical poisoning) against Messrs. John Nicholson and Sons of Leeds to recover damages for supplying sulphuric acid containing arsenic judgment was given in favour of the plaintiffs, but the questions of damages and as to how judgment should be entered were deferred. The case presents, of course, many points of interest in connexion with the supply of uncontaminated food which it will be proper for us to discuss at a future time. The award not having been given it is not possible to say to what in effect the judgment amounts. Mr. Justice Bruce decided that there was a contract for the sale of "B.O.V." which meant between the plaintiffs and the defendants an acid free from arsenic, so that when "B.O.V." was delivered in March, 1900, containing arsenic there was a breach of the implied condition. He further expressed the opinion, however, that the plaintiffs' chemists ought, as part of their duties, to have discovered arsenic in both the acid and the sugar, while the change in the colour of the acid supplied in March, 1900, which led to the mischief, ought to have aroused suspicion. The consideration of these facts will no doubt affect his lordship's decision as to the damages awarded, the amount claimed being £300,000.

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[1] The Symptoms of Tumours of the Frontal Lobe of the Brain, The Lancet, June 29th, 1901, p. 1848.

STREET NOISES.

AT length the legal worm has turned and in saying this we hope that Mr. Sheil and Police-Constable 208 B will forgive us. On Jan. 30th four able-bodied labourers appeared before Mr. Sheil charged by the constable in question with placing themselves in a public thoroughfare for the purpose of gathering alms. They had a barrel organ on which was suspended a card with the words "Out of work" inscribed thereon. The constable took them into custody and Mr. Sheil gave to each of them one month's hard labour. He added that if they came before him again they would have three months. We do not in the least cavil at the sentence but we wish that the magistrate had made it more clear for what offence the men were sentenced. Organs, both piano and barrel, are only too common and, as one of the prisoners pertinently remarked on being taken into custody, "Why shouldn't we play an organ as well as the Italians?" We confess that we can only repeat the question. If four men can be arrested for going about with an organ bearing a placard to solicit alms why should not the Italian or Briton who does the same minus the placard be also arrested and get a month's imprisonment? Yet time after time magistrates have told us that the aggrieved brain-worker cannot order an organ away unless he has sickness in his house or is prepared to give some other reason than that he simply does not want the organ to play. All persons who play organs in the streets "place themselves in a public thoroughfare for the purpose of gathering alms," and we are quite willing to allow that in some places they are welcome. But in the Strand, for instance, no one wants them and in the quieter residential districts it will be a boon to the householder if he can ask a constable to arrest incontinently the player of a piano organ if he refuses to go away. Then London will be a somewhat less wearisome place to live in than it is at present. But we must confess that Mr. Sheil's action puzzles us.

NEURO-FIBROMATOUS TUMOURS OF THE BRAIN.

Professor Joseph Fraenkel and Dr. J. Ramsay Hunt of New York contribute to the *Medical Record* of Dec. 26th, 1903, an account of an interesting group of cases of cerebral tumour characterised by the development of neuro-fibromata on the cranial nerves situated in the ponto-bulbar region within the posterior fossa of the skull. The occurrence of such tumours is uncommon and they have hitherto been regarded as beyond the reach of surgical operation. It is only recently that precise knowledge has been obtained of these growths. Thus in 1902 von Monakow reported three cases in which the anatomical and clinical features were accurately stated and called attention to the possibility of surgical operation. Professor Fraenkel and Dr. Hunt record five cases with necropsies of such neuro-fibromata. Three of these affected the auditory nerve on one side, one affected the trigeminal nerve, and the fifth involved both auditory nerves. The tumours were encapsuled and varied in size from that of a cherry to that of a hen's egg. They caused atrophy of the nerves involved. Sternberg believed that these tumours arose from embryonic "rests" of the dorsal cranial nerves—viz., the trigeminal, acoustico-facial, and vago glossopharyngeal—all of which arise in the embryo from the dorsal lip of the neural ridge of epiblast. Early focal symptoms referable to a single cranial nerve appear during the growth of such tumours, the symptoms being slight in intensity and long in duration owing to the benign nature of the growth. They include tinnitus aurium, progressive diminution of hearing, attacks of labyrinthine vertigo, and occasional attacks of facial neuralgia As the growth increases symptoms of pressure on the neighbouring parts are manifested, such as ataxia of the cerebellar or peduncular type, nystagmus, irregularities of size and reaction of the pupils, ophthalmoplegia externa, dysarthria, dysphagia, facial paralysis, and disturbances of cardiac and respiratory functions. The diagnosis depends on the presence of the above symptoms combined with headache and optic neuritis. Owing to their proximity to the vital centres in the bulb these tumours share the fatal prognosis of other severe lesions of the posterior fossa. Hence removal by surgical methods offers the only hope of saving life and Professor Fraenkel and Dr. Hunt state that their necropsies have shown that in some cases such growths would be accessible to surgical operation and that trephining in any case, even when the tumour is inaccessible, would give considerable relief of symptoms. Of the five cases two were in males, aged 40 and 41 years respectively, and three were in females, aged 40, 42, and 51 years respectively, all Russians. The locality of the tumours was in all cases nearly identical—viz., the recess formed by the junction of the pons, bulb, and lateral lobe of the cerebellum. The certainty of localisation, the essentially benign nature of the growth, and the loose attachment of the tumours to the cerebral meninges and nerve trunks, conclude Professor Fraenkel and Dr. Hunt, distinguish this group of intracranial tumours as a most favourable one for surgical interference.

"THE WHITE MAN'S BURDEN."

THE acquisition of oversea dominions by the United States of America has had the effect of rapidly increasing the importance of several administrative problems. Questions of public health could not fail to be one of these, for the new possessions are entirely tropical and the political readjustments involve the maintenance of a considerable navy. It is true that most of the tropical diseases are found in the Southern States, although the coast-line, with New Orleans and Galveston as the chief towns, lies well to the north of the geographical limit of the tropics, but the loss by invaliding and deaths from disease among the national forces during and since the war with Spain has considerably enlightened the public mind as to some of the responsibilities which have been undertaken. An American Society of Tropical Medicine has been formed and its first public meeting was held at Houston Hall of the University of Pennsylvania, Philadelphia, on Jan. 9th, Dr. James M. Anders, a vice-president of the society, being in the chair. A brief statement of the scope and workings of the society was made by the secretary, after which the speaker of the evening, Dr. James Carroll, of the United States Army and a former member of the commission appointed by the Surgeon-General of the United States to investigate yellow fever at Havana, Cuba, gave an address upon the Etiology of Yellow Fever. Dr. Carroll reviewed in an interesting manner the early researches upon the etiology of the disease, giving special consideration to the work of Freire, Sanarelli, and Finlay; he then reviewed the work of the commission, the researches of which are now known everywhere, and maintained that there was no reason to believe that yellow fever was propagated by any other means than the bites of the mosquito known as stegomyia fasciata. It is only the female mosquito that bites; therefore it was only the female mosquito that became infected. The mosquito was able to impart the disease only after 12 days had elapsed since its own infection and might retain the ability to infect for many months provided that it did not meet with destruction in the meantime. He said that confirmation of all the work of the United States commission had been given by the more recently appointed French commission. The secretary of the society is Dr. Joseph McFarland, Medico-Chirurgical College, Philadelphia.

A CASE OF CYSTINURIA AND CYSTIN CALCULI.

Dr. E. Riegler of Jassy in Roumania records an interesting case of cystinuria in the *Medicinische Blätter* of Jan. 21st, p. 31. The patient was a young woman, aged 24 years, of emaciated appearance, who complained of severe headache, pains in the lumbar region, stomach, and bladder, and almost daily vomiting, with alternating diarrhœa and constipation. No evidences of organic disease were forthcoming after careful examination. The urine was turbid, neutral in reaction, yellowish-green in colour, with a specific gravity of 1010; it contained no albumin, casts, or other formed elements. Microscopical examination of the sediment showed typical hexagonal crystals of cystin. These crystals were dissolved by a watery solution of ammonia and were re-precipitated on dilution. Acetic acid added to the urine rendered clear by filtration produced a further crop of these crystals. An examination of the urine for diamines revealed the presence of considerable quantities of penta-methylene-diamine and tetra-methylene-diamine, as shown originally by Dr. E Baumann and Professor von Udranszky. The patient was then lost sight of owing to her departure from the town but four months later she returned with almost precisely similar symptoms, having been treated in the meantime by another medical man for catarrhal enteritis. The urine at this time was almost exactly identical with that on the previous examination save that no diamines could be found. Some days later the patient complained of severe pain in the bladder and urethra which on examination was found to be due to two calculi in the urethra. These were extracted and were found to be of yellow colour and slightly transparent; they were of about the size of cherries and could be scratched with the finger-nail. They were completely soluble in ammonia and on dilution of the solution typical hexagonal crystals of cystin separated out. A few small fragments of these calculi were heated with sodium hydrate and on cooling sodium nitroprusside was added, when a violet colouration was obtained. Dr. Riegler also found that if a few granules from a cystin calculus were treated with concentrated hydrochloric acid a fine felt-work of needles was at once formed which under the microscope was seen to be composed of long prisms which consisted of a compound of cystin and hydrochloric acid. One of the most interesting features of the case was the association of cystinuria with gastro-intestinal symptoms which Dr. Reigler attributed to fermentation processes in the intestine induced by micro-organisms, the diamines in the urine having a similar origin. On this supposition the treatment he adopted was to attempt disinfection of the alimentary canal by administering calomel for several days, followed by salol, naphthol, and chloroform water, large enemata of water being at the same time frequently given and the diet being restricted to milk with a little meat and vegetables. After two weeks the patient was relieved of all her symptoms. Cases of cystinuria are of sufficient rarity always to be worth recording. According to Dr. Baumann and Professor Goldmann very small quantities of cystin exist in normal urine. Since it contains sulphur it is almost certainly a derivative of the proteids of the food and tissues but the conditions of its formation are as yet little understood, though it has been suggested that it is a derivative of the taurin of the bile. Its occurrence is usually associated with the presence of diamines, though their absence in the present case at one stage indicates that the association is not invariable or essential.

"FILTHY LUCRE."

DIRT has its varying degrees of offensiveness which are very well illustrated in the current coins of the realm. The bronze penny may have easily detachable dirt adhering to it or it may be the kind of black dirt which commonly has for its basis greasy substances and which is not readily removed. The former is considerably more objectionable than the latter. The easily detachable dirt of the current coins comprises more or less wet or sticky substances derived during their transit through more or less dirty channels. The bronze coin doing duty in the public-house, for example, is frequently sticky from coming into contact with the swipes on the counter, the change from the butcher is often besmirched with something more offensive than fat, and the odorous trades, the fried-fish shop and the oil shop, leave evidence of their association upon the coin. All this is repugnant to cleanly disposed persons and the many possible dirty situations of a coin hardly bear reflection. We need not now insist on the possibilities of the coin as a spreader of disease, although bacteriology could easily sound an alarming note as to the pathogenic entities hidden in the crevices of a coin, for disease germs are likely to be found where money freely circulates. The bacteriological state of the pocket, by the way, might be worthy of investigation. It seems a pity that something cannot be done to prevent the wholesale distribution of filthy coins from such places as meat and fish markets. The bronze and silver money handed in bulk to the banks from the environment of Billingsgate or Smithfield, or even Covent Garden, is often in the most disgusting state and it is handed back again to the public in the same revolting condition. Surely where large parcels of coins are received smeared with the nastiest description of filth they might be washed or rinsed in hot water and soap before being distributed again to the public. The inventor who devises a cheap and handy machine for rapidly washing and scrubbing coins at the bank would be a public benefactor. Some pressure, we think, might be brought to bear upon the bank authorities in regard to this matter. All money systems of exchange, whether by means of coins or paper, are necessarily not quite in accord with the best interests of sanitation, but at least some steps might be taken which would prevent the circulation of coin in a grossly filthy condition.

CONGENITAL OCCLUSION OF THE ŒSOPHAGUS.

CONGENITAL abnormalities of the pharynx and œsophagus are of considerable interest to both the pathologist and the clinician. To the former they open up a fascinating field for speculation as to the mechanism of their causation. The cause once determined the possibility that developmental errors of a similar nature are agents in the production of obliterations, constrictions, and pouchings of other parts of the alimentary tract and also of parts of the arterial system at once presents itself. To the clinician the problem of exact diagnosis occurs and as a natural sequel the question as to whether cure or alleviation is within reach of the medical or surgical art. The contribution by Mr. W. Thomas in another part of our present issue cannot fail to be read with the greatest interest. The clinical picture which he draws is of the most striking character and it falls to the lot of but few of us to see such cases during life. The combination of vomiting, choking, inanition, and obvious hunger in a newly born infant such as he describes is apparently produced as the result of pharyngeal or œsophageal malformation and nothing else. Curious cases of choking induced by the swallowing of fluids have been described as occurring in the adult but here the causes are of different and diverse nature. The late Dr. J. S. Bristowe discusses such cases in his volume on Diseases of the Nervous System under the heading, "A Peculiar Form of Choking caused mainly by Swallowing Fluids." He also mentions an ingenious method of discovering the site of an abnormal communication between the air and food passages. The method consists in passing an œsophageal tube into the stomach and administering fluid through it whilst it is gradually withdrawn until the point is reached at which choking occurs. It is quite obvious, however, that in the case of the infants above mentioned the choking is due to overflow of the contents of the pouch above the stricture into the rima glottidis, the abnormal tracheal communication being below and not above the site of occlusion. Mr. Thomas indicates, and we think very properly, gastrostomy as the proper operation, combined with rectal feeding. The difficulties of any direct operation on the œsophagus must necessarily be almost insuperable and, moreover, in some instances the site of the fistula is as low down as the main bronchus. Any interference with the trachea at once increases the risks of broncho-pneumonia, risks which, from the nature of the choking, are already very great. These malformations have been extensively discussed by pathologists. They are mentioned and illustrated by Mr. J. Bland-Sutton in his work on Tumours and are discussed in a masterly manner by Mr. S. G. Shattock in the forty-first volume of the Transactions of the Pathological Society of London. Mr. Shattock's article will well repay perusal by those interested in the subject. He ascribes the malformations to the mechanical influence of the lung outgrowth from the primitive intestinal tube and brings forward considerable evidence in support of his contentions. Incidentally also he deals with certain malformations of the aorta which may have a somewhat similar mechanical origin.

TICK FEVER.

THE Treasury Department has issued from the Hygienic Laboratory Bulletin No. 14, by Dr. John F. Anderson, past assistant surgeon and assistant director, Hygienic Laboratory, United States Public Health and Marine Hospital Service (Washington, 1903). The subject of the bulletin is Spotted Fever (tick fever) of the Rocky Mountains. The disease has been known in the valley of the Bitter Root River in Western Montana for about 20 years and is sharply localised on the west bank of the river. It is also known to occur in Idaho, Nevada, Wyoming, and in a mild form in Oregon, but does not prevail south of 40° or north of 47°. It prevails at an average elevation of about 3000 to 4000 feet, exclusively in the spring and early summer, and among persons who follow occupations that cause exposure to the bites of ticks. To Wilson and Chowning belongs the credit of discovering an intracorpuscular parasite which is very probably the cause of the fever. Dr. Anderson saw the parasites under three forms: (1) the most common was a single ovoid body, refractile, and able to project pseudopodia; (2) a larger form, larger at one end and showing a dark granular spot, also amœboid; and (3) a form arranged in pairs, distinctly pyriform, with the smaller ends approaching. On a study of the cases of tick fever it was always found that there was a history of tick bites about one week before the onset. The ticks which are apparently necessary for the transmission of the disease belong to the genus dermacentor. The symptoms which follow the incubation of about seven days are for a few days chilly sensations, malaise, and nausea; finally there is a distinct chill and the patient takes to bed. There are pains in the head and back; soreness of the muscles and bones; constipation; tongue with heavy white coat, red edge and tip; conjunctivæ congested, becoming yellowish; urine scanty, with albumin and a few casts; slight bronchitis after a few days; and bleeding of the nose, sometimes quite severe, is always present. Before the distinct chill there is little or no fever in the morning, with a slight rise of temperature in the afternoon. After the chill there is an abrupt rise and then the fever gradually increases in the evening, with a slight morning remission. The maximum is usually reached on from the eighth to the twelfth day. The pulse-rate appears out of all proportion to the temperature, usually running from 110 to 140. Red blood counts show a progressive decrease in red cells. The white blood corpuscles are increased in number, a most interesting feature being an increase of the mononuclears. The eruption appears usually on the third day, first on the wrists and ankles, then on the arms, legs, forehead, back, chest, and, last and least, on the abdomen. At first the spots are bright red; they are macular and in size from that of a pin-point to that of a split pea. From about the sixth to the tenth day of the disease they fail to disappear on pressure and are distinctly petechial in character. When convalescence is advanced desquamation extends over the entire body. Of 121 cases which occurred in or near the Bitter Root Valley 84 patients died. Since the discovery of the parasite Dr. Wilson and Dr. Anderson suggested the use of quinine in large doses, preferably hypodermically. In five cases in which it was used recovery took place. Quinine bimuriate, one gramme, should be given every six hours hypodermically. The heart's power should be supported with strychnine and whisky. The patient should be encouraged to drink large quantities of water to flush out the kidneys. For the fever warm sponge baths or packs are useful and refreshing. Milk, broths, lightly boiled eggs, and soft toast may be allowed. As soon as a person is bitten by a tick the insect should be removed and the place cauterised with 95 per cent. carbolic acid. By applying ammonia, turpentine, kerosene, or carbolised vaseline the tick can usually be detached without trouble

HOMES FOR EPILEPTIC PATIENTS IN POOR CIRCUMSTANCES.

WE frequently receive inquiries from medical men who are endeavouring to find a home for some epileptic patient in poor circumstances. At present there is very limited provision for these distressing cases, but it may be convenient for our readers to mention some ways of dealing with them. The patients fall into two categories, those without mental impairment and those in whom there is temporary or permanent mental derangement. For the *sane* epileptics there are several excellent institutions.

1. The Colony for Epileptics at Chalfont, where provision is made for over 100 adult epileptics, both male and female, and also for children. Arrangements are made for educating the children and for employing the adults in market-gardeni[illegible] laundry work and other useful industrial occupations [illegible] patients [illegible] but a [illegible] are taken, for whom a pay[illegible] paid by [illegible] office [illegible] made [illegible] Gaskell.

[illegible] Home for Epileptics, Maghull, near Liverpool. This home has been open for 14 years and at the end of the year had 174 inmates. Like the Chalfont Colony the inmates are lodged in several homes on a farm and they are chiefly employed in out-of-door pursuits, such as market-gardening. At Maghull provision is made not only for working-class but also for second-class patients, and there is also limited private accommodation for first-class patients. The rates of payment are: working-class patients, 7*s* 6*d*.; second-class patients, £1 1*s*.; and first-class patients from £2 2*s* upwards, according to accommodation. Application has to be made to the honorary secretary, Mr. William Grisewood, Imperial-buildings, 2, Exchange street East, Liverpool.

3. The Meath Home of Com[illegible] Westbrook, Godalming, Surr[illegible] Hayling Island. Together th[illegible] The weekly rates of payment [illegible] patients and £1 1s for ladies. [illegible] for girls under 12 years of ag[illegible] tions should be made to the [illegible] the home.

4. [illegible] Warford, near [illegible] intended to [illegible] start will be [illegible] been decided [illegible] W. Marshall, [illegible]

All of these homes are managed by committees. Although they have all had munificent gifts in the way of land and buildings none of them are self-supporting and not only are there no free beds, but all of them require large annual subscriptions to maintain them efficiently. For the second group of patients, including those in whom there is mental impairment, it may be stated generally that they can only be provided for under the general arrangements for the insane. As the mental aberration is frequently temporary or occasional it is often a great hardship for the epileptic to be constantly housed with the insane. This has been recognised by the asylums committee of the London County Council which has provided the epileptic colony at Ewell for cases chargeable to one of the London county parishes. They are admitted either directly from their respective unions or transferred from one of the sister London county asylums. The cases admitted are able-bodied epileptics who are of unsound mind, not necessarily persistently so, but whose recurrent attacks are sufficiently frequent to demand their being under care. Recently arrangements have been made for setting aside a villa for the reception of male private cases at a weekly charge of 18s. for those who can claim a London settlement and £1 1s. for those who cannot. The present accommodation in the colony is for 266 males and 59 females. Applications should be sent to Dr. C. Hubert Bond, the medical superintendent at the colony.

TOXIC AMBLYOPIA CAUSED BY METHYL ALCOHOL.

AN important article dealing with the forms of blindness caused by the drinking of methyl alcohol or "wood spirit" is published by Dr. Frank Buller of the Victoria Hospital, Montreal, in the *Montreal Medical Journal* for January. Attention has been called from time to time in THE LANCET[1] to the dangers of methyl alcohol and of preparations containing large quantities of the same, either when drunk or accidentally inhaled. During the past decade, says Dr. Buller, literature has been much enriched by records of cases and by pathological studies of the toxic amblyopia caused by methyl alcohol. Since Rymovitch in 1896 showed that fatty degeneration of the retinal ganglion cells occurred in the case of rabbits posioned by methyl alcohol, others, and especially Ward Holden and Birch-Hirschfeld, have described the occurrence of chromatolysis, vacuolation and destruction of the cell bodies, and a varicose degeneration of the axons of the ganglion cells of the retina. The last-mentioned writer states that a close similarity exists between the lesions thus produced in rabbits and those occurring in cases of methyl alcohol intoxication in the human subject. The quantity of methyl alcohol required to produce blindness is variable. Five and a half drachms have produced severe headache, nausea, and vomiting. Doses of from two to eight ounces have produced severe, prolonged, and in some cases permanent blindness, and occasionally death has followed upon drinking two wineglassfuls of methyl alcohol. Of the cases recorded by Dr. Buller the following three may be cited. The first case was that of a woman, aged 34 years, who took one evening by accident a wineglassful of methyl alcohol instead of a dose of sarsaparilla which she had been in the habit of taking from time to time. On awakening next morning she experienced an intense headache, felt very ill and feeble, and to her great dismay was completely blind. The blindness lasted for two weeks, after which partial recovery of sight set in. No further improvement could be obtained after many more weeks of treatment, her eyesight being permanently enfeebled. The second case was that of a man, aged 39 years, who also accidentally took a wineglassful of methyl alcohol or "wood spirit" one evening. Next morning he awoke with an intense headache, marked diminution of sight, weakness, and inability to work. For a week his sight continued "blurred and foggy" while the margin of the field of vision was irregularly constricted. Some improvement then set in, followed by exacerbation of symptoms, and after the lapse of several months a permanent weakness and defectiveness of vision were present, including a blotting out of central vision. The third case was that of a man, aged 42 years, a carpenter by occupation, who took by accident "a small wineglassful" of wood spirit. Symptom of headache and loss of sight appeared the next day and a general dulness of visual acuity was the result. He was treated in hospital for several weeks and slight improvement followed. A general dulness of sight and a central scotoma, however, were permanently present. Dr. Buller points out that the degeneration of the retinal ganglion cells and nuclear layers affects firstly and chiefly the macular area or region of central vision, and diffusely also other parts of the retina, and that the consequent degeneration of the axis cylinders of these cells produces an axial neuritis in the optic nerve, a lesion from which recovery is practically impossible.

LEAD POISONING AND WATER-SUPPLIES.

IN a leading article in THE LANCET of Feb. 28th, 1903, p. 596, we dealt with the very valuable report which had then just been issued by the Medical Department of the Local Government Board on Moorland Waters in regard to their Action on Lead. This report gave details of a prolonged research undertaken by Dr. A. C. Houston which was based on the results of his systematic study of waters derived from a variety of moorland gathering grounds in Lancashire and Yorkshire. In a supplementary report issued last week Dr. Houston presents the results obtained from a prolonged and extensive series of laboratory experiments. We regard the results as of the utmost value. An enormous amount of experimental work has been done which should give considerable help in the future when difficulties arise in determining what are the chemical and biological factors concerned in producing acidity, ability to dissolve lead, or ability to "erode" lead pipes. The report is illustrated with several excellent plates demonstrating the effects of water under different conditions upon strips of sheet lead. It may be remembered that in his survey of the circumstances Dr. Houston referred to the importance of considering in detail the factors of "plumbo-solvency" in connexion with the presence of lead in moorland waters. He showed how it was advisable in the case of existing works to test the water not only in the reservoirs and main streams but also in the tributary streams and subsidiary "feeders" during different seasons of the year and under ordinary and extraordinary conditions of the rainfall in order to arrive at a satisfactory conclusion as to the liability of the supply in general and of its constituent waters to acquire "plumbo-solvent" ability. In this way the real remedy would probably picture which he draws is of the most striking character and it falls to the lot of but few of us to see such cases during life. The combination of vomiting, choking, inanition, and obvious hunger in a newly born infant such as he describes is apparently produced as the result of pharyngeal or œsophageal malformation and nothing else. Curious cases of choking induced by the swallowing of fluids have been described as occurring in the adult but here the causes are of different and diverse nature. The late Dr. J. S. Bristowe discusses such cases in his volume on Diseases of the Nervous System under the heading, "A Peculiar Form of Choking caused mainly by Swallowing Fluids." He also mentions an ingenious method of discovering the site of an abnormal communication between the air and food passages. The method consists in passing an œsophageal tube into the stomach and administering fluid through it whilst it is gradually withdrawn until the point is reached at which choking occurs. It is quite obvious, however, that in the case of the infants above mentioned the choking is due to overflow of the contents of the pouch above the stricture into the rima glottidis, the abnormal tracheal communication being below and not above the site of occlusion. Mr. Thomas indicates, and we think very properly, gastrostomy as the proper operation, combined with rectal feeding. The difficulties of any direct operation on the œsophagus must necessarily be almost insuperable and, moreover, in some instances the site of the fistula is as low down as the main bronchus. Any interference with the trachea at once increases the risks of broncho-pneumonia, risks which, from the nature of the choking, are already very great. These malformations have been extensively discussed by pathologists. They are mentioned and illustrated by Mr. J. Bland-Sutton in his work on Tumours and are discussed in a masterly manner by Mr. S. G. Shattock in the forty-first volume of the Transactions of the Pathological Society of London. Mr. Shattock's article will well repay perusal by those interested in the subject. He ascribes the malformations to the mechanical influence of the lung outgrowth from the primitive intestinal tube and brings forward considerable evidence in support of his contentions. Incidentally also he deals with certain malformations of the aorta which may have a somewhat similar mechanical origin.

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[1] Blindness due to drinking Bay Rum, THE LANCET, July 13th, 1901, p. 93; Production of Amblyopia by Alcohol, THE LANCET March 29th, 1902, p. 911; and Toxic Amblyopia and other Lesions due to the Use of Wood Alcohol, THE LANCET, June 13th, 1903, p. 1684.

TICK FEVER.

THE Treasury Department has issued from the Hygienic Laboratory Bulletin No. 14, by Dr. John F. Anderson, past assistant surgeon and assistant director, Hygienic Laboratory, United States Public Health and Marine Hospital Service (Washington, 1903). The subject of the bulletin is Spotted Fever (tick fever) of the Rocky Mountains. The disease has been known in the valley of the Bitter Root River in Western Montana for about 20 years and is sharply localised on the west bank of the river. It is also known to occur in Idaho, Nevada, Wyoming, and in a mild form in Oregon, but does not prevail south of 40° or north of 47°. It prevails at an average elevation of about 3000 to 4000 feet, exclusively in the spring and early summer, and among persons who follow occupations that cause exposure to the bites of ticks. To Wilson and Chowning belongs the credit of discovering an intracorpuscular parasite which is very probably the cause of the fever. Dr. Anderson saw the parasites under three forms: (1) the most common was a single ovoid body, refractile, and able to project pseudopodia; (2) a larger form, larger at one end and showing a dark granular spot, also amœboid; and (3) a form arranged in pairs, distinctly pyriform, with the smaller ends approaching. On a study of the cases of tick fever it was always found that there was a history of tick bites about one week before the onset. The ticks which are apparently necessary for the transmission of the disease belong to the genus dermacentor. The symptoms whic follow the incubation of about seven days are for a few da chilly sensations, malaise, and nausea; finally there is distinct chill and the patient takes to bed. There are pains the head and back; soreness of the muscles and bones; co stipation; tongue with heavy white coat, red edge and tip conjunctivæ congested, becoming yellowish; urine scant with albumin and a few casts; slight bronchitis after a fe days; and bleeding of the nose, sometimes quite severe, always present. Before the distinct chill there is litt or no fever in the morning, with a slight rise of te perature in the afternoon. After the chill there is abrupt rise and then the fever gradually increases in t evening, with a slight morning remission. The maximu is usually reached on from the eighth to the twelfth da The pulse-rate appears out of all proportion to the te perature, usually running from 110 to 140. Red blo counts show a progressive decrease in red cells. Th white blood corpuscles are increased in number, a mo interesting feature being an increase of the mononuclear The eruption appears usually on the third day, first o the wrists and ankles, then on the arms, legs, forehea back, chest, and, last and least, on the abdomen. A first the spots are bright red; they are macular an in size from that of a pin-point to that of a split pea From about the sixth to the tenth day of the disease the fail to disappear on pressure and are distinctly petechia in character. When convalescence is advanced desquama tion extends over the entire body. Of 121 cases whic occurred in or near the Bitter Root Valley 84 patient died. Since the discovery of the parasite Dr. Wilson an Dr. Anderson suggested the use of quinine in large doses preferably hypodermically. In five cases in which it wa used recovery took place. Quinine bimuriate, one gramme should be given every six hours hypodermically. The heart' power should be supported with strychnine and whisky The patient should be encouraged to drink large quantities o water to flush out the kidneys. For the fever warm sponge baths or packs are useful and refreshing. Milk, broths, lightly boiled eggs, and soft toast may be allowed. As soo as a person is bitten by a tick the insect should be removed and the place cauterised with 95 per cent. carbolic acid By applying ammonia, turpentine, kerosene, or carbolised vaseline the tick can usually be detached without trouble

HOMES FOR EPILEPTIC PATIENTS IN POOR CIRCUMSTANCES.

WE frequently receive inquiries from medical men who are endeavouring to find a home for some epileptic patient in poor circumstances. At present there is very limited provision for these distressing cases, but it may be convenient for our readers to mention some ways of dealing with them. The patients fall into two categories, those without mental impairment and those in whom there is temporary or permanent mental derangement. For the *sane* epileptics there are several excellent institutions.

1. The Colony for Epileptics at Chalfont, where provision is made for over 100 adult epileptics, both male and female, and also for children. Arrangements are made for educating the children and for employing the adults in market-gardening, carpentering, laundry work, and other useful industrial occupations. At present only working class patients are taken, for whom a payment of 10*s*. per week is required, but a reduction is made to boards of guardians. The colony is managed by the National Society for the Employment of Epileptics, whose office is at 12, Buckingham-street, Strand. All applications should be made to the secretary, Mr. G Penn Gaskell.

2. The Home for Epileptics, Maghull, near Liverpool This home has been open for 14 years and at the end of the year had 174 inmates. Like the Chalfont Colony the inmates are lodged in several homes on a farm and they are chiefly employed in out-of-door pursuits, such as market-gardening. At Maghull provision is made not only for working-class but also for second-class patients, and there is also limited private accommodation for first class patients. The rates of payment are: working-class patients, 7*s* 6*d*.; second-class patients, £1 1*s*.; and first-class patients from £2 2*s* upwards, according to accommodation. Application has to be made to the honorary secretary,

THE REVACCINATION BILL, 1904.

THE following is the full text of the Revaccination Bill which has been drafted at the instance of the Imperial Vaccination League :—

MEMORANDUM.

The experience of this and other countries which have enforced
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German Empire, for instance, for the past 25 years there has been very little epidemic small-pox, though the disease has been frequently introduced into the frontier towns and districts. The absence of epidemics is the result of the population being, with very few excep-

penalties,

A BILL

Intituled an Act to provide for the Revaccination of Children after the Age of Twelve.

Whereas it is expedient to provide for the revaccination of children after the age of 12 years,

magistrate of such conscientious objection.

(2) This section shall come into operation on the passing of this Act, but in its application to a child who shall have attained the age of 12 years before the passing of this Act there shall be substituted for the period of four months from the date of such child attaining the age of 12 years the period of four months from the passing of this Act.

3. Every public vaccinator who shall have performed the operation of revaccination upon any child, and have ascertained that the same has been successful, shall, within 21 days after the performance of the operation, transmit by po
certificate in such form as
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in respect of such revaccination shall be determined in accordance with Section 22 of the Vaccination Act, 1867, as incorporated with this Act.

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hereby incorporated with and declared to form part of this Act. Providing that in each and every of such incorporated provisions there

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14," which
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the age of 12.

8. The provisions of this Act with regard to revaccination shall apply to every child between the ages of 12 and 13 years, whether or not such child shall have been previously vaccinated, either in accordance with the provisions of the Vaccination Acts, 1867 to 1898, or otherwise, and whether or not such child shall have been granted a certificate of exemption in accordance with Section 2 of the

taken to repeal or modify any of the
ct, 1867 to 1898, with regard to re-

10. This Act shall not extend to Scotland or Ireland.

11. This Act shall come into operation on the first day of January one thousand nine hundred and five.

12. This Act may be cited as the Revaccination Act, 1904.

SCHEDULE.

Table of Provisions of the Vaccination Acts, 1867 to 1898, which are Incorporated with this Act by and subject to the Provisions of Section 7 of this Act.

Session and chapter.	Short title.	Provisions incorporated.
30 & 31 Vict. c. 84.	The Vaccination Act of 1867.	Sections 10, 18, 20, 22 23, 24, 25, 26, 28, 29, 30, 31, 33, 34, and 35.
34 & 35 Vict. c. 98.	The Vaccination Act of 1871.	Sections 4, 5, 6, 7, 11, 12, 14, 15, 16, 17, and so much of the Schedule of Repeals as affects Section 23 of the Vaccination Act, 1867.
61 & 62 Vict. c. 49.	The Vaccination Act of 1898.	Section 2, Subsection (1), Sections 3, 5, 6, and 9, and so much of the Schedule of Repeals as affects Sections 20 and 29 of the Vaccination Act, 1867, and Section 11 of the Vaccination Act, 1871.

ELEVENTH ANNUAL REPORT (FOR 1902) OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON.

IN THE LANCET of Jan. 16th, p. 171, we inserted a short preliminary notice of Mr. Shirley Murphy's eleventh annual report to the London County Council. At the time of going to press the book had been in our possession only a few hours so that any detailed examination of its contents was for the time out of the question; it was therefore laid aside for subsequent treatment in a series of articles of which the present is the first.

The report before us is the eleventh of a series, each successive number of which, while preserving the necessary uniformity, has shown very distinct progress as compared with its predecessors. This volume, with its six appendices, runs to about 160 folio pages. Like its predecessors it is divided into three sections, the first of which deals mainly with vital statistics, the second with county sanitary administration, and the third contains, in the form of appendices, the reports of the several assistant medical officers on matters of hygienic importance that have been submitted to the chief medical officer in the course of the year.

Mr. Shirley Murphy opens his report with a review of the question of overcrowding as it affects London. It will be remembered that in the report for 1901 a table was published similar in form to that in the present report but based on the census returns of 1891. Owing, however, to the changes effected by the Local Government (London) Act of 1899 the areas of the London sanitary districts in the two tables do not admit of strict comparison, consequently a new table is now submitted which has been supplied by the Registrar-General and which shows particulars of occupation of tenements of less than five rooms at the date of the last census in the sanitary areas of the county as constituted prior to the passing of the Act just referred to.

The term "overcrowding," as used in this report, is applied to those tenements of less than five rooms, in each room of which at the census more than two persons were found to be living or sleeping. In view of the present controversy as to the housing of the London poor it is satisfactory to find from Mr. Shirley Murphy's report that in the county, as a whole, the proportion of the population occupying "overcrowded tenements" has declined from 19·70 to 15 97 per cent. within the last ten years. This decline appears to have been shared by the occupants of each class of tenement but it is most marked—as it is obviously desirable that it should be—in tenements limited to one or two rooms. It is in the case of such tenements, and especially in that of those consisting of single rooms, that the question of overcrowding becomes sanitarily of chief importance. We are therefore gratified to learn that the most conspicuous feature in the movement of the London poor for the last ten years is "the shifting of the people from tenements of one or two rooms to the more ample accommodation provided in tenements of three and four rooms." Moreover, we note that only in the sanitary areas of Whitechapel, St. George's-in-the-East, and Mile End Old Town, which have been specially affected by "alien" immigration, has there been an increase in the proportion of the total population occupying overcrowded tenements of less than five rooms. We further note that even in these areas the proportion of the population occupying overcrowded single-roomed tenements has declined.

This question of overcrowding in certain of the slum districts of the metropolis is of vital importance in its relation to the health of the people; and, if we mistake not, the information relating thereto now made public by Mr. Shirley Murphy will be duly appreciated by the committee which is at present considering the subject of the alleged physical deterioration of the labouring classes.

In many of his past annual reports the county medical officer has directed attention to the almost continuous decline that has taken place in the birth-rate of London. Ever since the decade 1881–90, when the rate averaged 33·2 per 1000, there has been (with some few intermissions) a steady decline in the ratio of births to population. In 1902 the rate was only 28·5 and was the lowest since the institution of civil registration. In England and Wales generally there has likewise been a steady decline in the birth-rate since the decade just mentioned, but in that case the lowest rate recorded was that of 1901, a slight recovery having taken place in the rate of the following year.

As the London marriage-rate—i.e., the proportion of persons married to population—was higher in 1902 than in the preceding year it may reasonably be hoped that the returns for 1903, when they are available, will show a corresponding improvement in the birth-rate.

Coming now to speak of London mortality in the year 1902, we find that, as in recent past years, elaborate precautions have been taken to avoid fallacies arising from the use of crude rates of mortality—i.e., the mere proportions of deaths to persons living without correction either for deaths in public institutions or for differences in the composition of the population as regards age and sex. A table is given in the present report showing the death-rate of London for decennial periods from 1841–50 to 1881–90, and also for separate years from 1891 down to the present date. With respect to the latter series of years (though not to the decennial periods) it should be noted that the rates are fully corrected for institution mortality, i.e , by *excluding* the deaths of persons not belonging to but occurring in institutions situated within the county of London and by *including* the deaths of persons belonging to London but occurring in London institutions situated outside the administrative county. So likewise in dealing with the death-rate of the separate sanitary areas of London: for in his remarks on the mortality of the London boroughs Mr. Shirley Murphy is careful to state that the several published rates *include* the deaths of Londoners in the metropolitan workhouses, hospitals, and lunatic asylums outside the county, but *exclude* the deaths of non-Londoners in the Willesden Workhouse, the London Fever Hospital, the Metropolitan Asylums Board hospitals, and the Middlesex county asylums, all of which institutions are situated within the administrative county of London. In this way a degree of correction has been applied to the London death-rate which approaches completeness perhaps as nearly as possible under existing conditions of life. Perfection in this respect is, for obvious reasons, unattainable, for the deaths of strangers taking place in private houses within the metropolis cannot be extracted from the local death registers, neither can account be given of the deaths of Londoners occurring away from home; but we wish we could assume that the death-rates of all other English municipalities were corrected with equal completeness and care, for in that case statisticians would attach much greater importance to the comparative statements of local mortality than that which they are at present held to deserve. The general death-rate of London in the year 1902 was equal to 17·2 per 1000 persons living at all ages and of both sexes. It was therefore higher by 0·1 only than the rate of the year immediately preceding and with this exception was the lowest rate hitherto recorded for the metropolis as a whole. A useful chart is appended to this section of the report which illustrates graphically, and therefore to most persons more clearly than tabular statements can do, the curve of London mortality in recent and previous years, the rates for the last 60 years being shown in relation to a mean line represented by the rate of 22·4 per 1000. This chart indicates that, disregarding a few earlier years in which there have been oscillations above and below this mean, the death-rates since the year 1880 have been below, and, speaking generally, increasingly below, the mean line On the other hand, the rates in the years prior to 1880 were in most cases very considerably above the average. Comparing with the London death-rate the death-rates of those of the great towns of England which contain more than 200,000 inhabitants, as given in the weekly, quarterly, and annual returns of the Registrar-General, it is found that London had in 1902 a lower rate than Manchester, Liverpool, Birmingham, Leeds, Salford, and Newcastle, and in the decennium 1892–1901 had a lower rate than any of these towns except Bristol, Nottingham, Hull, West Ham, and Leicester. Comparing the London death-rate with that of the principal continental towns, as given in the Registrar-General's returns, it is shown that both in the period 1892–1901 and in the year 1902 the London rate exceeded that of any of these towns except Paris, St Petersburg, Vienna, Rome, and New York. A table is given showing the corrected rates of mortality in each of the metropolitan boroughs, a second shows the number of deaths occurring at the usual age groups, and a third gives the mean death-rates obtaining in London at the several age periods and for each sex in the ten years 1891–1900 and in the year 1902. The figures for the year 1902 are fully corrected for institution deaths and the rates for the period 1891–1900 are based upon figures which have been corrected for institution deaths on the basis of the experience of the four years 1897–1900.

In a footnote to the first of these tables Mr. Shirley Murphy observes: "A few of the age and sex factors shown here differ materially from the corresponding factors published in my last annual report. This is due to the fact that since the publication of my last report I have been able to obtain from the General Register Office the age and sex distribution of the population of several large workhouses and infirmaries which are situated outside the area from which their inmates are drawn, and the populations of these institutions have been added to the populations to which they properly belong and the factors recalculated." If the death-rate of London be taken as 1000 the death-rate of its several boroughs range from the lowest—669 in Hampstead and 773 both in Stoke Newington and in Lewisham—to the highest—1304 in Holborn and 1320 in Finsbury.

(*To be continued*)

AT the meeting of the Quain Society to be held in the anatomical theatre, University College, London, W.C., on Monday evening, Feb. 8th, at 8 o'clock, Sir Victor Horsley will read a paper, illustrated with photographs and lantern slides, on the Termination of the Fillet in the Optic Thalamus. Visitors are cordially invited.

Looking Back.

FROM

THE LANCET, *SATURDAY*, FEB. 4, 1826.

REVIEW.[1]

The Science of Surgery, or the Principles of Pathology made the basis of Medical and Surgical Practice. By W. W. SLEIGH, Esq., Lecturer on Anatomy, Physiology, and Surgery. 8vo. pp. 316 London, 1825 Anderson. Vol. I.

We are next presented with the case of the late Lord Byron, which the author has transcribed from the account given by Count Petro Gambia.

"April 9th, Lord Byron had suffered visibly in his health during the last day or two: the events just mentioned, and the weather, had made him more than usually nervous and irritable; but he this morning received letters from Zante and from England, which raised his spirits exceedingly. He had not been on horseback for three or four days; and though the weather was threatening, he resolved to ride. Three miles from the town we were overtaken by a heavy rain, and we returned to the town walls wet through, and in a violent perspiration. Two hours after his return home, he was seized with a shuddering: he complained of fever and rheumatic pains. At eight in the evening I entered his room; he was lying on a sofa, restless and melancholy. He said to me, I suffer a great deal of pain; I do not care for death; but these agonies I cannot bear. The medical men proposed bleeding, but he refused, observing, 'Have you no other remedy than bleeding?—There are many more die of the lancet than the lance.' Some of the physicians answered, that it was not absolutely necessary to bleed as yet, and I fear were too much inclined to flatter his prejudice against that operation. But there was not then the slightest suspicion of any danger, nor was there any at that moment.

10th. The next day he felt himself perpetually shuddering; but he got up at his usual hour, and transacted business; but he did not go from home.

12th. The next day he kept his bed with an attack of rheumatic fever.

13th. He rose from his bed the next day, but did not go out of the house. The fever appeared to be diminished; but the pains in his bones and head still continued: he was melancholy and very irritable. He had not been able to sleep since his attack, and he could take no other nourishment than a little broth, and a spoonful or two of arrow-root.

14th. The following day he got out of bed at twelve: he was calmer; the fever was less, apparently, but he was very weak, and suffered from the pains in his head. He wished, however, notwithstanding the weather was threatening, to go out on horseback, or at least in a boat; but his physicians dissuaded him. It was now thought that his malady was got under, and that in a few days he would be quite recovered. There was no suspicion of danger.

15th. The fever was still upon him; but the pains in his head and bones were gone. He was easier: he even wished to ride out; but the weather would not permit. Both on this day and the day before, he had entertained some suspicions that his complaint was of no ordinary nature, and that his physicians did not understand it; but he had not the least apprehension of danger.

16th. He was better; his complaint was following the usual course, and there was no fear.

17th. The next day I contrived to get to his room. His countenance at once awakened the most dreadful suspicions: he was very calm; he talked to me in the kindest manner. This was the first day that the medical men seemed to entertain serious apprehensions of the event: he was bled twice; first in the morning, and at two in the afternoon, and lost about two pounds of blood. He did not faint, and his eyes were lively, but he had no sleep; he perspired on the head and neck: and the disease seemed attacking the head. He was dreadfully distressed by want of sleep; and he now said to Dr. Millingen, 'I know that without sleep, a man must die or go mad: I would sooner die a thousand times.' He repeated this to his valet Mr. Fletcher.

18th. During the night of the 17th, he had some attacks of delirium, in which he talked of fighting; but neither that night nor the next morning was he aware of his peril. This morning his physicians were alarmed by appearances of inflammation of the brain, and proposed another bleeding, to which Lord Byron consented, but soon ordered the vein to be closed. Dr. Bruno entreated him, with tears in his eyes, to be again bled. No, he said: if my hour is come, I shall die whether I lose my blood or keep it.

Since their last consultation, the majority of the medical men had thought that the crisis of the disorder was now come, and that the principal danger now was the extreme weakness of the patient; and that restoratives should be administered. Dr. Bruno thought otherwise; but it was resolved to give a draught of claret and bark and opium, and to apply mustard blisters to the soles of the feet. Byron took the draught readily, but refused the blisters: accordingly I was sent for to persuade him, and I returned in all haste with Mr. Parry.

It was about six o'clock in the evening when he said—I want to go to sleep now; and immediately turning round, he fell into that slumber, from which, alas! he never awoke!

On my arrival, they informed me that he was asleep, and that he had suffered the blisters to be applied, not to his feet but elsewhere. The physicians augured well of this sleep—perhaps it was but the effect of the medicine, and only hastened his death."[2]

MIDWIVES IN THE RURAL DISTRICTS.

THE conference convened by the Rural Midwives' Association was held on Jan. 27th at 3, Grosvenor-place, London, S.W., to consider plans to meet the requirements of the Midwives Act in the various rural and provincial districts, including the training and supervision of midwives, assistance from local associations, and other points connected with the work. The chair was taken by Lord Belper, vice chairman of the County Councils' Association. After two hours' discussion the conference came to the unanimous conclusion that the requirements of the Midwives Act might be usefully met by adding midwives to the staffs of the local nursing associations and by training local women to work under a small committee, provided that in both cases their work was kept distinct from cases dangerous to their calling. Where localities were unable to meet the initial expense of training midwives it was considered that recourse must be had to grants from county councils and others but some payment by the patient ought always to be made to meet the current expenses. The conference further expressed its opinion that respectable women of the cottager class, carefully trained and working under supervision, would meet the requirements of the Act in rural districts. The last formal declaration of the conference was that the supervision of the local committee was advisable in every case and that it should be in communication with the local supervising authorities under the Act. Dr. R. Boxall said that to avoid pauperising the class of people who used midwives a plan should be adopted by means of which they should contribute some small sum to an institution for the payment of a medical man if required. He considered it a very detrimental practice to leave it to the midwife to call in a medical man when she thought it necessary and to reduce her fee when that occurred. He advised that the best of the women of the cottage class who had been already working as midwives in the rural districts should be sought out and put through a suitable training. Dr. W. S. A. Griffith, physician to Queen Charlotte's Hospital, pointed out that the work of the association was to assist in training the midwives who were to practise in the rural districts. These women would be poorly trained and quite unable to pay for their own training or to make a living from midwifery unless they had homes of their own and were independent of their earnings. The association must not place a strange midwife in a district and tell the people to go to her. They must take a woman from the district, train her, and then let her work among those who know her. Midwives for the rural districts must be trained in some less expensive method than obtained in the great metropolitan hospitals and yet they must be taught up to the standard of the Midwives Board. In his opinion the combination of elementary nursing, sanitation, cooking, with the preparation required from midwives, was the training at which the Rural Midwives' Association and all similar bodies should aim. Dr. F. R Cassidi of Derby gave an account of how they managed to set on foot a scheme for the training of midwives for the rural districts at the cost of about £20 for a year's training. One of the ladies present spoke of the success achieved in her district by supervising the work of the midwives through a local committee. Her remarks were met by another lady from Scotland who said that her experience was that the midwives were apt to supervise the local committee and in the particular case to which she referred the difficulty was met by appointing a fully trained and certificated nurse to superintend the work of the midwives, a plan which answered admirably. Dr. Constantine Holman in a few words persuaded the meeting to take his view that it was most certainly advisable to recommend that local committees should be intrusted with the supervision of the work in question.

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[1] A portion only is transcribed.

[2] The appearances on dissection also are set out in THE LANCET of Feb. 4th. 1826.

ASYLUM REPORTS.

Hereford City and County Asylum, Burghill (Report for the year ending March 31st, 1903).—The average number of patients resident during the year was 453, comprising 204 males and 249 females. The admissions during the year amounted to 161—viz., 67 males and 94 females. Of these, 109 were first admissions. Mr. C. S Morrison, the medical superintendent, states in his report that among the causes of insanity in the admissions were senile decay, neuropathic heredity, and alcoholic intemperance in descending order of frequency. "The remarks that have been made in previous years," adds Mr. Morrison, "as to the unfavourable type of admissions in regard to prospect of recovery may be repeated." The tendency among parochial officials and authorities to send to the asylum persons of unsound mind, especially those suffering from bodily disease and infirmity rather than serious mental disorder, shows no diminution. Of the patients admitted during the four years 1900–03 "109 were from 60 to over 80 years of age, the great majority requiring infirmary care and treatment." The number of patients discharged as recovered during the year amounted to 29, comprising 15 males and 14 females, or 6·4 per cent. of the average number resident. The deaths during the year amounted to 38, or 8·3 per cent. as calculated on the same basis. Of the deaths, two were due to epilepsy, two to pulmonary tuberculosis, three each to cancer and general paralysis, five each to bronchitis, cardiac disease, and senile decay, and the rest to other causes. An epidemic of scarlet fever occurred in the institution and affected 12 patients (six males and six females), 16 nurses, and two attendants. "That we had no death from scarlet fever was fortunate, especially as the majority who suffered were the younger members of the staff." Electric lighting was decided upon as best for the purposes of the institution and an electric installation has since been put up throughout the building. The Commissioners in Lunacy state in their report that all parts of the asylum were found to be in good order, that the wards were bright and cheerful, that the dormitories and bedding were clean, well ventilated, and well-cared for, that the patients seemed comfortable and contented, and that the medical case-books were well kept. The committee of management states in its report that the farm and dairy are in a satisfactory condition and draws attention to "the gradual extermination of tuberculosis in the herd of dairy cows which has never been healthier than at present." In consequence of the increased number of patients under care the committee has found it necessary to appoint a third medical officer to the institution.

Wilts County Asylum (Report for the year ending March 31st, 1903).—The average number of patients resident during the year was 938, comprising 425 males and 513 females The admissions during the year amounted to 162—viz., 73 males and 89 females. Of these 137 were first admissions. Mr. J. Ireland Bowes, the medical superintendent, states in his report that the number of hopeless and incurable cases among the admissions continued to increase yearly, particularly as unions no longer afforded the relief that they did years ago. Hereditary predisposition and alcoholic intemperance were among the most important causes of insanity in the admissions. 15 were epileptics and a large proportion were said to have made attempts at suicide. The number of patients discharged as recovered during the year amounted to 45—viz, 15 males and 30 females, or 4·8 per cent. of the average number resident. The deaths during the year amounted to 70, or 7·4 per cent. as calculated on the same basis. Of the deaths three were due to cerebral softening associated with hemiplegia, three were due to bronchitis, four to epilepsy, eight to senile decay, ten to general paralysis of the insane, 13 to cardiac disease, 17 to pulmonary and other forms of tuberculosis, and the rest to other causes. The cause of death was verified by post-mortem examination in 54 cases. A male patient suffering from delusions of persecution secretly secured possession of an old razor thoughtlessly left in an unlocked drawer in the room of a junior attendant and with this instrument he made a murderous attack on a fellow patient whose throat he attempted to cut when his victim was asleep. The injury was serious but did not prove fatal. The health of the institution has been good throughout the year apart from the occurrence of isolated cases of dysentery and erysipelas. The Commissioners in Lunacy state in their report that the wards were bright, cheerful, and clean, that the dormitories were well ventilated, that the patients seemed physically in good health and fair condition, and that the medical case-books and records were particularly well kept. The committee of management states in its report that a new detached block for female patients is in process of erection and that a new waiting room and the isolation hospital have been completed during the year. Owing to the continued high price of most necessaries used at the asylum and to the increase in the rates the committee was obliged to raise the weekly rate of maintenance per patient to 10*s.* 6*d.*, as against 9*s.* 11*d.* during the previous year.

MEDICINE AND THE LAW.

The Cold Weather and the Factory Acts.

A COMPANY called the Eburite Paper Company, 35, Red Lion-street, was fined £10 and 18*s.* costs at Bow street police-court on Jan. 22nd for failing to take measures for securing a reasonable temperature in its workrooms. On Dec. 31st, 1903, when, it will be remembered, there was a spell of extremely cold weather, Miss Vines, a factory inspector, found women and girls at work in rooms upon the company's premises, two of which were at 42° F. and one at 45°. The magistrate, Mr. Fenwick, characterised the offence as a bad one of its kind, which it certainly was, and imposed further penalties of 40*s.* upon the same defendants upon each of three summonses for employing girls under 16 years of age without medical certificates of their fitness for employment in the factory.

Street Locomotives.

Attention was recently called in THE LANCET to the increased number of locomotives to be seen and, at night, heard drawing trucks through the London streets, to the heavy weights allowed to be treated thus, and to the annoyance and disturbance caused by the resulting noise and vibration. Driven by sober men these engines are terrifying to horses and consequently dangerous both to persons driving and to foot passengers. A man in charge of such an engine drawing a truck behind it was recently stopped by a policeman after he had driven on the wrong side of a street refuge and had proceeded on his way at a rate described as about seven or eight miles an hour. He was sentenced at Clerkenwell police-court on Jan. 21st to a month's imprisonment and may consider himself lucky that he is not lying under remand on a charge of manslaughter.

Corporal Punishment and Crimes against Women.

Grand juries frequently make "presentments" at country assizes recommending legislation to enable rape and kindred offences to be punishable by flogging, and this penalty was actually ordered to be inflicted by Mr. Justice Darling in a recent case upon the Western Circuit where the prisoner, by pleading guilty to an indictment charging him with robbery with violence, enabled the learned judge to take advantage of the law passed with a view to garotting. The prisoner, a labourer, aged 27 years, and married, pleaded guilty to three indictments charging him with an assault with intent to ravish committed upon one woman, with an indecent assault committed upon another, and with using personal violence to a third and robbing her of 12*s.* Three other women had identified him as having indecently assaulted them and the police at Bournemouth had had many complaints of similar acts committed in the same neighbourhood which had ceased since his arrest and imprisonment. In sentencing him to receive 24 lashes with the cat and to be imprisoned for six months the judge made it abundantly clear that it was for the offences of lust that he was ordering personal chastisement and not for the robbery for which technically it was to be inflicted. Many will approve of the course taken but at the same time there is another side to the question and the fact that the prisoner had had six months' imprisonment before for an assault upon a girl at Bournemouth, coupled with the series of disgusting and cruel outrages perpetrated upon women in the same locality, go to show a condition of mind inconsistent with perfect sanity. Moreover, it was proved that on one occasion the man was actually arrested by the Bournemouth police and charged with being a wandering lunatic, and although the medical evidence on that occasion did not justify his certification and detention mental conditions change rapidly, and the arrest upon the charge of insanity shows, at any rate, the view held as to his condition by those who then took him into custody. The carrying out of a sentence of severe corporal punishment upon a man mentally defective is undesirable from the point of view of humanity and the release of a man with an insane tendency to attack females after six months in prison and a flogging is hardly to be recommended in the interest of the public unless it is consider [illegible] inflicted will deter him from [illegible] worse crimes in the future. [illegible] would seem to demand at all events careful consideration on the part of judges with the assistance of evidence given by medical men of experience in such matters. On the other hand, a case which has just been tried by Mr. Justice Phillimore on the North Wales Circuit presents features which seem to demand corporal punishment if such a penalty is ever to be inflicted. In this instance three young colliers set upon a woman, 60 years of age, after dark, knocked her about, stripped her, outraged her, and tortured her. The judge characterised it as the worst case that he had ever tried and sentenced two of the ruffians to 12 years' penal servitude and the third to 15 years. In rape by a gang there can hardly be a question of the prisoners' mental responsibility and if a flogging had been ordered in the case of the three Welsh colliers few could be found to protest on grounds of humanity or justice.

Corporal Punishment in Board Schools.

The head-master of a board school at Hackney was recently fined 40*s.* with 23*s.* costs by Mr. Fordham for inflicting upon a pupil a caning which, in the opinion of the magistrate, was excessive although he had no doubt that the boy was disobedient and defiant. It appeared that there had been to begin with a dispute between the boy and an under-master as to whether the former deserved a minor punishment and resentment on the one side coupled with a determination to enforce submission on the other led to about 20 strokes being eventually inflicted. Whether great force was used or not there was medical evidence of considerable bruising given by Dr. Leslie Durno whose experience as divisional surgeon of police would not be likely to cause him to take a sentimental view. It is, however, to be said that the buttocks are very easily marked by blows which otherwise leave little after-effect. Many men must now occupy positions as magistrates or school-masters who have in years almost forgotten by them played their usual games as schoolboys within a day or two after receiving punishment quite unconscious of backs which would have excited the horror and indignation of their female relatives. Mr. Fordham disclaimed all sympathy with the modern sentiment against corporal punishment in schools but no doubt was of opinion that there had been loss of temper caused by the obstinacy of an unruly boy rather than due recognition of a breach of discipline. With the difficulties under which board school teachers enforce discipline in the absence of all home training the public should fully sympathise. The minor punishment which the boy refused to submit to in the case before Mr. Fordham would have consisted of two "handers." Blows on the hand are far more likely to occasion injury than those on portions of the frame which, though sufficiently sensitive, are better adapted by nature to the purposes of chastisement and it would be interesting to know the precise nature of the "hander" intended to be given.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A COMITIA was held on Jan. 27th, Sir WILLIAM SELBY CHURCH, Bart., K.C.B., the President, being in the chair.

The following gentlemen having passed the required examination were duly elected and admitted as Members of the College: Sol Jervois Aarons, M.D. Edin.; David Forsyth, M.D. Lond., L.R.C.P. Lond.; Alfred Ernest Jones, M.D. Lond., L.R.C.P. Lond.; and Lindley Marcroft Scott, M.A., M.D. Aberd.

Licences to practise medicine were granted to 112 gentlemen who had passed the required examinations.

Diplomas in Public Health jointly with the Royal College [illegible] re granted to the following [illegible] Edmund Bridger, L.R.C.P. [illegible] n Caddy, M.D., B.S. Lond., L.R.C.P. Lond., M.R.C.S. Eng.; Alfred George Caldwell, M.D., B.Ch. R.U.I.; John William Edward Cole, B.C. Cantab., L.R.C.P. Lond., M.R.C.S. Eng.; Beaumont Harry Comerford, L.R.C.P. Lond., M.R.C.S. Eng.; Archibald Sinclair David, L.R.C.P. Lond., M.R.C.S. Eng.; Arthur Sydney Downton, L.R.C.P. Lond., M.R.C.S. Eng.; Leslie Winter Dryland, L.R.C.P. Lond., M.R.C.S. Eng.; Gilbert Elliott, L.R.C.P. Lond., M.R.C.S. Eng.; Alexander Robertson Falconer, M.B., B.Ch. New Zealand; Major Ernest Carrick Freeman, R.A.M.C., L.R.C.P. Lond., M.R.C.S. Eng.; Gerald Dudley Freer, M.B. Lond., L.R.C.P. Lond., M.R.C.S. Eng.; David Arthur Hughes, L.R.C.P. Lond., M.R.C.S. Eng.; Major Malcolm Albert Ker, I.M.S., M.B., C.M. Edin.; John Everard Linnell, M.B., B.C. Cantab.; Brinley Richard Lloyd, L.R.C.P. Lond., M.R.C.S. Eng.; Sidney Isaac Pritchett, L.R.C.P. Lond., M.R.C.S. Eng.; Charles Ryley, L.R.C.P. Lond., M.R.C.S. Eng.; Major Arthur Ernest Smithson, R.A.M.C., M.B., B.C. Cantab., L.R.C.P. Lond., M.R.C.S. Eng.; Percy Taylor Humphrey Stedman, M.B. Lond., L.R.C.P. Lond., M.R.C.S. Eng.; Arthur Hitchings Thomas, L.S.A.; George Smith Wallace, M.B., Ch.B. Glasg.; and Edward Croft Watts, M.D., C.M., F.R.C.S. Edin.

The PRESIDENT announced that Dr. E. Klein had been appointed to deliver the first Dr. Horace Dobell lecture in November of this year. Also that Dr. J. F. Payne would deliver the FitzPatrick lecture probably on Nov. 8th or 10th of this year.

The following communications were received:—1. From Dr. Hugh Walsham, asking leave from the College to publish his Weber-Parkes prize essay. Permission was granted. 2. From Dr. George Oliver, offering to present £2000 to the College in trust to endow a lectureship or prize, with a view to encourage the application of physiological knowledge to the prevention and cure of disease and the prolongation of life. The terms of the trust were given and the award will be termed the "Oliver-Sharpey Prize," according to the desire of the donor. The thanks of the College were returned to Dr. Oliver for his liberality, his offer having been gratefully accepted. 3. From the secretary of the Physical Deterioration Committee of the Privy Council, asking the College to nominate a physician to give evidence before it. A further communication contained a request that a physician should be nominated to give evidence on the occurrence of lunacy amongst the poorer classes. Dr. Eustace Smith, Dr. H. Ashby, and Dr. R. Hutchison were nominated to give evidence on matters connected with physical deterioration and it was left to the President to nominate a physician to give evidence on the occurrence of lunacy. 4. From the President of the General Medical Council, asking the opinion of the College on certain questions raised by the report of the visitors on the whole series of first examinations of the licensing corporations inspected. The matter was referred to the committee of management.

The College seal was set to a "declaration of trust," accepting on the part of the College a sum of £500 Consols in trust to endow for a term of years a lectureship at the College to be called "The Dr. Horace Dobell Research Lectureship," the conditions having been already agreed upon.

Dr. E. Markham Skerritt, Dr. Samuel H. West, Dr. J. Abercrombie, and Dr. J. Kingston Fowler were appointed Councillors, and it was further resolved that Dr. P. H. Pye-Smith should remain on the Council for a second period of two years.

It was announced that the Council had appointed Dr. T. M. Legge, one of His Majesty's inspectors of factories, to be Milroy lecturer for 1905. The subject of the lectures will be Industrial Anthrax.

A report, dated Dec. 17th, 1903, was received from the committee appointed on July 2nd, 1903, on the Physical Disability of Army Recruits. The committee had considered a communication received from the Director General of the Army Medical Service and the following motions had been adopted:—

> The committee of the Royal College of Physicians appointed by the College, July, 1903, having taken into consideration the further documents submitted to them, are of opinion that an inquiry into the present extent and causes of the alleged physical disability for military service of certain classes of the population is desirable.
>
> In their former report the committee considered that sufficient data were not available for forming a judgment on the extremely complex question of the occurrence or not of progressive degeneration in the classes from which recruits are mainly drawn, and the supplementary matter now brought before them does not suggest any modification of their former opinion.

A report was received from the committee appointed on Oct. 29th last to consider a Norwegian report on beri-beri occurring on board ships submitted by the Board of Trade. The report was adopted as the answer of the College to the Board.

A report was received and adopted from the representative of the College (Dr. Norman Moore) on the General Medical Council on the proceedings of the Council affecting the College at its session in November last.

The quarterly report of the College finance committee was received and adopted.

A report was received from the committee of management, dated Dec. 7th, 1903. The committee recommended that the municipal schools at Gloucester should be added to the list of institutions recognised by the Examining Board in England for instruction in chemistry, physics, and practical chemistry. The report was adopted.

A report was received and adopted from the laboratories committee, dated Dec. 4th, 1903.

Books and other publications presented to the library during the past quarter were received and thanks were returned to the donors.

The annual returns by the examiners of the results of the examinations for the Licence in the year 1903 were received.

The PRESIDENT then dissolved the Comitia.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8512 births and 5669 deaths were registered during the week ending Jan. 30th. The annual rate of mortality in these towns, which had been 20·3, 19 0, and 18 1 per 1000 in the three preceding weeks, rose again last week to 19·4 per 1000. In London the death rate was 19·5 per 1000, while it averaged 19·3 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 6·4 in Hornsey, 8 6 in Hastings, 9·4 in King's Norton, 10 4 in Wallasey, 11·4 in Willesden, 12·0 in Northampton, and 12 2 in Leyton. The 5669 deaths in these towns last week included 497 which were referred to the principal infectious diseases, against 462, 450, and 427 in the three preceding weeks; of these 497 deaths 167 were referred to whooping-cough, 114 to measles, 77 to diphtheria, 70 to diarrhœa, 39 to scarlet fever, 28 to "fever" (principally enteric), and two to small-pox. No death from any of these diseases was registered last week in Hornsey, Hastings, Bournemouth, Southampton, Burton-on-Trent, King's Norton, Smethwick, Barrow-in-Furness, or Tynemouth, while the highest death-rates from the principal infectious diseases were recorded in Great Yarmouth, Walsall, Warrington, Bury, Preston, West Hartlepool, Rhondda, and Swansea. The greatest proportional mortality from measles occurred in Warrington, Bury, Rochdale, Blackburn, Preston, Leeds, and Cardiff; from scarlet fever in Devonport and Walsall; from diphtheria in East Ham, Walsall, Aston Manor, and St. Helen's; from whooping-cough in Great Yarmouth, Coventry, Bolton, Bury, West Hartlepool, Gateshead, Merthyr Tydfil, and Swansea; from "fever" in Devonport, Walsall, and Rhondda; and from diarrhœa in Preston. Of the two fatal cases of small-pox registered in these towns last week one belonged to Manchester and one to Gateshead. The Metropolitan Asylums hospitals contained 21 small-pox patients on Saturday last, Jan. 30th, against 26, 26, and 24 on the three preceding Saturdays; four new cases were admitted during last week, against six, four, and three in the three preceding weeks. The number of scarlet fever cases remaining under treatment in these hospitals and in the London Fever Hospital, which had been 1659, 1660, and 1677 at the end of the three preceding weeks, had declined again to 1651 at the end of last week; 168 new cases were admitted during the week, against 201, 195, and 180 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 433, 406, and 353 in the three preceding weeks, rose again last week to 429, and were 74 above the number in the corresponding period of last year. The causes of 87, or 1·5 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bolton, Leeds, Newcastle-upon-Tyne, Cardiff, and in 39 other smaller towns; the largest proportions of uncertified deaths were registered in Willesden, Reading, Birmingham, Smethwich, Coventry, Liverpool, Bootle, Manchester, Sheffield, Sunderland, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 23·2, 20·2, and 19·8 per 1000 in the three preceding weeks, further declined to 18·4 per 1000 during the week ending Jan. 30th, and was 1 0 per 1000 below the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 11·2 in Greenock and 14·3 in Aberdeen, to 18·8 in Leith and 31·3 in Dundee. The 608 deaths in these towns included 17 which were referred to diarrhœa, 16 to whooping-cough, 12 to measles, seven to diphtheria, six to scarlet fever, three to small-pox, and one to "fever." In all 62 deaths resulted from these principal infectious diseases last week, against 53, 63, and 54 in the three preceding weeks. These 62 deaths were equal to an annual rate of 1·9 per 1000, which was 0 2 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of diarrhœa, which had been 15, 13, and 14 in the three preceding weeks, further rose last week to 17, of which eight were registered in Glasgow and seven in Dundee. The deaths from whooping-cough, which had been 15, 15, and 11 in the three preceding weeks, rose again to 16 last week, and included four in Aberdeen, three in Edinburgh, three in Dundee, and three in Leith. The fatal cases of measles, which had been 13, 23 and 19 in the three preceding weeks, further declined last week to 12, of which six were registered in Glasgow, three in Dundee, and two in Paisley. The deaths from diphtheria, which had been three in each of the three preceding weeks, increased to seven last week, and included five in Glasgow. The fatal cases of scarlet fever, which had been one in each of the three preceding weeks, rose last week to six, of which three occurred in Glasgow. The deaths from small-pox, which had been three, five, and two in the three preceding weeks, increased again to three last week, and were all recorded in Glasgow. The deaths referred to diseases of the respiratory system in these towns, which had been 213, 198, and 167 in the three preceding weeks, further declined last week to 128, and were 45 below the number in the corresponding period of last year. The causes of 20, or more than 3 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27·8, 28·8, and 26·0 per 1000 in the three preceding weeks, further declined to 25·6 per 1000 during the week ending Jan. 30th. During the past four weeks the death rate has averaged 27 1 per 1000, the rates during the same period being 18 8 in London and 17 9 in Edinburgh The 186 deaths belonging to Dublin registered during the week under notice, showed a decline of three from the number in the preceding week and included 14 which were referred to the principal infectious diseases, against 23, 10, and eight in the three preceding weeks; of these, 11 resulted from whooping cough, one from measles one from "fever," and one from diarrhœa, but not one from small pox, from scarlet fever, or from diphtheria These 14 deaths were equal to an annual rate of 1 9 per 1000 the death rates last week from the principal infectious diseases being 1 5 in London and 0 9 in Edinburgh The fatal cases of whooping cough, which had been nine, five, and five in the three preceding weeks, rose again last week to 11 The 186 deaths in Dublin last week included 29 among children under one year of age and 50 among persons aged 60 years and upwards, the deaths of infants showed a considerable decline from the number in the preceding week while tho o of elderly persons decreased but slightly Three inquest cases and six deaths from violence were registered, and 75 or more than two fifths, of the deaths occurred in public institutions The causes of 10 or more than 5 per cent, of the deaths registered in Dublin last week were not certified

THE SERVICES

Royal Navy Medical Service

The following appointment is notified —Civil Practitioner J P Fall to be Surgeon and Agent (dated Jan 30th, 1904)

Royal Army Medical Corps

Major A. J Luther and Captain G A Moore on arrival in India are posted to the Bengal Command Colonel J J Morris joins the Southern District Major J Will is appointed Principal Medical Officer in the East African and Uganda Protectorates

Army Medical Reserve of Officers

Surgeon Major G H Darwin having resigned his Volunteer appointment ceases to belong to the Army Medical Reserve of Officers Surgeon Captain W P Peake having resigned his Volunteer appointment ceases to belong to the Army Medical Reserve of Officers

Volunteer Corps.

Rifle 4th Volunteer Battalion, the Norfolk Regiment Surgeon Captain W G Galletly resigns his commission (dated Feb 3rd, 1904) 1st Volunteer Battalion the Suffolk Regiment Surgeon Captain F Ward resigns his commission (dated Feb 3rd, 1904) 1st Lanarkshire Surgeon Lieutenant J G Andrew to be Surgeon Captain (dated Feb 3rd, 1904) 1st Volunteer Battalion the Royal Sussex Regiment Ernest Rivay Hunt to be Surgeon Lieutenant (dated Feb 3rd, 1904)

Royal Army Medical Corps (Volunteers)

The Aberdeen Company Lieutenant A H Lister to be Captain (dated Feb 3rd, 1904)

Volunteer Infantry Brigade Bearer Company

Sussex and Kent Captain O Jacomb Hood is appointed to command under paragraph 55A Volunteer Regulations (dated Feb 3rd, 1904)

The New Army Reorganisation Scheme

The three members of the War Office Reconstitution Committee have certainly lost no time in making up their minds on the matters submitted for their consideration and in expressing in clear and perspicuous terms the conclusions at which they have arrived Nor can it be said that the measures proposed by the Reconstitution Committee as outlined in its report are not of a sufficiently radical and comprehensive nature for they assuredly are and they are made, moreover, with the approval of the King The committee evidently set about its work in a thoroughly earnest and determined way from the standpoint that the British Empire is pre eminently a great naval Indian, and colonial power, and, so far as the War Office is concerned, with a single eye to adapting that institution to the needs of war The new scheme is a bold and comprehensive one It proposes the abolition of the office of Commander in Chief and the appointment of an Inspector-General to replace him, the creation of an army board on the model of the Board of Admiralty, together with sweeping changes at the War Office, to be carried out with the least practicable delay—because new measures demand new men That radical organic changes are called for and are to be regarded, indeed, as essential to any scheme of Imperial defence most people believe No final judgment of the scheme can be pronounced, however, until we know more of it in detail and of the proposed method of giving effect to it—for some knowledge of men, as well as of measures, is required The most capable men must be selected to fill the new official posts and to supply the places of any displaced and not simply those who happen to possess the greatest interest or high titular rank and distinction Meanwhile, it may be safely said that the new scheme promises well and has been favourably received. It remains to be seen how far and in what respects the Army Medical Services will be affected by the great and important changes proposed by the War Office Reconstitution Committee It is just possible that the ultimate result may be some attempt at the organisation of an Imperial Medical Service

Royal Army Medical Corps Examination

The undermentioned gentlemen were successful at the recent examination in London for commissions in the Royal Army Medical Corps 58 candidates entered

	Marks
G F Rugg M R C S Eng L R C P Lond	590
D S B Thomson B A M B B Ch, B A O Dub	583
A S Arthur M B B S Durh	562
J Fairbairn M B B Ch Edin	555
R G Anderson M R C S Eng L R C P Lond	542
L Bousfield B A M B B C Cantab M R C S Eng L R C P Lond	542
J H Douglass B A M D B Ch B A O D P H Dub	540
D Le Bas M R C S Eng L R C P Lond	537
R R Lewis M R C S Eng L R C P Lond	532
C H Turner M R C S Eng L R C P Lond	527
F H N ke M B B S Lond M R C S Eng L R C P Lond	526
G I Cathcart M R C S Eng L R C P Lond	520
E C Whitehead M B Lond M R C S Eng L R C P Lond	519
T O Lucas B A Cantab M R C S Eng L R C P Lond	518
J A Turnbull L R C P & S Edin L F P S Glasg	511
W Wiley B A, M B B Ch B A O Dub	509
R B Hole M B B Ch Edin	508
A L Otway B A M B B Ch Dub	506
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The Imperial Navy of Japan

Baron Saneyoshi F R C S Eng, chief of the Bureau of Medical Affairs in his report for the year 1901 states that the health of the Imperial Navy of Japan was generally very satisfactory The mean daily force in the service was 26 469 persons, which shows an increase of 3172 as compared with the preceding year The number of cases of disease and injury reported shows as a result of the expansion of the navy, an increase of 2237 cases when compared with 22 817 cases of the preceding year and the number of days sickness gives an increase of 48 750 days when contrasted with 536 115 of the previous year But the ratio of men sick daily and that of cases per 1000 of force show a decrease In the group of diseases of the urinary and generative systems there were 456 cases which give a ratio of 17 23 per 1000 of force, being an increase of 3 09 as compared with the previous year There was no case of death recorded Invalidings numbered four, giving a ratio of 0 15 per 1000 of force and being an increase of 0 02 as compared with the preceding year The total number of cases of venereal diseases was 5926 the ratio per 1000 of force being 223 88, which shows a decrease of 5 76 when compared with the previous year There was no case of death but there were 13 persons invalided from the service the ratio per 1000 of force being 0 49 which gives an increase of 0 02 over the preceding year Venereal diseases are most numerous of all the cases every year and they show a ratio of 23 75 per cent. of the total number of all the cases recorded. Arranged in order of number they are as follows: gonorrhœa and its sequelæ, 1918; soft chancre, 1587; bubo, 1316; secondary and tertiary syphilis, 800; and hard chancre, 305.

RECRUITING FOR THE ARMY.

The recent report of the Inspector-General of Recruiting was not altogether pleasant reading, as our readers are aware, for those who have the interest of the army at heart. Much stress was laid in that report upon the great importance of inquiring into the reasons for rejections of recruits on physical grounds in order to discover by what means the number of medical rejections can be lessened or obviated. The Inspector-General has since issued a memorandum to recruiting authorities which states that the question of physical degeneration, recently brought prominently forward, has drawn attention to the great difference in the numbers of medical rejections in the various recruiting centres, mainly attributable, it is believed, to the variety of systems employed. With the view of securing a fuller and more accurate system certain changes have been introduced. Quarterly returns are to be rendered in future from regimental districts embodying various new points of information. All recruiters are to be carefully instructed in carrying out preliminary examinations, so that the time of medical officers may not be wasted in examining men who are obviously ineligible.

Correspondence.

"Audi alteram partem."

THE PROPOSAL TO PROHIBIT MEDICAL PRACTITIONERS FROM DISPENSING.

To the Editors of THE LANCET.

SIRS,—I have read with serious interest your leading article in THE LANCET of Jan. 23rd, p. 242, upon the suggestion to prohibit medical men dispensing their own medicines. At first I must confess to having felt somewhat staggered by the suggestion, but upon further consideration the difficulties associated with such an innovation rapidly disappeared from my mind and I have come to regard such a prohibition as salutary, necessary, and progressive. That it would raise the general tone of the profession there can be no doubt. Undoubtedly, also, it would rouse the energies of many a medical man and instead of their slipshod manner of practice—only, alas, too frequent—it will compel them to furbish their professional knowledge and to make readier and more careful use of the manifold methods of arriving at a diagnosis or be left behind in the ever-heated struggle for success. Before, however, so great a strain is thrown upon a hard-worked profession by such a prohibition [illegible] Parliament [illegible] bounden duty of Imperial [illegible] ciently the interests and welfare of our [illegible] be absolutely protected from the irr[illegible] of the "prescribing" druggist and [illegible] ruin to many medical men in the [illegible] vested the General Medical Council [illegible] Society must have full power to [illegible] practice, injurious alike to us and the [illegible]

There is much food for reflection [illegible] suggested prohibition. Consider, [illegible] a very usual type of general practice [illegible] patients and club patients. In any [illegible] safeguards suggest themselves: 1. [illegible] proved to have prescribed for any [illegible] fined and that for a second offence [illegible] his name [illegible] should be [illegible] by the Phar[illegible] Practitioner [illegible] friendly society [illegible] of mixture like a druggist. It is true that somewhat by the less frequent home consultation, but the we shall have no drug bill to meet at the end of the year. It may drive many more to the out-patient departments of our hospitals, but this will be met by keen competition among the dispensing chemists and the hospital authorities will be compelled to expel from such out-patient departments the many hundreds of "well to-do" poor who are quite able to [illegible] a half-crown or five-shilling fee to their medical man. To the general practitioner who does his own dispensing it will mean a gain of two hours daily for rest, recreation, or reading; to the man who keeps a dispenser it will mean a saving of the dispenser's salary.

I am confident that nothing but good will come of such a prohibition. We have got rid of the unqualified assistant, so much the better for our patients. If we can get rid of dispensing, so much the better for us. It will prove, I [illegible], a great stimulus to all kinds and classes of friendly societies, for women and children as well as men. The working classes will naturally seek refuge in [illegible] from the [illegible] expense of private medical treatment. It will make [illegible] tend to make them more provident, and so prove a universal good. Provident [illegible] will spring up all over the country and therefore the [illegible] and welfare of the medical men appointed thereto must be settled and legally assured in advance. What can be done in America, in France, and in Germany can be done here. The tone of general practice cannot [illegible] in the estimation of the poorer classes than at the present. These dispensaries and "open surgeries" have [illegible] It is time that an advance was made towards a higher grade of practice.

I am, Sirs, yours faithfully,
F. [illegible], M.D. Durh.

London, S.E., Jan. [illegible], 1904.

To the Editors of THE LANCET.

SIRS,—The settlement of this vexed question by the pro[illegible] legislation must, it seems to me, be [illegible] of its relation to our [illegible] medical efficiency. In France [illegible] dispense. We have [illegible] however, of the social position [illegible] tioner in his country [illegible] England it is distinctly [illegible] being greater it is decidedly [illegible] to help his patients being [illegible] lowered. The French medical [illegible] laws so constructed to [illegible] who qualifies in medicine and in pharmacy [illegible] the latter as a profession [illegible] have had with French [illegible] freer and more liberal [illegible] often are driven [illegible]

[illegible] last week fr[illegible]
[illegible] glish towns.
[illegible] d been 15, 13, and
[illegible] further rose last week to
[illegible] ed in Glasgow and seven
[illegible] whooping-cough, which had
[illegible] e preceding weeks, rose agai
[illegible] ed four in Aberdeen, three in
[illegible] nd three in Leith. The fatal
[illegible] been 13, 23 and 19 in th
[illegible] her declined last week to 12,
[illegible] in Glasgow, three in Dundee,
[illegible] from diphtheria, which had
[illegible] e preceding weeks, increased t
[illegible] d five in Glasgow. The fatal ca
[illegible] een one in each of the three pre
[illegible] six, of which three occurred
[illegible] small-pox, which had been
two in the three preceding weeks, increas
last week, and were all recorded in Glasg
referred to diseases of the respiratory
towns, which had been 213, 198, and 1
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To the Editors of TH[illegible]

SIRS,—[illegible] comments on the non-[illegible] Medical Act Amendment Bill [illegible] as you say, show's [illegible] conditions of medical practice in country places. I wish the medico-political committee would understand that: 1. A medical man is a perfectly competent dispenser of his own prescriptions, and in country places, where some drug must at times be wanting, he is the best dispenser, for he can substitute another with no injury to the patient. 2 That there is nothing disgraceful in a medical man dispensing. There is nothing more *infra dig.* in mixing drugs than in administering an enema or washing a wounded hand in soap and water. If there is a perfectly trustworthy nurse at hand the medical man gladly leaves it to her, but in doing anything for the good of his patient the practitioner does not lose dignity. 3. That all medical men find dispensing irksome and that they readily and joyfully avoid it when circumstances permit. They can be trusted to decide when it is advisable to do so, being far better judges of local conditions than the General Medical Council can ever be.

The country practitioner has the highest interest in the efficacy of his drugs and can be trusted to keep these, his weapons, in the best working order. It is not to the interest of his patients that they should be compelled to go to the village druggist, who is often a man in a very small way of business, and one who ekes out a precarious living by selling wines, groceries, and the like, and also, it cannot be denied, by prescribing for all sorts of ailments. Suppose the village druggist goes in for early closing must the medical man also "close"? He is not much use without his armoury. How about branch surgeries? How far from the sacred village drug shop may the practitioner dare to dispense medicine without fear of being guilty of infamous conduct? Must he travel at least three miles so as to be a *bonâ-fide* traveller? Suppose the druggist does not, and will not, keep certain expensive drugs that the medical man uses, can the latter dare to buy and to dispense these? Suppose a druggist gets an injunction from the General Medical Council forbidding the medical man to dispense and then starts a store and fails, how long must the medical man deal with him? Until the last dose is sold or until he is bankrupt? Such a Bill would flood the country with young men trying to start small shops and I fear the public would suffer severely, for good and fresh drugs are very expensive. Who is to report to the General Medical Council that a medical man is dispensing where there is room for a druggist? Can any one; and will the poor practitioner have to fight the case? [illegible]

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have any influence with and for whose family I have dispensed many bottles of medicine, that it is a deliberate attempt by an ignorant majority to limit the usefulness of the country practitioner, and that its effect in the country will be to drive the poor, who cannot afford a double fee, to the prescribing druggist; also that it will greatly increase the Poor-law expenses and will almost ruin many friendly societies. I should think the clause was drafted by a lawyer who was totally ignorant of medical work in the country and who thought that medical men's drugs could be distributed in the leisurely way that legal documents are produced. After your clearly expressed opinions and the excellent letter of Dr. James Oliver I do not think there is much danger of this absurd clause ever becoming law, but practitioners should be on their guard, for an almost equally objectionable clause was attached to the Vaccination Bill and only objected to after it was too late.

I am, Sirs, yours faithfully,

PAGANUS.

Jan. 25th, 1904.

To the Editors of THE LANCET.

SIRS,—Many of us must be grateful to you for your leading article on this subject calling attention to the Draft Medical Act Amendment Bill of the British Medical Association, which deserves the word "impracticable" you apply to it. To compel medical men to give up all dispensing after the centuries it has been a custom, at short notice or none, is going rather too far and too fast—even if the institution is "to raise the tone and status of the profession." Would it really add to the dignity of the profession? Much of our work—obstetrical, surgical, and medical—is of such a nature that those who practise it can never hope for an exalted position in the public estimation. Compared with the other professions—army and navy, Church and law—it must always be content with a humbler status. "No man can be a hero to his valet" and much less can a valet be hero to his employer. The personal service often required of medicine is of such familiar kind as to engender a feeling like contempt in the recipient and many patients will not have as medical attendant one whom they may meet in society; therefore, as everyone must see from the very nature of their work, medical men must be content to find their recompense in other ways than in pride of station and social dignity. As you remark, it would be impossible to carry on a practice in a poor neighbourhood if the practitioner was debarred from dispensing, and even in fair mixed practice it would be impossible to keep the poorer patients. A druggist might be arranged with to supply the medicines. The usual charge in such cases is 1*d* an ounce dose; three doses a day for a week would cost 1*s*. 9*d*., not to speak of pills, draughts, &c , that might be necessary. A good fee from poorer patients—mechanics, artisans, shop hands, and clerks—would be half-a-crown, and this after paying for the medicine would leave the medical man 9*d*. Is this a sufficient reward for a medical man's services? The patient it might [illegible], should

[illegible] s fee to

[illegible] t do so.

[illegible] dispensaries. As it is these institutions hardly pay the medical attendant anything when the cost of medicine, &c., is deducted as dispensed by himself They would simply be impossible if it were necessary to arrange with a druggist for medicines. Do the authors of this Bill really mean to stop all dispensary and club practice? all the artisan and shop assistant work at present done? Where, then, would these folk go in illness? The hospital would be their only resource and yet we are hearing on all hands of how the out patient departments are overcrowded and abused by those able to pay something for attendance. How urgently necessary it is that many should be sent to the general practitioner to relieve the finances and the overworked staff of the hospitals, but it would be impossible for him to attend them if he were prohibited from dispensing. How would this course allay the "accidents," &c., that are complained of through the repetitions of prescriptions or their being handed on to persons they were not intended for? You say truly that preventing medical men from dispensing would be throwing a good deal of their practice into the hands of the counter prescribing druggist. Is this to benefit the profession or the public? Again, there is a considerable amount of capital invested in surgery fittings, appliances, bottles, &c., by the members of the profession. Suppose even half the medical men on the Register dispense their own medicines and the average value of a surgery is £50, are they to be summarily deprived of this asset without compensation? Those thousands of surgery fittings, &c , would be thrown on the market at once, and would therefore be unsaleable, especially as they would be useless in this country. Is there any provision in the Bill to compensate the medical man? Ought it not in justice to be done by the British Medical Association who is advocating this Bill?

Looked at, then, from any point of view it would be bad policy to prevent medical men from dispensing. The poor would be deprived of medical assistance and would be driven to the hospital or to the guardians. The better-to-do classes would have to pay for such hospitals and for their own medical attendance a great deal more than they have at present. The medical practitioner would have his surgery fittings, &c , compulsorily confiscated without any fault of his own and without compensation and be deprived of all his poor patients. And to balance all this we are told that the tone and status of the profession would be improved. But would it? It is to be hoped that the backbone of the profession, the general practitioner, will duly consider the matter and, if he sees as I do, oppose it at every opportunity.

I am, Sirs, yours faithfully,

SURGERY.

Jan. 25th, 1904

To the Editors of THE LANCET.

SIRS,—As a country practitioner who has entered the autumn of life I venture to hope that we (country practitioners) may rely upon your assistance for protection against the proposed "Medical Act Amendment Bill" in reference to the dispensing of medicines. I commenced practice in a town of 4000 inhabitants about 35 years ago. There are five medical men in practice here, all of whom dispense their own medicines. The great bulk of the people cannot afford to pay a medical man's fee and at the same time a chemist's bill, as they would have to do under the new Act. The consequence would be that the great majority of the people would be either prescribed for by the chemists or use the prescription of a friend or fly to the different quack advertisements which abound in all our local papers and may even be found in the leading London "dailies."

When I came to this country there was far more prescribing done by the chemists than by the medical man, but by perseverance, hard work, and by charging very moderate fees this has considerably improved but will soon revert to the old order of things if the Act passes in its proposed form. To me, as an example, the subject is a very serious one, for I cannot retrench. As the practice is so widely scattered I am compelled to keep three horses and a coachman. I have also to pay £47 per annum for rent for the simple reason that I cannot get a suitable house, with stables, for less. I am able to pay my way as it is but cannot put anything by for my old age. I pay £47 10*s.* yearly premium for insurance on my own life and that of my wife, and this is all the provision I am able to make for my family. It seems clear to me if this new Act passes in its present form that I and thousands of other country practitioners will be simply ruined. Our work is hard and often very anxious in its nature and now our anxieties are added to by this harassing legislation. I fail to see what harm I do in dispensing my own medicines and I have the comfort of feeling that I get the best of drugs for my patients.

I am, Sirs, yours faithfully,
M.R.C.S., L.S.A.
Jan. 28th, 1904.

THE INQUEST ON WHITAKER WRIGHT.

To the Editors of THE LANCET.

SIRS,—If it be allowable to reopen discussion on this sad case I should like to say that I am not alone in thinking the evidence adduced at the inquest held by Mr. Coroner Troutbeck (as reported in the *Standard* and the *Globe* newspapers) singularly inconclusive and quite inadequate to justify such an assertion as that made by the coroner himself—namely, that it was "absolutely certain beyond all possibility of doubt that the deceased took his own life." So far as can be judged from the published reports at least five persons were present for some minutes preceding the death, one or two being medical men, yet failed to detect any but natural causes of the occurrence. Surely the length of time which had elapsed after the deceased's return from the lavatory, where, on the theory of suicide by poison, the fatal dose was probably taken, would be sufficient to allow of its impregnating the breath with the distinctive odour. Yet the acting house physician of King's College Hospital, who particularly investigated this possibility, says: "His breath smelt of spirits but there was no smell of poison at all." Four other persons similarly failed to detect any peculiarity in this respect.

The necropsy, regarding which Dr. Freyberger gave evidence, did not take place until 21 hours after the death, and this is a very important point. For although the odour of prussic acid is a valuable test up to 12 hours after death it is not reliable later. Some of the organs, especially the brain, emit a similar odour where there is no suspicion of poison; and certainly the evidence of one man, however eminent, is not sufficient to establish the possibility that the odour of prussic acid, which was markedly absent during several minutes prior to the death and for some hours afterwards (as we are left to infer), should become a "penetrating smell" given off by "every organ of the body" so long after as 21 hours. At any rate, the nose is not of itself an adequate witness. Yet the only other criteria afforded by Dr. Freyberger are the *bluish tint* of the body and the *fluidity* of the blood, which are neither separately nor together distinctive. The majority of the pathological signs adduced are consonant with death from syncope due to heart failure as the result of natural causes, especially as accelerated by mental shock. No mention was made by any witness of the peculiar "cry" uttered by the majority of victims to prussic acid, the deceased did not fall as if shot, nor does he appear to have been convulsed or to have had relaxation of the sphincters (as in more than 50 per cent. of cases). The corrosion of the mucous membrane, adduced as found chiefly at the back of the tongue and in the stomach, is difficult to explain in the absence of any sign of acute pain manifested during life. Cyanide of potassium has an alkaline reaction and is not markedly caustic. But it rapidly deliquesces on exposure, giving off fumes of prussic acid as soon as moistened, making it difficult to understand how it could have remained any time on the tongue without becoming noticeable by the bystanders. There is, moreover, no evidence of the vehicle in which it would be necessary to preserve it prior to its being used.

Whitaker Wright was singularly reticent as to any intention to commit suicide. In fact, supposing he did take his own life, he seems to have been at some pains to throw people off the scent. The revolver at full-cock, with ball cartridge in every chamber and none fired, may be ranked with the at first suspected tabloid; but it is remarkable that the revolver was not found by the first searcher (who appeared to ransack every pocket), but came so readily to the hand of the coroner's officer. It is surprising that the knife, which also was found, failed to be adduced as evidence of intention. Mining engineers and many rich men carry the former as a weapon of defence. It is not clear that the revolver had a special pocket made for it in Wright's case. But it is easy to understand that the habit which he had contracted in America would not readily be given up in England, where he became a far more tempting bait to the footpad and burglar.

That Whitaker Wright had had a fatty and dilated heart is a fact of prime importance and this was established (or confirmed) by the post-mortem examination. I incline to consider the judgment of the five persons who were present before death and who attributed it to natural causes as by no means upset by the further evidence submitted to the coroner. I have given evidence in many cases of various kinds before no less than five different coroners during the last 40 years, but I cannot recall a single case in which any of the five coroners was satisfied with nose-evidence or in which I expected him to be.

I am, Sirs, yours faithfully,
D. BIDDLE, M.R.C.S. Eng.
Kingston-on-Thames, Feb. 1st, 1904.

To the Editors of THE LANCET.

SIRS,—On Tuesday, Jan. 26th, I was called in to attend Whitaker Wright at the time of his death and I naturally expected to receive an intimation as to the time and place of the necropsy. On Wednesday at 1.45 P.M. as I had received no such information I telephoned to Mr. Troutbeck who referred me to Dr. Freyberger, adding that the necropsy was probably already completed or at any rate still in progress. I can quite understand that the demands on the coroner's time may be very great, but at the same time I cannot but feel that it is in the interest of the public as well as due to our profession that the courtesy should be extended to us of inviting the medical man present at the death scene to be present at the post mortem examination. I am, Sirs, yours faithfully,
OLIVER ATKEY.
King's College Hospital, Feb. 1st, 1904.

⁂ Mr. Atkey ought to have been present at the necropsy, of course.—ED. L.

THE SANATORIUM TREATMENT OF CONSUMPTION: ARE WE ON THE RIGHT TACK?

To the Editors of THE LANCET.

SIRS,—There are 67 institutions in the United Kingdom given over to the treatment of tuberculosis. Let us say for (exaggerated) argument's sake these could receive 12,000 cases—of course they could not or anything like it, but let us put it at that. There are architects, builders, expensive sites, ornate hospitals, highly paid secretaries, chapels, chaplains, and all the usual details of hospital construction and maintenance in the charitable financial foreshadowing of the near future. Meanwhile there are the downs unused, the roof garden is neglected, the cheap and useless (now) agricultural land is ignored, and the camp of huts on those downs is never considered. We want 100,000 huts and 100,000 roof gardens. We do not want beautiful buildings on expensive sites but moveable camps on land of no agricultural value. We are not seeking to stay a transient epidemic; we are striving to eradicate the most devastating scourge of the human race. I read the other day of a new hospital the chapel of which was to cost £20,000. But, Sirs, the chapel for these afflicted people should be where the

Sermon on the Mount was preached and in the full eye of the healing "wind of God." We are simply canonising expensive inefficiency by inaugurating fresh hospital buildings.—I am, Sirs, yours faithfully,

GEORGE H. R. DABBS, M.D. Aberd.

Austin Friars, E.C., Jan. 20th, 1904.

THE POINT OF PRIMARY GONORRHŒAL INFECTION IN THE FEMALE.

To the Editors of THE LANCET.

SIRS,—The letter on this subject by Dr. J. H. Arton, published in THE LANCET of Jan. 16th, p. 190, deals with a matter of great importance and one on which *misconception* is probably rife. Whether Dr. Arton is or is not correct in supposing that in the female the cervical canal is the usual seat of primary infection in gonorrhœa, this much is certain, that *vaginitis* of any severity is an altogether exceptional result of gonorrhœal infection in adult women and yet it is probable that most men engaged in private practice regard vaginitis as the specific criterion of gonorrhœa. Recent authorities, doubtless, inculcate other views. Herman,[1] for instance, writes: "The gonococcus is short lived and easily killed; hence it is only a passing guest in the vagina. It lingers longest in the urethra; probably in the glands of the floor of the canal near the meatus; next longest in the cervical canal. Hence you will find it in the vagina only when the disease is acute and pus abundant." Again, Muir and Ritchie in their "Manual of Bacteriology," second edition, 1899, state: "In the disease in the female gonococci are almost invariably present in the urethra, the situation affected next in frequency being the cervix uteri. They do not appear to infect the lining epithelium of the vagina of the adult unless some other abnormal condition be present, but they do so in the gonorrhœal vulvo-vaginitis of young subjects."

But while gynæcologists, bacteriologists, and those whose duty involves the regular examination of prostitutes have correct views of the disease I think there can be little doubt that a large proportion of general practitioners are still under the influence of the erroneous doctrine taught in the medical schools and reiterated in text-books until a quite recent date that vaginitis, often brief in duration and trifling in severity, is the principal characteristic of gonorrhœa in the female. And yet it is precisely in general practice that, as Dr. Artón indicates, so much might be done to prevent gonorrhœal infection and to lessen the disastrous consequences of the disease. The existence of latent gonorrhœa in the male has recently attracted much attention. No less attention should be given to the true nature of gonorrhœal infection in the female which in private practice is, in nine cases out of ten, a sequel of the said latent gonorrhœa in the male and is further, as Dr. Arton rightly insists, the major source of a *considerable number of the diseases peculiar to women.* Apart even from the much greater frequency of the disorder there seems considerable evidence in favour of the view that gonorrhœa is a greater scourge of the human race even than syphilis. I am, Sirs, yours faithfully,

Alderney, C.I., Jan. 25th, 1904. M. EDEN PAUL.

CARBON MONOXIDE POISONING BY THE INHALATION OF CIGARETTE SMOKE.

To the Editors of THE LANCET.

SIRS,—In papers read some years ago before the Bolton and District Medical Society and the Lancashire and Cheshire branch of the British Medical Association I drew attention to, and described, some work I had done on this subject at the suggestion of Mr. Gibson Dyson, Ph.D. It was shown that the presence of carbonic oxide gas could be demonstrated in tobacco smoke by several simple experiments and also analyses proved that smoke from cigarettes [illegible] that obtained from [illegible] is pointed out that [illegible] cigarette the most dangerous form in which tobacco could be enjoyed. Only by inhalation could the contained carbon monoxide come in contact with the blood; the resulting carboxyhæmoglobin owing to its great stability would give an ever-increasing load to be pumped through the body, whilst the heart, together with the rest of the tissues, was suffering from a [illegible] centres. It was also pointed out that the connexion of carbonic oxide with the evils attending the habitual inhala*tion of cigarette smoke hitherto had been overlooked* and it was further suggested that the enormous amount of damage inflicted by this vice on the younger members of the community constituted a national danger and that some means should be adopted to minimise or to put an end to it.

I am, Sirs, yours faithfully,

Bolton, Jan. 26th, 1904. J. HILTON THOMPSON, M.D. Vict.

THE MEDICAL DEFENCE UNION.

To the Editors of THE LANCET

SIRS,—In your able and instructive comment upon the action, Salisbury *v.* Gould, you made the statement that the Public Authorities Protection Act pleaded technically in addition to the evidence for the defence did not prevent Mr. Gould from being exposed to the anxiety and the expense entailed by an action persisted in until the jury refused to hear any more of it. It is quite true that the Public Authorities Protection Act did not so relieve Mr. Gould, *but the Medical Defence Union, of which association he was a member, clearly did.* To quote from a letter of Mr. Gould which I have before me in which he writes: "I was relieved not only of all trouble and anxiety but of very great expense, having only to go into the witness box and give my evidence. I cannot conceive how any registered medical practitioner can be so foolish as not to avail himself of the insurance afforded to all members of the Medical Defence Union." I am sure you will be willing to allow me to make this as an additional report to your article in your issue of Jan. 30th.

I am, Sirs, yours faithfully,

A. GEORGE BATEMAN,

General Secretary, Medical Defence Union.

Trafalgar-square, W.C., Jan. 29th, 1904.

⁂ We have much pleasure in publishing Dr. Bateman's letter. Mr. Gould, since the appearance of our article, has written to us in much the same terms of his gratitude to the Medical Defence Union.—ED. L.

TREATMENT OF DIABETES MELLITUS.

To the Editors of THE LANCET.

SIRS,—Will you kindly permit me to remark that I have read with much interest the clinical lecture on the treatment of diabetes mellitus by Dr R. T. Williamson in THE LANCET of Jan. 23rd, p 213. In the treatment of the disease with *drugs* Dr. Williamson gives the preference to salicylate of sodium and aspirin. I have not had much experience of aspirin, but I have been prescribing salicylate of sodium in diabetes for nearly 30 years and with so much satisfaction that I consider it my "official" remedy for the disease. I sometimes combine ergot with it, and I have the notes of cases written as far back as 1877 in which I found this combination most beneficial We have many remedies for diabetes but, unfortunately, no specific. We have few specific remedies for any disease, with the exception, perhaps, of arsenic for pemphigus, balsam of Peru for scabies, iodide of potassium for tertiary syphilis, quinine for ague, and bromide of potassium for epilepsy.

After all, the great difficulty in the treatment of diabetes is the dietary. Most of the articles of food in present use are so unsavoury that patients soon loathe them. A modification of the well-known "boxty" cake of the "Green Isle" might occasionally be given with impunity; it is rather appetising and I find that a meal or two is relished by most patients. The principal ingredient of it is fibrin procured from peeled, grated, raw potatoes from which for this special purpose the starch is abstracted and the fibrin only is retained. To this are added salt, eggs, some condiment, and sometimes a little flour. The mass is made into cakes and fried in a quantity of butter. I am sure that the readers of THE LANCET will mentally thank Dr. Williamson for his able lecture on that perplexing disease diabetes.

I am, Sirs, yours faithfully,

WILLIAM O'NEILL, M.D. Aberd., M.R.C.P. Lond.

Lincoln, Jan. 30th, 1904

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[1] Diseases of Women, first edition, 1893.

MOSQUITOES AT SEA.

To the Editors of THE LANCET.

SIRS,—As mosquitoes have been found to be distributers of many serious diseases it may not be out of place to call attention to the frequent presence of these pests on sailing ships at sea and to suggest the possibility of their being responsible for the continuance of certain fevers on these vessels. Sailing ships leaving a tropical port always take away many mosquitoes which breed and keep a succession for weeks or even months. It is conceivable that, if a fever be epidemic at the port left, some of the mosquitoes carried away may belong to the variety capable of conveying that fever from one human subject to another.

There are many places on a sailing ship in which mosquitos may increase; stagnant rain water in boats, fire-buckets, and elsewhere, receptacles for keeping the day's issue of fresh water in cabins and forecastle which are often never completely emptied for weeks together and in which the larvæ can come to maturity. If salt water be added to the stagnant fresh water and tanks and buckets for the daily issue of fresh water be entirely emptied frequently or at least once a week mosquitoes soon disappear. This is, however, so simple a proceeding that it is often omitted and a constant succession of mosquitoes is kept up in some cases for the whole voyage. On steamships the conditions do not seem to favour the continuance of mosquitoes and I have never noticed them after the first day or two. I may add that I speak from an experience of 30 passages in sailing ships. I am, Sirs, yours faithfully,

Tavistock, Jan. 30th, 1904. F. O. SHAW, M.R.C.S. Eng.

THE INCIDENCE OF LEPROSY IN THE BRITISH EMPIRE.

To the Editors of THE LANCET.

SIRS,—With reference to the report on the incidence of leprosy, &c., in the British Empire, which I am preparing for the forthcoming International Congress of Dermatology at Berlin, I should feel obliged if you would kindly mention in your esteemed journal the lines on which it is proposed the data should be collected, viz.:—

1. *Statistics*.—(*a*) According to official reports (Government); and (*b*) leper asylums, settlements, missions. Details as to these—race, sex, and age of inmates. Type of disease.

2. *Methods employed to cope with leprosy between 1897 and 1903 (inclusive)*.—(*a*) Government laws as to leprosy; and (*b*) means taken by governments, municipalities, parishes, private societies, &c., for the suppression of leprosy: (1) number of leper asylums, hospitals, and settlements; (2) number of beds, &c.; (3) fluctuations in the number of lepers, &c.; (4) occupation of lepers in institutions, settlements, &c.; and (5) transport by rail, steamer, ambulance, &c.

3. *Lepers in general hospitals, infirmaries, lunatic asylums, prisons, &c.*

As the request for the treatment of the subject on the above lines only came to hand after I had got out my circular letter to our numerous colonies and protectorates, it would help me very much if I could have the valuable assistance of publicity in your columns.

I am, Sirs, yours faithfully,

GEORGE PERNET,
Assistant to the Skin Department, University College Hospital, &c.
Upper Gloucester-place, N.W., Jan. 31st, 1904.

MALIGNANT GROWTHS AND NORMAL REPRODUCTIVE TISSUES.

To the Editors of THE LANCET.

SIRS,—The theory of spermatic influence has long been discarded as an explanation of the origin of carcinomatous processes. Professor J. B. Farmer, Mr. J. E. S. Moore, and Mr. C. E. Walker have expressed their opinion that the malignancy of cancer is due to tissues which have undergone a reducing division and have demonstrated that heterotypic and homotypic mitoses occur in the deeper layers of carcinomata and sarcomata. This has been confirmed by Dr. E. F. Bashford and Dr. J. A. Murray in malignant tumours from the trout, the mouse, and the dog. The interpretation of these "intrinsic" changes remains to be decided, but in general terms it seems to point as before to the determination of which of the "extrinsic" factors of cell growth varies from the normal, as compared with the "intrinsic." A fuller explanation of the phenomena of cell growth from the period of fertilisation of the ovum to the adult stage, of acromegaly, of the potentialities for secretion of glands, such as the testis, ovary, &c., cannot fail to throw light on the origin and nature of the disease. It is to be hoped that the Cancer Research Fund, the British Medical Association, and other bodies will assist those medical men who reside in the provinces to carry out both general and cytological investigations when opportunities arise and the workers are to be found.—I am, Sirs, yours faithfully,

F. BUSHNELL, M.D. Lond.,
Honorary Pathologist in charge of the Clinical Laboratory,
South Devon and East Cornwall Hospital,
Plymouth.
Plymouth, Jan. 30th, 1904.

ROYAL MASONIC INSTITUTION FOR BOYS.

To the Editors of THE LANCET.

SIRS,—Would you be kind enough to insert the inclosed appeal in an early number of THE LANCET? This boy is the only candidate at the April, 1904, election who is the son of a medical man and so ought to have the sympathy of all medical Freemasons.

I am, Sirs, yours faithfully,

Bewdley, Jan. 27th, 1904. U. W. N. MILES.

⁂ The case referred to by our correspondent is that of Patrick Trevor Webster, whose father, the late Mr. Trevor Webster, a member of the Lechmere Volunteer Lodge, No. 1874, practised at Bewdley, and died on Oct. 28th, 1902, leaving a widow and seven children very inadequately provided for.—ED. L.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

A Sanitary Association for Bombay City.—Technical Scholarships for Bengal.—The Plague Epidemic.

AN attempt is being made in Bombay city to excite an interest in the general study of sanitation and the Governor presided recently at a meeting for the purpose of establishing a sanitary association. A number of objects are specified as being aimed at in connexion with the association, three of them being: (1) to create an educated public opinion with regard to sanitary matters in general; (2) to provide its members with such advice as shall insure a proper sanitary condition of their dwellings and enable them to procure practical advice as to the best means of remedying defects in the houses of the poorer classes in which they are interested; and (3) to deliver lectures in English and the vernaculars to all people (males and females) of different castes and creeds. This is a very comprehensive programme and is, I believe, due to the initiative of Dr. J. A. Turner.

Another educational movement is being provided for Bengal in the shape of State technical scholarships. The subjects of study are law, medicine, forestry, veterinary science, agriculture, and engineering. The scholarships will be of the value of £150 a year and tenable for two years. They may be held in Great Britain, the continent of Europe, or in America. Natives of India only will benefit. No age limit is fixed. The idea is to provide higher technical education for promising natives of India in order to promote the improvement of existing native industries and, if possible, to develop new ones. As medicine and veterinary science are included it will give opportunities to deserving students to enlarge their knowledge and ideas upon these subjects in the advanced countries. The value of this scheme cannot be questioned and may be placed next to the establishment of industrial institutes and experimental research laboratories among the new institutions arising in India.

The plague mortality, as expected, is resuming the increase which has been in progress during the past few months.

For the week ending Jan 9th there were 17 344 deaths from plague throughout India as compared with 16,503 for the previous seven days and with 16 197 for the corresponding week in 1903 The disease is evidently developing again in Bombay city and continues in Poona There are now so many more centres for plague that the recrudescence which is making itself felt all over India may be expected to assume very large proportions. The monthly statement published showing the incidence of plague in the Bombay Presidency reveals the fact that the excess mortality in the various towns and districts is not covered by the returns of plague The obvious inference is that there is a greater mortality from plague than the returns indicate I have had occasion to point this out for years past as the figures for Bombay city, Karachi, and Poona tell their own tale In the districts this anomaly is not surprising, but in the large cities more accurate estimates should be forthcoming Calcutta seems to be the only place in which a fairly approximate estimate is made of the amount of plague, the figures for each year showing that the whole of the excess mortality has been due to this disease

Jan th

THE RUSSIAN MEDICAL CONGRESS DISSOLVED BY THE POLICE

(FROM OUR SPECIAL CORRESPONDENT)

THE Russian Medical Congress which met at St Petersburg at the end of January has been dissolved by the police In Western Europe it will seem extraordinary that a technical and scientific congress cannot be held without police interference On the other hand, it is easy to see how in Russia such things may happen The practice of medicine there is not independent of politics and when questions of sanitation or of the prevention of disease are approached science is at once forced into the political arena Even in England vaccination and vivisection are sometimes made test questions during the heckling of Parliamentary candidates In Russia the position is far more serious Medicine and sanitation can certainly divorce themselves from party politics such as we know them in England, but medical men and men of science generally would be compelled, not only as individuals but in the name and for the defence of their profession, to take part in politics if they were denied the freedom necessary for the pursuit of their studies This is precisely what is happening in Russia. At the St Petersburg congress a joint meeting was held of the sections on tuberculosis and on social hygiene Here a motion was carried setting forth that the ignorance of the ordinary and elementary laws of hygiene and the excessive drinking of alcohol created the predisposing causes that facilitated the spread of tuberculosis which is one of the most fatal of prevailing diseases So far so good, but the motion and the speeches by which it was supported went a step further, for a clause was ultimately adopted to the effect that a regular and systematic campaign against tuberculosis could only be carried out in Russia on condition that "personal freedom and the freedom of speech, of the press, and of meeting were granted' In the existing circumstances and considering that Russia is an autocracy, it would seem as if the medical profession had here outstepped the bounds of prudence and was asking for what it knew perfectly well would not be granted and for what was not necessary for its purpose Consequently the adoption of such a motion might be construed as an act of aggression against the Government and therefore justified the dissolution of the congress The resolution practically asks for complete freedom and this is not necessary when it is simply a question of teaching the ignorant masses the advantages of cleanliness, of thorough ventilation, and of abstinence from excessive drinking Unfortunately these arguments, however plausible from the point of view taken by the present autocratic Government do not in practice cover the issue Such freedom as that suggested does exist It is possible to deliver lectures on ventilation or on the best means of keeping dwellings clean, but whenever any systematic effort of this sort is made the organisers immediately fall under the suspicion of the police These benevolent and charitable endeavours are ascribed to some political motive and a scientific lecture on sanitation may land its author in Siberia.

Worse than this, however, was to follow The medical men had not only the audacity to demand that their freedom to teach the laws of health should be absolutely guaranteed, but they actually touched upon the burning question of the treatment of the Jews The medical profession is called upon to bring its science to bear so as to reduce the prevalence of tuberculosis, and it answers, in no uncertain or faltering voice, that overcrowding and poverty are the principal culture beds of Koch's bacillus But the Russian Government by its anti Semitic enactments has increased to an enormous extent the overcrowding of the ghettos and the poverty that prevails therein There are supposed to be rather more than 5 000,000 Jews in Russia who, with but a few exceptions, are confined in certain portions of the towns within only a part of the empire By the "Laws of May," which the Emperor Alexander III signed on May 3rd, 1892, the Jews were no longer allowed to reside in villages but only in towns or burgs The police were apparently left to decide whether a place was a village or a burg If they chose to call it a village then the Jews might be driven out in 24 hours Thus, for instance in 1895 all the burgs of the provinces of Poltava and Tchernigoff were declared to be villages and the Jews had to leave in 24 hours The results of this unnecessary haste are appalling The Jews have to sell their property at a ruinous sacrifice and thus poverty is added to the overcrowding of the ghettos in which they are compelled to live Another illustration may be given of the way in which this political action against the Jews affects the public health and must be taken into consideration however anxious we may be to avoid any allusion whatsoever to politics The vice governor of Kishineff some time ago gave orders for the evacuation of a burg which was henceforth to be qualified as a village The subordinate who lived on the spot immediately requested that this rigorous measure might be deferred as a severe epidemic of small pox prevailed at that time This very natural protest was however, unavailing The Jews were all forced out of their houses and whether ill or in good health they were crowded together into carts and driven into Kishineff It was mid winter Many of the children died on the road and the epidemic of small pox was introduced into the town of Kishineff The question with regard to the Jews may be a political matter but it has also a very serious effect on the public health It is estimated that since the "Laws of May" more than 600,000 Jews have been driven out of places now called villages and compelled to increase the overcrowding of the ghettos of the towns

Is it surprising if, in the face of such facts, the Russian Medical Congress should adopt a motion "calling attention to the danger resulting from the artificial concentration of the Jewish population in the authorised zone of residence established for the Jews in the towns and burgs of the south and west of Russia"?

Then there are laws which forbid the Jews to bathe in lakes or rivers, nor are they allowed to go to seaside watering places, to sanatoriums, or to mineral wells The congress therefore passed a motion demanding that patients, even if they are Jews should be allowed to seek the benefit of the country air and "be permitted to inhabit the country or to follow a cure at a sanatorium or a watering place, and the congress considers that it is indispensable to grant the Jews the right to go from place to place"

At present a Jew may not live in the more healthy or suburban parts of his town but must inhabit the ghetto However ill he may be and though his life might be saved by a change of air still he must remain in his ghetto If he desires to seek the advice of a medical practitioner who lives in some other town he cannot do so unless he first obtains a special authorisation from the police In such circumstances it is not surprising that the death rates in these towns are high and that epidemic diseases have become endemic in many of the ghettos Yet when the medical practitioners of Russia are in congress assembled and very naturally protest disease they are accused of congress is dissolved by the if this is not followed by the arrest and imprisonment of some of the more earnest speakers But how medical science and sanitation can progress under such conditions is a question which the Russian Government must be left to answer

TRIPLE COMPULSORY VACCINATION IN FRANCE.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

No. II.[1]

IT being now enacted by law that everyone who lives in France, whether a French subject or a foreigner, shall be vaccinated three times, that is, during the first, eleventh, and twenty-first year, the next question is to indicate how this law is to be put into practice. On this subject a special decree was issued on July 27th, 1903, signed by the President of the Republic, M. Emile Loubet, countersigned by the Minister of the Interior and the Minister of Justice, and published in the *Official Journal* of July 31st. After quoting Article 6 of the new Public Health Act of Feb. 15th, 1902, the decree explains that, according to the stipulations of this Act, the Academy of Medicine and the Consultative Committee of Public Hygiene have been duly consulted and, in harmony with the opinions of the Minister of Justice and the Council of State, the following regulations are issued. It is first explained that the vaccination service established at the Academy of Medicine is intrusted with the duty of providing the best vaccine lymph. It is further instructed to endeavour to improve the production of vaccine lymph and the methods of vaccination. Thus the law goes out of its way to urge that there is always room for improvement. Finally, this service, established by the Academy of Medicine, must make all the scientific experiments and tests necessary to control the establishments which prepare and distribute vaccine lymph. This means presumably that there shall be one standard of excellence—that set up by the most competent authority on the subject—and this standard is to be enforced throughout the country. Every year the Academy of Medicine must report to the Government the results of the vaccination and revaccination practised, especially in regard to towns where there are more than 20,000 inhabitants. The decree then goes on to say that no one shall be allowed to open an establishment for the production and distribution of vaccine lymph without first notifying the prefect of his district and placing himself under full public surveillance and control.

Article 4 of the decree stipulates that in each commune there shall be séances for gratuitous vaccination and for the revision of the results. Public advertisements shall announce when and where these vaccination séances will be held and shall recall the obligation imposed by the law on all persons in this matter. All parents or guardians must take the children in their care to be vaccinated or produce a certificate proving that this has already been done. The prefect, however, is authorised (Article 5) to stop the vaccination of the population while some other epidemic than that of small-pox prevails in the neighbourhood. The municipalities must draw up lists (Article 6) first of all children more than three months and less than a year old on the day they were vaccinated and who were born in the commune. This list must be compared with the registrar's returns. Secondly, there must be a list of children of the same age living in the commune but born in another locality. Thirdly, there must be a list of children who have exceeded the age of one year but who for some reason or other have not been vaccinated. Fourthly, those who have been vaccinated but who must be vaccinated again because the operation did not succeed must be recorded. It will be seen that the second list mentioned above comprises the children of English and other foreign families residing in France.

In regard to the first revaccination the directors of all public or private schools must report all pupils who are in their eleventh year, so that they may be revaccinated. Also, they must report any child, no matter of what age, who happens not to have been vaccinated. Thus if English parents send their children to any school in France and these children have not been vaccinated the fact will be reported and they will be vaccinated forthwith. If these children have, however, been vaccinated in their infancy they will be again vaccinated when they reach their eleventh year or if they have passed their eleventh year and have not been revaccinated. Where a child is not sent to school but is kept at home with the parents or guardians the latter are held legally responsible for the inscription of that child on the lists drawn up by the municipality giving the vaccination statistics. In regard to the second revaccination the list comprises all persons who happen to be residing in the commune and who have reached their twenty-first year. Then there are some details given as to how the records are to be kept and Article 8 authorises the vaccinator to postpone the operation if the subject is not in a suitable state of health. Where the vaccination does not succeed it should be repeated as soon as possible. A medical certificate stating that the law has been duly observed can only be given when there is no result after three attempts have been made. It is the duty of the mayor of each commune to send a notice to all persons who have failed to conform to the above stipulation warning them that if before the expiration of the year during which they should be vaccinated they do not produce a medical certificate showing that this operation has been successfully performed proceedings will be taken against them. Should this warning prove of no avail the matter is to be handed over to the police and the Minister of the Interior and the Minister of Justice will, each according to his respective function, see that the law is enforced.

This decree was followed by a Ministerial circular, dated August 7th, 1903, and addressed to all the prefects. It gives explanations elaborating the various clauses of the law. Thus the prefects are reminded that while in many countries vaccination was enforced and its utility proved beyond the possibility of doubt small-pox continued to make many victims in France because vaccination could not be applied to everyone. The object of the law, therefore, was to produce in France results as favourable as those that have been attained in other countries. The prefect is to appoint the medical men and other agents necessary for the organisation in each locality of a public vaccination service. The *conseil général* or county council will have to decide where and how frequently gratuitous vaccination shall be offered to the populations in the various districts and what remuneration shall be given to the medical men who do this work. But the appointment of the public vaccinators is not left to the local elected body or county council. It is the representative of the Central Government, the prefect, who appoints and he makes his selection acting under the instructions in regard to technical and professional competence elaborately prepared by the Academy of Medicine and the Consultative Committee of Public Hygiene.

The circular then explains that in rendering vaccination obligatory the law does not seek to make vaccination depend exclusively on the public authority. It is only where individual initiative and the normal participation of the medical corps in the practice of vaccination and revaccination fail that the administration has the duty of periodically providing the necessary facilities. Everyone is free to select the medical practitioner whom he prefers and the time that suits best so long as he produces the certificate proving that the vaccination has been properly done. On the other hand, there must be at least once in the year free vaccination offered in each locality. Where, however, two localities are close to each other and have but few inhabitants the vaccination séances may be held alternately in the one or the other locality. Where small-pox is actually prevailing supplementary gratuitous vaccination must at once be organised, indeed the circular recommends house-to-house vaccination so that the disease may at once be stamped out before it has time to spread extensively. Then the circular points out that though the lists which the mayors must draw up will serve as the basis for action in applying the law, the fact that the name of a person happens to have been omitted from such a list does not exempt him from the obligation of conforming to the law. Also, the circular explains that though the law does not insist on revaccination after the twenty-first year the public vaccinators should always be willing to vaccinate anyone and at no matter what age. If there are cases of small-pox it is especially advisable to encourage revaccination at all ages and therefore the entire population should be urged to avail themselves of the opportunities offered.

From this it will be seen that permanent public vaccinators are not to be appointed as in England. Perhaps in rural districts and in very small towns this may not be necessary, but in large centres there will be work enough to be done all the year round to keep vaccination offices open permanently. This doubtless will follow in due course when its necessity makes itself felt. In the meanwhile the French legislature may be congratulated on having fairly taken the bull by the horns. In the course of a year or two the vital statistics will, in relation to small-pox, establish and vindicate the wisdom of this proceeding.

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[1] No. I. was published in THE LANCET of Jan. 16th, 1904, p. 194.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Royal Infirmary; the New President; Handsome Donation.

THE annual meeting of the trustees of this infirmary took place on Jan. 20th. The treasurer in his remarks made allusion to the endowment of three beds during the year in memory of friends or relatives—by Sir Thomas Brocklebank, in memory of his daughter; by Mrs. Hamilton B. Gilmour, in memory of her husband who had been chairman of the committee for a period of 19 years; and by the President, Mr. James Lister, in memory of his grandfather. The committee ardently hoped that at least 20 beds might be endowed. There had been received from the Hospital Saturday and Sunday Funds £3097. Legacies realised £2776, subscriptions accounted for £3665, whilst other donations added £1095 to the general fund. The total expenditure had been £15,045, to balance which £2649 had been transferred from the maintenance fund. The debt now stood at £2806. The average number of in-patients had been 253. 3307 patients had been admitted to the house. 323 patients died during the year. The number of out-patients treated was 19,205, whilst the total attendances reached 74,354. Mr. James Lister on retiring from the presidency presented the institution with 100 guineas. Mr. Edward Robert Bickersteth, the senior honorary surgeon, was elected the president for the ensuing year. Mr. Bickersteth, in expressing his sincere thanks for the great honour conferred upon him, said that he had been connected with the institution probably longer than anyone present. When he first became a student at the infirmary in 1846 things were very different from what they were now and nothing had been more interesting than to watch during his long career the rapid advance of kindness and charity. In 1856 he was elected honorary surgeon and occupied that position for 32 years. In his early days the hospital was devoid of mattresses and patients had to sleep on sacks stuffed with straw by the more able-bodied patients. There was a feeling at the time that if the patients were too kindly treated they would be more anxious than ever to gain admission. He had some difficulty in persuading the committee to accept 12 mattresses from him and they only did so on the condition that he would keep them in repair and replace them when necessary. In those days also there were no trained nurses and only one night nurse. How different things were to-day: he believed they now had the most perfect arrangements and every appliance that could be thought of. In conclusion he said he would be glad to present £1000 to endow a bed in memory of his father who was for 42 years a surgeon to the institution.

David Lewis Northern Hospital.

The chairman, in moving the adoption of the report and accounts at the meeting of the subscribers to this hospital on Jan. 20th, referred to the great urgency there was for increased support. They had only received £675 in legacies, as against £4000 in the previous year. The increase in the number of in-patients showed that there was a great need for additional funds; in fact, £1800 more a year were required to keep the institution in an efficient condition. The number of in-patients had increased to 2326. The number of out-patients had been 12,689. The ordinary expenditure had been £10,831. There was a debit balance of £5069, being an increase of £1377 over that of last year. The amount of the grant of the Hospital Saturday and Sunday Funds was £1865. The expenditure had exceeded the income by £1877 19*s*. 7*d*.

Conference at the Town Hall on Hospital Rating.

A conference was held at the town hall on Jan. 25th with [illegible] the payment [illegible] attendance [illegible] of the city, together with representatives of the Hospital Saturday and Sunday Funds. The following motions, brought forward by the Lord Mayor and seconded by Mr. H. H. Hornby (the representative of the Eye and Ear Infirmary), were carried:—

> T[illegible] ded to the rates by the [illegible] to the care and treat- [illegible] by voluntary contribu- [illegible] pectfully asked [illegible] to pass a Bill [illegible] in the manner [illegible] the House of [illegible] Government to introduce a Bill for this purpose during the ensuing session of Parliament.
>
> That a copy of this resolution be sent to each of the Members of Parliament for the city.

The hospitals are doing work that would otherwise rest as an obligation upon the city. Private philanthropy, by raising up so many institutions as exist in this city for the help of the sick and injured, relieves the ratepayers of Liverpool from a heavy burden which would otherwise have fallen on them, therefore exemption from the payment of local rates is not an unreasonable demand made by the managers of these useful charities.

Infirmary for Children: Annual Meeting.

At the annual meeting of the subscribers to the Liverpool Infirmary for Children, held on Jan. 27th, it was stated that the work of the institution was being seriously crippled owing to the pulling down, for sanitary reasons, of the infirmary building in Myrtle-street and the inadequacy of the temporary premises in Catherine-street. Dr. E. W. Hope (the medical officer of health) had reported favourably on the old site, trial holes had been sunk in parts of the site, and in addition the trial holes had been extended by a trench to the depth of ten feet. The sand and sandstone below the foundations were found in a virgin condition, clean and pure, and there were no evidences of percolation of any organic material. Rebuilding, however, could not be started until the amount already received (£20,000) had been increased by £10,000 more The total cost of the complete building is estimated at £60,000.

Preservatives in Marmalade.

At the Liverpool police-court on Jan. 27th a local grocer was summoned for having sold to Inspector Collins marmalade which upon analysis was found to contain five and a half grains of salicylic acid per pound. The prosecution held that it was quite unnecessary to add salicylic acid to marmalade. The defence urged that the acid was not injurious to health and that it was now used by many manufacturers. It was stated that the large quantity of acid used was unintentional. The marmalade in question was manufactured 12 months ago and it was thought that the employé who had made it had put in a *double quantity by mistake.* Mr. W. J. Stewart, the stipendiary magistrate, said there was not the slightest reason for putting any preservative in marmalade, especially salicylic acid. They were familiar with home-made marmalade which would keep for years if kept in the proper place. It seemed to him there was no object to be gained by putting the salicylic acid in the marmalade and whatever might be said that people were getting to understand the fact that salicylic acid exerted a beneficial effect on bacteria it might produce a prejudicial effect on the human organs. Perhaps they might put on the bottle or jar a notice that the marmalade contained some preservative and then purchasers would know they were taking in anti-rheumatic physic and marmalade together. It would be like taking powders in the old days—sealed in jams—and taking them without knowing it. He imposed a fine of £5 and costs.

City Coroner's Report for 1903.

The total number of cases of deaths reported to the city coroner during 1903 was 1784, compared with 1792 in 1902. Of these, 997 formed the subject of coroner's inquests as against 977 the previous year. The cases in which a verdict of murder was returned were three, the same as in the previous year. 59 cases of suicide were investigated, compared with 55 in the previous year. Want and exposure caused six deaths, as against seven in 1902. Alcoholic excess contributed 166 deaths, as against 165 in 1902. Want of proper attention at birth caused the deaths of 17 infants, as against seven in 1902. Accidents accounted for 476 deaths, compared with 523 in 1902. There were 41 drowning cases, as against 29 in 1902. There were 78 cases of burning, of which in 72 cases lack of fireguards or the use of *flannelette* was either the immediate cause or largely contributory, the deceased persons being young children or aged and infirm people. There were 84 cases of suffocation, as against 116 in 1902. The coroner remarked in regard to cases of overlying that in most instances the mothers had not removed the breast from the child's mouth before going to sleep. The majority of cases were free from suspicious circumstances. Suffocation cases of this kind were not altogether confined to persons in the lower grades of life. The fact that so many of these cases occurred late on Saturday or early on Sunday appeared to be accounted for, in many instances, by the presumption of the mothers being fatigued after an arduous day's work.

Liverpool Medical Institution: President's Badge of Office.

At the meeting of the Medical Institution held on Jan. 21st a badge of office for the president was presented. Sir William Banks, in a few appropriate remarks, made the presentation to Dr. James Barr (the new president) on behalf of the subscribers. Dr. Nathan Raw (who acted as secretary to the badge committee) endorsed Sir William Banks's remarks, at the same time wishing the President a happy and successful term of office. Dr. Barr suitably acknowledged the insignia of office. The badge is of gold, with blue enamelling, displaying on the front the Greek motto of the society and on the reverse the inscription, "President of the Liverpool Medical Institution, 1904."

New Horse Disease: Warning to Liverpool.

A letter was read at the meeting of the health committee of the city council on Jan. 28th from the Board of Agriculture and Fisheries drawing attention to the appearance among horses in England and Ireland of a new disease, called epizootic lymphangitis, which was stated to be very contagious. The symptoms were a swelling and eruption of the legs, generally the hind legs, and isolation was recommended. The veterinary superintendent of the health committee said that the disease had existed for some time in India and was carried during the late war to South Africa, and was subsequently transferred to this country. It had been discovered at several of the military depôts.

Feb. 2nd.

WALES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS.)

Cardiff Medical Society.

THE annual meeting of the Cardiff Medical Society was held on Jan. 29th when Sir William Macewen, F.R S., LL.D., delivered an interesting and exhaustive address, taking as his subject the Diagnosis and Treatment of Appendicitis. At the annual dinner of the society which was subsequently held Sir William Macewen urged the establishment of a completely equipped medical school in Cardiff. The medical society, which has a membership of over 100, was formed in 1870, with Dr. Alfred Sheen as the first secretary. Of the other original members there are probably only two left in Cardiff—namely, Dr. W. T. Edwards, who was president in 1871 and in several subsequent years, and Mr. John Evans. In 1888 a medical library was established and the members of the society have now a very good collection of books in their rooms in Queen-street.

Swansea Workhouse Infirmary.

The new buildings which have been recently erected in connexion with the Swansea workhouse will facilitate the administration of the institution very considerably. They include an infirmary with wards to accommodate 71 patients, surgeons' rooms, nurses' rooms, and a lying-in ward. There are also women's receiving wards, vagrants' wards, a porter's lodge, and a disinfecting block. The infirmary is lighted with electricity and is heated with hot-water pipes, the floors are of wood blocks, and the walls have glazed bricks to the height of five feet. The buildings are constructed of stone and the entire cost was £17,730.

Colliery Work as a Board School Subject.

At many of the eisteddfodau held in the colliery districts of South Wales the contests are not confined to singing Prizes are given to the winners in ambulance and first-aid competitions and to those who are the most familiar with the Home Office rules regulating the collier's conduct when engaged at his work. These latter competitions must be of great value for neglect of the rules may have very disastrous results. It is gratifying to learn, therefore, that the education authority for the county of Glamorgan has decided that in future in the boys' schools under its charge instruction shall be given in subjects relating to colliery work such as coal-mine gases and how they become dangerous; the safety lamp and how to use it; the method of ventilating a colliery; coal and how it is formed; the method by which coal is worked in a mine; and the rules framed for a collier's safety.

Death of Mr. Jenkin Jenkins, L.R.C.P. Edin., L.F.P.S. Glasg, L.S.A.

Mr. Jenkin Jenkins, who died from pulmonary consumption at Aberystwith on Jan. 27th, had practised for more than 20 years in Pontypridd, where he was much esteemed. He was surgeon to several collieries, medical officer and public vaccinator to the town district of the Pontypridd union, and medical officer to the post-office.

High Death-rate in Merthyr.

In spite of the activity displayed during the past few years by the health committee of the Merthyr urban district council the town has still an unenviable notoriety with regard to the number of deaths recorded. For the week ending Jan. 23rd the death-rate from all causes was equal to 39·4 per 1000 per annum, the next highest rate among the 76 large towns being 29·5 per 1000 at Preston. For the five weeks ending Jan. 25th the Merthyr death-rate was equal to 32 5 per 1000 and of the 229 deaths registered during that period 119 were of children under the age of five years.

Royal United Hospital, Bath.

The annual meeting of the subscribers of the Royal United Hospital, Bath, was held on Jan. 27th, at the Guildhall, Bath. The medical report stated that 1397 in-patients had been admitted during 1903 against 1389 in 1902. The out-patients numbered 8632 compared with 7891 in the previous year, and 232 patients were visited at their homes against 349 in 1902. The average daily number of in-patients was 82. The financial statement showed that although the unfavourable balance of £4000 had not been reduced, at the close of 1903 the committee had increased its invested capital, by legacies, to the amount of £1434 The Rev. E. Handley, who for the past 13 years had been president of the institution, having resigned through ill-health, Mr. Richard Sumner Fowler, F.R.C S. Edin., who for a long period had been a member of the honorary staff of the hospital, was elected to the post.

Bristol Medical Dramatic Club.

The annual performances of the Bristol Medical Dramatic Club will be given at All Saints' Hall, Clifton, on Feb 9th and four following days, when *The Lancers*, by Captain Leicester Vernon, M P., will be presented. The proceeds will be devoted to the funds of the Bristol Royal Infirmary and the General Hospital.

Feb. 2nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Retirement of Dr. D. Argyll Robertson.

THE Edinburgh Cap and Gown Club on Jan. 30th entertained Dr. D. Argyll Robertson at dinner to mark the occasion of his retirement from practice in Edinburgh Dr. Argyll Robertson announced some time ago his intention to retire from practice and to spend his closing years in Jersey. Mr. G. W. Barclay, F.R S. Edin., presided over a considerable company of the medical and other professions. In proposing the health of Dr. Argyll Robertson Mr. Barclay said that it was many years since, after taking his degree and studying abroad, the guest of the club began his life-work in Edinburgh. While practising physiology under Hughes Bennett he had already begun the study of the eye, with which his name was so particularly associated. He had held many highly important positions and numerous presidential appointments, among others that of the Royal College of Surgeons of Edinburgh, and at that moment he was surgeon oculist to the King in Scotland. The members of the club did not think that they could allow so old and distinguished a member to go from among them without holding out to him the hand of fellowship and wishing him every joy and happiness in his new home. Dr. Argyll Robertson, in responding, said that he wished he had had the power to give expression to the fulness of a heart that was overflowing with gratitude for the kind words that they had listened to and responded to. He assured them that it was with feelings of no small regret that he made up his mind to leave the city of his birth, the city in which he had contracted and formed so many ties of kindly friendship and of intimate good fellowship. Were it not for the circumstance that he felt an overwhelming desire for a country life, that he desired to be free from the cares and turmoils of practice and responsibility of office, he assured them it would be with extreme difficulty, if at all, that he could tear himself away from the most lovely city in the world. But in the sunshine of Jersey he would possess freedom from care and worry and the pursuit of golf and gardening and other recreations would be possible. He thought it was infinitely wiser to retire while yet perhaps a few years remained in which fairly good health and strength might be given to him and while his faculties were not altogether weakened and decayed.

Glasgow Royal Infirmary.

A public meeting, the object of which was to promote the scheme for the reconstruction of the Royal Infirmary, was held in the City Chambers, Glasgow, on Jan. 29th, the Lord Provost, Sir John Ure Primrose, presiding. This scheme was initiated in the year 1897, when it was proposed to rebuild the front block of the present structure as a memorial of Queen Victoria's Jubilee Reign. For this purpose £86,500 had been obtained, but as the Lord Provost pointed out, it was now felt that reconstruction of the whole building was advisable. What was required for this purpose was an additional £200,000, of which £78,000 had already been contributed by a few citizens, including three subscriptions of £10,000 each. On the motion of Lord Overtoun a committee was appointed to receive contributions to the supplementary fund.

Glasgow Samaritan Hospital Bazaar.

At a meeting of the executive committee of the Samaritan Hospital bazaar held on Jan. 28th, at which the Lord Provost presided, a financial statement was submitted showing that the total receipts of the bazaar amounted to £25,588 and that the expenditure had been £1962, leaving a balance of £23,626 On the motion of the Lord Provost it was agreed in the first place that £20,000 of the free proceeds of the bazaar should be set aside for the purpose of constituting a special endowment fund for the hospital, the annual income accruing from which shall be applied in aid of its maintenance in all time coming. For this purpose the following trustees were appointed—namely, the Lord Provost of Glasgow, the Sheriff of Lanarkshire, the president of the hospital, the chairman of the directors of the hospital, Mr. A. Cameron Corbett, M.P., Mr. John M. MacLeod, C.A., Lady Blythswood, and Lady Ure Primrose, any three of the said trustees being a quorum. It was further agreed that the balance of the free proceeds of the bazaar should be paid over to the directors of the hospital in aid of the building fund in connexion with the new wing about to be erected.

Small-pox in Glasgow.

The total number of patients in Belvidere Fever Hospital on Jan. 29th suffering from small-pox was 241.

Feb. 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Central Midwives Board and Irish Midwifery Training.

A REPLY has been sent to the Master of the Rotunda Hospital, Dublin, and to Professor J. W. Byers of Belfast in [illegible] regulations disqualify women trained in the Irish schools of midwifery. The reply of the Central Midwives Board incloses a resolution which was passed by the Board on Jan. 28th to the effect that—

> They regret that the suggested alternatives were not brought to their notice before the rules were sent to the Privy Council, as having been now approved by that body it is impossible for the Board to alter them.

Typhus Fever in Ireland: the Death of Mr. W. J. Coneys.

It was once thought that typhus fever was stamped out in Ireland but such is far from the truth. That disease, which is much the most dangerous and fatal of fevers in this country, prevails in its epidemic form almost every year along the west coast. At such times it is virulent and contagious. It may be remembered that when last it appeared at Clifden four trained nurses were sent from the Mater Misericordiæ Hospital, Dublin. Of these two contracted the disease; they were both very gravely ill and one died. The death of Mr. W. Smyth of Burton Port will be recalled on account of his heroic efforts to bring home and to save his typhus fever patients in the outlying islands in his district in Donegal, which in fact appealed most strongly to the medical profession and to the public. He has been succeeded by a practitioner from Manchester who now cheerfully risks his life out there. Another melancholy death from typhus fever took place recently along the same coast but lower down, in the person of a medical practitioner who contracted the disease in the performance of his duty as dispensary officer for the Roundstone district. Dr. R. J. Kinkead of Galway saw him in consultation with Mr. P. C. Gorham of Clifden and two nurses were summoned by telegraph from Dublin. Nothing availed and Mr. Coneys, who was well known and popular in county Galway, died on Jan. 19th, aged 35 years. His untimely death has caused much grief among the poor people for whom he worked and for whom, indeed, he ultimately sacrificed his life. The following motion was unanimously passed by the Clifden board of guardians:—

> That owing to the sad and lamented death of Dr. Coneys of Roundstone No. 1 Dispensary District who, in discharge of duty, sacrificed his life on behalf of the people who are suffering from a fever epidemic in that district, it is resolved that the business of the board stand adjourned in respect to the memory of this brave man, and we beg to tender our respectful sympathy to his friends and relatives in their sad bereavement.

Clonskeagh Small-pox Hospital.

In the Court of Appeal on Feb. 1st judgment was given in the suit brought by the Attorney-General who sought an injunction to restrain the Rathmines and Pembroke joint hospital board from erecting an isolation hospital for the treatment of small-pox and other infectious diseases on the grounds of Vergemont contiguous to the village of Clonskeagh. The appeal was brought from a judgment of the Vice-Chancellor in which he granted an injunction but only as regards the reception and treatment of small-pox cases. The issue was really a purely medical one for it depended on whether the aerial convection of small pox was proved or was not. The conflicting evidence brought before the Vice Chancellor—and already reported in THE LANCET—from physicians and public health officers was reviewed by Lord Justice Fitzgibbon who stated in his judgment dismissing the action that "he confidently hoped that experience might justify him in declining to accept the theory of aerial convection as against fact so sanctioning an alarm based only upon theory, as the result had justified the decision of Mr. Justice Romer who declined to grant an injunction in a somewhat similar case in Ossett, Yorkshire." Lord Justice Walker and Lord Justice Holmes concurred.

The Provostship of Trinity College, Dublin.

It is said now that the most likely appointment for this most honourable position is Mr. Justice Madden. He is the present Vice-Chancellor and is more ambitious of academic than legal preferment. If, however, a complete outsider is selected rumour points to Professor Butcher, son of the late Bishop of Meath, who is a great personal friend and old Cambridge associate of the present Prime Minister.

Health of Belfast.

The health of Belfast, as disclosed by a discussion in the city corporation on Feb. 1st, is far from satisfactory. 14 cases of small-pox between Dec. 20th, 1903, and Jan. 23rd, 1904, have been notified and since the commencement of this epidemic 35 cases were treated in hospital. Of these 16 have been discharged, 18 remained in hospital, and one (a girl, five years of age, who, owing to bad health, had never been vaccinated) died. There were numerous deaths (59) from whooping-cough 86 cases of scarlet fever, 58 of erysipelas, 27 of typhoid fever, 23 of simple continued fever (whatever disease this may be), 17 of diphtheria, six of puerperal fever, and two of croup were notified. The death-rate was 25·3 from all causes. There is a widespread epidemic of measles and whooping-cough at present in Belfast. It is proposed that the medical officers of health should give certificates in these cases, which it would be necessary to produce before the children were readmitted to the public schools, and to adopt a system of voluntary notification of such complaints as are not legally notifiable.

Attention was rightly drawn to the fact that the public analyst found that the quality of milk supplied to the city of Belfast was deteriorating, due largely to the neglect and apathy, it was said, of the magistrates in not assisting in such cases. The point was of great importance when taken with the fact that one-fourth of the whole mortality last month in Belfast was of infants under one year and almost one half of the deaths were of children under five years. To these children the value of pure milk is of paramount importance. The Dairymen's Association is to have a consultation with the public health committee in reference to the matter. Very strong expressions of opinion were made in reference to allowing the plans of any houses, or rearrangement of houses, to pass which have not provision for back passages.

Mater Infirmorum Hospital, Belfast.

At the annual meeting of the maintenance committee held on Feb. 1st a concert was given to the weekly collectors and workers for this deserving institution. Financially the yield from contributions from business firms was £300. Two wards have been opened for sick children and accident cases from the northern part of the city were conveyed in large numbers daily to the hospital. It is hoped that both workers and employers will contribute to the funds of the hospital.

Queen's College, Belfast.

Mr. Frederick Purser, Fellow of Trinity College, Dublin, has presented a sum of £2000 to the equipment fund of Queen's College, Belfast, to found a studentship in mathematics, in memory of his distinguished brother who was so long on the teaching staff of Queen's College, Belfast, the late Professor John Purser, D.Sc.

Forster Green Hospital for Consumption, Belfast.

At the annual meeting of the friends of this hospital, held on Jan. 28th, it was reported that during the past year there had been 186 intern and 655 extern patients. Necessity of beginning treatment early if satisfactory results are to be looked for was pointed out as well as the proper use of the word "infection" when used in connexion with consumption. Owing to insufficient support more patients were not treated and for the same reason the post of resident physician remains unfilled. Dr. R. M. Beatty has been appointed pathologist. Financially there was a deficit of £235 16*s*. 1*d*. at the close of 1903.

Feb. 2nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Medical Men and the Workmen's Compensation Acts.

I HAVE on many previous occasions written about the difficulties which are always arising in France for the medical profession in the working of the Compensation Acts. I have also mentioned the hard-fought battles which take place between the medical defence societies on the one hand to prevent their members being unfairly exploited and the insurance companies on the other which are naturally desirous of profiting by loopholes in the law so as to fulfil their engagements as cheaply as possible and they are backed up in this by the Government which is anxious to curry favour with the working classes by the application of this very contentious law. As is usually the case in all State philanthropic innovations it is the medical men who really pay. The medical defence societies have shown a certain skill in drawing over to their side firstly the working classes, who have the nominal right under the law of choosing their own medical man to attend them in the case of an accident, and secondly the poorer classes, who find themselves at a disadvantage by seeing themselves excluded from the hospitals so as to leave room for injured workmen, and it is certainly an abuse of charity to consider these latter as needy patients for all their expenses are guaranteed by the rich insurance companies Midway between the two camps come the medical officers of the insurance societies whose duties are to report upon an accident and to decide when the injured man is fit to return to work. These medical officers, who are always young and who are only too pleased when confronted with the difficulties of commencing practice to be able to obtain a fixed salary, naturally work in the interests of the insurance societies which are opposed to those of the working man and of his medical attendant. Professor Brouardel has made the grave mistake of intervening on behalf of the companies' medical officers on the hypothesis that in the poor quarters of Paris a fraudulent arrangement might be come to between an injured workman and a needy practitioner to prolong unduly the duration of the former's illness at the expense of the insurance society. This risk, if indeed it exists, is very hypothetical for the insurance companies' medical officer always has the right to inspect the injured man and if he disagrees with the opinion of the patient's medical man as to the duration of the illness he can have the matter decided by the evidence of an official expert (*par un expert assermenté*). The chief question now, however, is the injury caused to hospital physicians and surgeons who have to treat at the expense of the Assistance Publique and without any pecuniary benefit to themselves injured workmen who, had they been treated at home, would have had the fees for treatment paid by the insurance companies. M. Bousquet of Clermont-Ferrand and M. Reynes of Marseilles sent in some interesting reports on the matter to the annual Congress of French Surgery. M. Lande, the Mayor of Bordeaux, who is both a medical man and a member of the Superior Council of the Assistance Publique, has managed to get the administration of the Bordeaux hospitals to agree to pay fees to the hospital medical officers when these latter treat patients whose expenses would be reimbursed to the administration by the insurance companies. Meantime the Society of Paris Hospital Surgeons has not been idle and a committee composed of M. Perier and M. Sebileau has drafted the following resolutions :—

1. That the administration of the Assistance Publique estimate the price charged for hospital accommodation or treatment as an out-patient in the case of injured workmen who cannot be considered as indigent patients.

2. That as regards patients of the above-mentioned class, in addition to the daily charges for food, lodging, drugs, and dressings there shall be added a sum for medical and surgical attendance, such fees to be fixed after the tariff in present use, and that this shall hold good for both in- and out-patients.

3. That the amount of these medical and surgical fees be collected by the Assistance Publique and paid by them into a fund attached to each several hospital, the moneys so paid in to be allocated by the surgeons of the said hospital and divided among charitable institutions or other works of benevolence (in accordance with a schedule drawn up by the committee).

4. That there shall be no special wards for accidents coming under the Compensation Acts, for such a special department would be of necessity prejudicial to the interests of the injured, of the insurance companies, and of the medical men.

The Differences in the N Rays derived from Nervous or Muscular Tissues.

At the meeting of the Academy of Sciences held on Jan. 4th M. Charpentier read a communication which tended to show that physiological radiations are for the most part n rays but that apparently they also contain other radiations. Radiations, for instance, sent out by nervous tissue are partly stopped by aluminium. The radiations which do pass through aluminium will traverse a sheet of that metal even when fairly thick and they are n rays properly so called. On the other hand the sheaf of radiations sent out by the heart, the diaphragm, and other muscles is not affected by aluminium. Another point which distinguishes nervous from muscular radiations is that, as M. Charpentier has previously shown, the former are increased by slight compression whereas the latter are scarcely at all increased by the same means. Finally, the radiations from nerve tissues when compared with those from other tissues affect much more strongly the screen of phosphorescent sulphide when it is heated to a temperature of from 40° to 45° C. It is therefore reasonable to conclude that nervous radiations differ from Blondlot's rays.

Picture Post-cards and the Hospitals.

The administration of the Assistance Publique has just had an idea which will serve to turn to the profit of the sick one of the amusements of modern society. Ten photographs of wards and other interesting places in every hospital have been taken and printed on post-cards. These ten cards are sold by the porters of the several hospitals for 60 centimes the lot and they cannot be bought in the ordinary shops. The profits from this little commercial venture will go to make a sum for each hospital which will be considered as a Samaritan fund for those patients who leave the hospital well in body but friendless and in need.

Feb. 2nd.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Abscess of the Lungs.

Professor Hermann Schlesinger recently read a paper on Abscess of the Lungs before the Wiener Medicinisches Doctorencollegium. He said that during the last ten years some progress had been made in the knowledge of the clinical symptoms and the therapeutics of this disease. The non tuberculous forms were caused by pneumonia, the entrance of foreign bodies, traumatism, embolism, perforation of neighbouring ulcers, and bronchiectasis. Among the symptoms which were of diagnostic value might be mentioned the physical signs of cavity and the presence of very abundant, sometimes very offensively smelling, expectoration containing in some rapidly developing cases elastic connective tissue and fragments of lung substance. If there was a spot on the thorax which was at one time tympanitic and at another time dull on percussion, and if the change of sound coincided with the coughing up of large amounts of sputum, this change and the presence of râles would be of diagnostic value in cases of pyrexia combined with ill-smelling sputum. The occurrence of circumscribed dulness amidst the air-containing tissue, a shadow or extremely bright spot shown by means of the Roentgen rays, and portions of lung substance in the sputum were important diagnostic indications. Amphoric breathing was not characteristic for a large cavity. The diagnosis might also be made in cases without pulmonary cavities by observing the increasing circumscribed dulness, the purulent sputum, and the increasing leucocytosis. Up to now the symptom of slowly increasing dulness had not been regarded as significant, but it was of value in the rare cases without expectoration in which no breathing was heard over the area of dulness and this area of dulness was surrounded by normally resonant lung. Pulmonary abscess might be either solitary or multiple; it was mostly in cases of influenza that multiple abscesses occurred. In 80 per cent. of the cases of pulmonary suppuration pleural adhesions were present and might be diagnosed by the imperfect respiratory movement of the lower border of the lung, by the decreased mobility of the individual parts of the thorax, by the condition of *rétrécissement thoracique*, by the drawing in of the skin between the ribs during inspiration, and by the appearances shown with the Roentgen rays. Professor Schlesinger has found inflammatory œdema of the skin (a symptom not long recognised) over the affected part of the lung. Operative treatment was indicated when pulmonary abscess had been diagnosed and its position located, because there was the danger of rapid extension of the process, but operation might be postponed for three or five weeks if the abscess was not putrid. If enlargement of the abscess or perforation into the pleural cavity occurred immediate operation was necessary. It has been found that 80 per cent. of pulmonary abscesses which had been operated on recovered but in cases of gangrene only 60 per cent. of those which were operated on proved successful. After operations for bronchiectasis the results were so unsatisfactory that Professor Schlesinger did not recommend surgical interference in these cases.

Treatment of Sarcoma with the Roentgen Rays.

Dr. Kienböck has had under his care a case of sarcoma of the nose which after the failure of surgical treatment was exposed once a week for three months to the Roentgen rays. The pain disappeared after a short time and the tumour diminished in size. The cause of this improvement was endarteritis obliterans and necrobiosis. Dr. Grossmann has described a case of sarcoma of the nose which was greatly benefited by exposure to the Roentgen rays. Dr. Holzknecht has suggested in reference to cases of sarcoma of the ovary improved by Roentgen rays that there are apparently some kinds of sarcoma extremely sensible to the Roentgen rays and that deep-seated sarcoma not directly exposed to the rays may disappear by absorption through the influence of the small amount of rays passing through thick layers of tissue.

Treatment of Carcinoma of the Œsophagus by means of Radium Rays.

Dr. A. Exner has treated six cases of carcinoma of the œsophagus in the following manner. He fixed an indiarubber capsule containing 60 milligrammes of radium bromide on the general condition improved, because the difficulty of swallowing disappeared. The improvement was caused by breaking down of the carcinomatous tissue, but the treatment was not free from danger because perforation of the œsophagus might occur.

Death of Professor Seegen.

Professor Josef Seegen, celebrated for his researches in connexion with diabetes, has just died at the age of 82 years. A new treatise by him on the Formation of Sugar appeared only a few days before his death.

Feb 1st

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Large Deficit in Hospital Funds.

THE annual statement of the financial affairs of the hospitals of New York makes a very unfavourable showing as to their pecuniary support. For example, the deficit of Roosevelt Hospital was $6000; of St. Luke's, $27,000; of the he Women's, $10,000; of the red and Crippled, $55,675; of of the Lying-in, $88,477; and) hospitals report a deficiency 40 hospitals in the greater city scarcely three or four end the year without a deficit in their funds. From comments on this condition of our great metropolitan hospitals, of which the city may well be proud, we learn that an examination of the methods by which these deficits are met shows that it is mostly done by employing for current expenses legacies and other funds which should be invested for the purpose of making additions to the revenue-yielding capital. If this is the policy pursued these institutions must sooner or later come to bankruptcy. The initial point of departure from a wise policy in the establishment and management of these hospitals is in the construction of the buildings. On purely architectural ornamentation millions of dollars have been expended that might have been saved for endowment or management. There are instances of the expenditure of several millions of dollars of endowment funds on buildings and when the hospitals were opened for the reception of patients there was not a dollar left in the treasury to meet the demands of the management The only suggestion yet made as to the best method of meeting these annual deficiencies of the hospitals is to raise an endowment fund of $10 000,000. No effort has yet been made to accomplish this object and it is doubtful if it can be consummated.

The Public Sale of Depressant Drugs.

The increase of deaths from heart failure has raised the question as to the effects upon the public health of the sale of such remedies as headache powders. In this city in the year 1900 there were registered 4069 deaths from heart disease in a population of nearly 3 500,000; in 1901 the number of such deaths increased to 4626; and in 1902 these deaths reached a total of 5461. The subject came under the notice of the health authorities and early last year an inspection of articles sold as headache powders was undertaken. The result of an analysis of 373 samples of phenacetine showed that only 58 were pure phenacetine, 315 were adulterated with cheaper drugs chiefly acetanilid, 267 specimens contained more acetanilid than phenacetine, and 32 samples were pure acetanilid. The health commissioner published the results of this inspection and announced his determination to expose and to prosecute all druggists found guilty of committing this misdemeanour in the future. It is an important fact that for the year following this threatened prosecution the death-rate from heart failure fell from 1·34 to 1·28 per 1000.

The Results of Treatment of Congenital Dislocations of the Hip.

A report of the orthopædic staff of the Children's Hospital, Boston, throws some new light on the value of Dr. Lorenz's method of treatment of this deformity. The report covers a period of 20 years and 138 cases. In the period previous to 1896 all the 26 cases were failures; in 1896–1902 out of 54 cases treated 12 were successful and only 13 were failures. The year 1902 included those cases treated by Dr. Lorenz and cases treated 11 were successful, four were failures, four ed improvement, and in three the results were unknown. results of treatment in the year 1903 show a remarkable provement, for of 33 cases treated 24 were successful, x failed, and in three the results were unknown. Of the six cases treated by the Lorenz method five were successful and the sixth, being a child nine years old, failed, as was expected. One case treated by incision failed. Much of the success is attributed to the use of a machine invented in Boston, for of the 24 successful cases 18 were manipulated by its aid. In all of the cases treated there was no disaster or fatality.

Tenement House Reform in New York.

The Tenement House Commission has now been in operation for one year and the results of its work surpass public expectation. A summary of its operations shows the need and value of its services in the interests of the poor of the city. Tenement conditions were in many instances found so bad as to be indescribable. Such are vile privies and privy sinks; foul cellars full of rubbish, garbage, and decomposing fæcal matter; dilapidated and dangerous stairs; plumbing pipes emitting sewer gases; living rooms so dark that one could not see the people in them; and pigs, goats, horses, and other animals kept in cellars. The work of the department is thus summarised: 40,000 buildings were inspected, over 80,000 persons were provided with comfortable homes in good sanitary condition, prostitution has been practically abolished in the tenement houses, 337,246 inspections were made, 55,055 violations were filed, 21,584 repairs were made to plumbing, 13,617 water-closets were cleaned, 10 060 unsafe wooden floors were removed from iron fire-escapes and new iron floors were substituted, and 1701 fire-escapes were erected on buildings that were without this protection. The results of this work are clearly reflected in the reduced death rate which in 1902 was 18 7 per 1000 as compared with 20·0 in 1901, and in the first eight months of 1903 it was reduced to 18 per 1000.

The Extermination of the Mosquito.

The war against the mosquito is about to take on national dimensions. The Board of Trade of New York has determined to call a convention for the purpose of concerting measures for a combined onslaught on the mosquito. The promoters of the meeting have requested all departments of health, boards of trade, village and town improvement associations, and medical, entomological, engineering, and agricultural societies to send representatives It is intended to perfect a national organisation for mutual aid in suppressing the mosquito plague. The body so formed will publish and circulate widely a full report of the papers and discussions as a means of arousing and maintaining interest in this subject. In the same connexion may be mentioned the action of the First International Sanitary Convention held in Washington which advised that the different Governments should study in their respective territories the geographical distribution of the mosquito of the genus stegomyia. In compliance with the request the Surgeon-General of the United States Bureau of Public Health has issued orders to the officers of that bureau to collect specimens of all the mosquitoes of the country and to forward them to the entomologist of the United States Agricultural Department, Dr. O. L. Howard, who is engaged in the preparation of a report upon the mosquitoes of North and Central America and the West Indies.

Organised Defence in Suits for Malpractice.

The New York State Medical Association has among its provisions one that enables a member who has been prosecuted for malpractice to appeal to the association to defend him in the trial. The practical result of this engagement of the association in the defence is to bring the profession of the entire State to his support and to relieve him of all responsibility and personal annoyance. The costs of the trial have been reduced to a minimum, as the association has its own attorney who aids the counsel of the physician, or he may assume the duties entirely of the defence. During the two years of the operation of this provision many suits have been defended and every one successfully. When the proposition was first made to make it an obligation of the association to assume the defence of members prosecuted for malpractice the scheme was regarded as not only impracticable but likely to induce patients to prosecute and thus to increase rather than to mitigate the evil. The effect has been found to be the opposite; prosecutions are diminishing and apparently because it is becoming known that the physician prosecuted does not stand alone but, on the contrary, has the actual support and protection of a powerful organisation which represents the profession of the State.

The New Naval Medical School.

The Surgeon-General of the United States navy speaks in the warmest terms of the Naval Medical College at Washington in his annual report to the Congress It was organised under department orders of May 27th, 1902, and closed its first session on April 27th, 1903, by the graduation of its first class of 12 members. The course of instruction is designed to instruct and to train newly appointed medical officers in professional branches peculiar to naval requirements and in the methods of naval work as applied to their profession and in general. The need of a preliminary course of instruction for the novitiate of the medical corps before taking up active duty was fully demonstrated in the class work, and already in the few months since graduation during which the members of the class have been actively employed the value of this school training has been practically demonstrated.

Jan. 20th.

Obituary.

WILLIAM DONALD, M.D. ABERD.

MUCH and sincere regret is felt in Banff and neighbourhood at the death of Dr. William Donald which occurred in Aberdeen on Jan. 18th. For about a year he had been suffering from a very painful internal malady and about two months ago it was found necessary to have him removed to Aberdeen for the purpose of undergoing a surgical operation. This was successfully performed and for a time gave the patient relief, but after this he took a turn for the worse and rapidly lost strength.

Dr. Donald was the eldest son of William Donald, M D, Bogside of Eden, King Edward, Aberdeenshire, and graduated at the University of Aberdeen as M B. and C.M. in 1873. He passed the next few years in Banff where he was resident surgeon in Chalmers' Hospital. From Banff he went to Colombo, Ceylon, where he was district medical officer for several years and married Miss Deane, only daughter of the late Captain H. Deane, Banff. Returning from Ceylon about 26 years ago Dr. Donald settled in Banff and in time made for himself a large practice throughout an extensive district. He held many local appointments, among others those of visiting surgeon to the Chalmers' Hospital, Banff, certifying surgeon under the Factory Act, and lieutenant-surgeon of the Macduff Artillery. He was a justice of the peace of the county and was for many years an elder in the parish church. In public affairs Dr. Donald took a very keen interest and for a term of years was a member of the School Board. He was 51 years of age at the time of his death and is survived by a widow and grown-up family for whom much sympathy is expressed.

Medical News.

UNIVERSITY OF OXFORD.—The following dates are fixed for degree days: Hilary term, Thursday, March 17th; Easter term, Thursday, April 28th, and Thursday, May 19th; and Trinity term, Thursday, June 16th, Thursday, June 23rd, and Saturday, July 9th. The following degrees have been conferred:—

B.M., B.Ch.—Dec. 10th, 1903: Henry Wynyard Kaye, Magdalen. Jan. 21st: Douglas Reginald Pike, Jesus; Frederick Pitcairn Nunneley, Brasenose; Frederick Lucien Golla, Magdalen; Conrad Meredyth Hinds Howell, Trinity; Paul Norman Blake Odgers, Lincoln; and Alexander George Gibson, Christ Church.

The examination for the Radcliffe travelling fellowship will commence on Tuesday, March 1st. The names of intending candidates must be sent in to the "Radcliffe Examiners," University Museum, Oxford, on or before Tuesday, Feb. 9th.

UNIVERSITY OF CAMBRIDGE.—His Majesty the King has graciously announced his intention of visiting the University on March 1st for the opening of the new Medical

School, Botanical Laboratory, Sedgwick Memorial Museum, and Law School.—At the congregation on Jan. 28th the following medical and surgical degrees were conferred :—

Doctor of Medicine.—J. R. Garrood, St. John's; and E. M. Light, Clare.
Master of Surgery.—J. K. Murphy, Gonville and Caius.
Bachelor of Medicine and Bachelor of Surgery.—R. E. V. Foster, King's; and W. Hill, Emmanuel.
Bachelor of Surgery.—C. F. Hardie, Queen's; H. R. Fisher, Emmanuel; and B. J. Steward, Downing.

Dr. H. K. Anderson has been appointed university lecturer in physiology in the room of Dr. J. N. Langley, resigned, on appointment to the professorial chair.—The report of the special board for medicine, proposing the establishment of a special examination and a university diploma in tropical medicine and hygiene, was on Jan. 28th adopted by the Senate.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS.—The following candidates have passed the examinations indicated :—

Second Professional Examination.—(a) *First trial*: F. F. Gilligan [illegible] Wallace.
Third Professional Examination.—(a) *All subjects*: M. Campbell, C. L. Browne, George Thomason, and C. H. Twells. (b) *Completing*: A. C. Adams, M. Antony, F. L. Bradish, W. C. Carson, E. Duffy, J. C. Heelan, Miss Lardner, James Roberts, P. P. Ryan, R. H. Smythe, and W. Tobin.
Fi[illegible] *All subjects*: C. L. Browne. (b) *Completing*: R. G. Allen, [illegible] Kelly, Thomas Kelly, John [illegible] W. W. Stuart, and Miss A. Taylor.

SHELL-FISH.—A conference of oyster merchants and others interested in the shell fish industry will be held at the Great Eastern Hotel, Liverpool-street, London, to-day (Friday, Feb. 5th), at 11 A.M. Mr. D. J. Morgan, M.P., will preside and the business will be to consider the recent report of the Royal Commission on Sewage Disposal bearing upon the protection of shell-fish layings.

LONDON HOSPITAL MEDICAL CLUB.—A meeting of the executive of the above club was held on Jan. 26th to formulate the rules and regulations to be submitted for acceptance by the members for the formation of a benevolent scheme in connexion with the club. Several subscriptions have already been promised and it is believed that the movement will not only prove successful but that it will be the pioneer of similar plans being carried out in connexion with the various medical schools throughout the entire country. The London Hospital Medical Club has now been in existence for over a century. It is not proposed to alienate any of the present funds of the club and all subscriptions are to be carried to capital account, the interest of which alone is to be applied to benevolent purposes.

LECTURES ON MEDICAL JURISPRUDENCE.—The third of the interesting series of lectures under the auspices of the Council of Legal Education was delivered on Jan. 28th at the Old Hall, Lincoln's Inn, by Dr. F. J. Waldo, coroner of the City of London, the subject being Death in its Medico legal Relations. This was a matter of considerable importance to the legal profession. The possibility of live burial was dismissed shortly by the lecturer with the statement that from a scientific point of view it might be said that no recorded case bore the scrutiny of exhaustive logical inquiry. It was often of considerable importance both in civil and in criminal cases to determine the exact moment of death. At the same time speculations of this kind were often of theoretical rather than of practical value. Of the signs of death no one could be taken as absolutely conclusive of the precise moment at which somatic or general cessation of life had taken place. Putrefaction, again, although a certain sign of death, could not be regarded as a precise index of the time that had been taken up in the process. Thus it would be impossible to say in many instances whether a given body had been that of a person dead one or six months. Fallacies on this point were numerous. For instance, putrefaction might be considerably delayed in the case of persons who had been confirmed alcoholics or who had been poisoned with antimony, or whose bodies had been immersed in water. The lecturer concluded by various practical recommendations as to desirable reform in the present system of death certification. One of the chief points was the registration of all still-born children by a duly qualified medical practitioner; otherwise the body of such an infant should be buried only upon the order of a coroner. Other important suggestions were made as to the causes of death that should be investigated by the coroner. The lecture, which proved both practical and interesting, dealt with the subject rather more from the point of the well-informed medical jurist than from that of the legal.

DONATIONS AND BEQUESTS.—Under the will of [illegible] *to the Ulverston* [illegible] to Bolingbroke [illegible] resented £350 to the committee of the Tiverton Infirmary, Devon, for the purpose of providing a laundry for the institution.

NEWPORT MEDICAL SOCIETY.—A meeting of this society was held in the Newport and County Hospital on Jan 27th. There was an exhibition of clinical cases and specimens. Major H. B. Mathias, R.A.M.C., read notes on a case of Splenic Anæmia in which trypanosomes were found in a smear preparation taken from the spleen after death. Mr. W. Sheen read a paper on Radium and its Possible Therapeutic Uses. The exhibits and papers were discussed by the members present.

INSTITUTE OF CHEMISTRY OF GREAT BRITAIN AND IRELAND.—In the Intermediate Examination held on Jan. 5th–8th 15 candidates presented themselves and 11 passed. In the Final (A.I.C.) Examination in Branch A, Mineral Chemistry, six candidates presented themselves and four passed. In Branch D, Organic Chemistry, 11 candidates presented themselves and six passed. In Branch E (the Analysis of Food and Drugs, including an examination in Therapeutics, Pharmacology, and Microscopy) four candidates were examined and three passed. Of three candidates examined for the Fellowship (F.I.C.) two were successful. The examiners in general chemistry were Mr. W. W. Fisher, M.A., F.I.C., and Professor W. Palmer Wynne, D.Sc., F.R.S., F.I.C.; and the examiner in therapeutics, pharmacology, and microscopy was Dr. Arthur P. Luff, B.Sc.

PRESENTATIONS TO A MEDICAL OFFICER OF HEALTH.—On Jan. 28th Mr. John Robertson, M.D., B.Sc. Edin., until recently medical officer of health of the city of Sheffield and now holding a similar appointment in Birmingham, was entertained at dinner by members of the medical profession and by his late colleagues on the staff of University College, Sheffield. Mr. R. J. Pye Smith, in presenting him with a silver James I. tea tray on behalf of the council and staff of University College, spoke in enthusiastic terms of Dr. Robertson's services to that institution as professor of public health and lecturer on bacteriology during the past six years. Dr. Robertson was also the recipient of a silver rose-bowl which was presented on behalf of the medical profession of Sheffield in recognition of his valuable services to the city as medical officer of health by Councillor Dr. E. Hargreaves.

BALNEOLOGICAL CONGRESS AT AACHEN (AIX-LA-CHAPELLE).—The twenty-fifth Balneological Congress will be held at Aachen from March 3rd to 7th, under the presidency of Herr Liebreich of Berlin. A number of interesting addresses will be delivered. The physicians and civic authorities of the town have taken the liveliest interest in the preparations for the Congress and are prepared to extend a hearty welcome to their medical guests. The opening reception will be held at the Kurhaus at 8 P.M. on Thursday, March 3rd. The Congress will open at 10 on the following morning with speeches from Herr von Hartmann, "Regierungs Präsident"; Herr Veltmann, "Oberbürgermeister"; Dr. Breuler, rector of the "Hochschule"; Dr. Beissel, "Sanitätsrath"; and others. During the Congress papers will be read by Herr Polis of Aachen o[illegible] the Rhine Provinces; by Herr [illegible] Rheumatism in the Joints; by [illegible] the Climatic Treatment of Heart Complaints; by Herr Kugler of Marienbad on Balneo physics and Climatic Health Resorts, and many others. Several receptions will be arranged and on the last evening there will be a special performance of Haydn's *Creation* in the large concert room of the Kurhaus. Further particulars will be supplied by Herr Sanitätsrath Dr. Beissel, 18, Kleinkolnstrasse, Aachen.

Parliamentary Intelligence.

Opening of the Session.

The session of Parliament was opened on Tuesday, Feb. 2nd, by His Majesty the King, who was accompanied by Queen Alexandra. The opening ceremony took place in the House of Lords in presence of a large gathering of peers and members of the House of Commons and other privileged persons. In the speech delivered by His Majesty legislation was promised with reference to the immigration of criminal and destitute aliens into the United Kingdom, the issue of liquor licences in England, the housing of the working classes in Ireland, the law of public health, the hours of employment in shops, and a number of other subjects The opening proceedings lacked the presence of the Prime Minister who was suffering from an attack of influenza.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to The Lancet *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

Atkins, S. E., L.R.C S.I., L.S.A., has been appointed Certifying Surgeon under the Factory Act for the Hatherleigh District of the county of Devon.

Beresford, R. de la Poer, M.D. Glasg., has been appointed Medical Examiner of Recruits for the Montgomery Imperial Yeomanry at Oswestry.

Corner, Edred M., M.B., B.S. Cantab., F.R.C.S. Eng , has been appointed Assistant Surgeon to St. Thomas's Hospital.

Fry, W. W. B., M.B., C.M. Edin , has been appointed Medical Examiner of Recruits for the Montgomery Imperial Yeomanry at Builth Wells.

Humphreys, C. E., M.R.C.S., L.S.A., has been appointed Medical Examiner of Recruits for the Montgomery Imperial Yeomanry at Llanfair.

Jones, F. F., M.R.C.S , L S.A., D.P.H., has been appointed Medical Examiner of Recruits for the Montgomery Imperial Yeomanry at Llanfyllin.

Kenwood, H. R., M.B., C M. Edin., D.P.H., has been appointed Professor of Hygiene and Public Health at University College, London.

Murray, J., M.B., C.M. Glasg., has been appointed Medical Examiner of Recruits for the Montgomery Imperial Yeomanry at Llandrindod.

Pringle, J., M.D., has been appointed Certifying Surgeon under the Factory Act for the Manchester, S.W., District of the county of Lancaster.

Procter, Thomas, M.R C.S., L.R.C.P. Edin., has been appointed Medical Officer and Public Vaccinator for the Fifth District of the Chipping Sodbury Union.

Richardson, F. L. C., L.R.C.P. & S. Edin., has been appointed Medical Examiner of Recruits for the Montgomery Imperial Yeomanry at Rhayader.

Salter, F. W., L.R.C.P. & S. Edin., has been appointed Medical Examiner of Recruits for the Montgomery Imperial Yeomanry at New Mills.

Scott, Sydney, B.S. Lond., F.R C.S. Eng., has been appointed Honorary Surgeon to the Westminster General Dispensary, London, W.

Smith, William Robert, M.D., B.S. Lond., F.R.C S. Eng., has been appointed Assistant Surgeon to the Hospital for Women, Nottingham.

Wilson, F., has been appointed Medical Examiner of Recruits for the Montgomery Imperial Yeomanry at Newtown.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Ancoats Hospital, Manchester.—Resident House Physician. Salary £80 per annum, with board, residence, &c.

Birkenhead Union Infirmary, Workhouse, and Sanatorium.—Resident Assistant Medical Officer. Salary £120 per annum, with board, washing, and apartments.

Birmingham, Queen's Hospital.—Two House Surgeons, for six and twelve months respectively, and one House Physician, for twelve months. Salaries at rate of £50 per annum, with board, lodging, and washing. Also one Obstetric and Ophthalmic House Surgeon for six months. Salary at rate of £40 per annum, with board, lodging, and washing..

Bristol Royal Infirmary.—Resident Junior House Surgeon and Anæsthetist; also Resident Casualty Officer, both for six months. Salaries at rate of £50 per annum, with board, lodging, and washing.

Camberwell House Asylum.—Second Assistant Medical Officer, unmarried. Salary £150 per annum, with board, residence, and laundry.

Cancer Hospital, Fulham-road, London, S.W.—Surgical Registrar. Honorarium £26 5s. per annum.

Carmarthenshire Infirmary.—Resident Medical Officer, unmarried. Salary £100 per annum, with apartments, board, attendance, &c., for twelve months, one month's notice.

Carmarthen, Joint Counties Asylum.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, apartments, and washing.

Central London Ophthalmic Hospital, Gray's Inn-road, W.C.—Assistant Surgeon.

Charing Cross Hospital.—Medical Officer in charge of the Electrical Department. Also Assistant Physician to Dermatological Department.

Coventry and Warwickshire Hospital.—Assistant House Surgeon Salary £60 per annum, with rooms, board, washing, and attendance.

Dudley, Guest Hospital.—Senior Resident Medical Officer. Salary commencing £100 per annum, increasing to £120, with board, residence, attendance, and washing.

Gloucester, Barnwood House Hospital for Mental Diseases.—Junior Assistant Medical Officer. Salary at rate of £150 a year, rising to £170, with board, &c.

Gloucester General Infirmary and Eye Institution.—Assistant House Surgeoncy for six months. Remuneration at rate of £30 per annum, with board, residence, and washing.

Holloway and North Islington Dispensary, Holloway road, N.—Honorary Medical Officer.

Hospital for Diseases of the Skin, 52, Stamford-street, Blackfriars, S.E.—[illegible]

Hospital [illegible] London, W.—House Physician for six m[illegible]

Kettering and District General Hospital.—Resident Medical Officer, unmarried. Salary £60 per annum, with board, residence, &c.

Liverpool, Royal Southern Hospital.—Junior House Surgeon. Salary 60 guineas per annum.

Macclesfield General Infirmary.—Junior House Surgeon. Salary £70 per annum, with board and residence.

Manchester Hospital for Consumption and Diseases of the Throat and Chest, Hardman-street, Deansgate, Manchester, and Bowdon, Cheshire.—Honorary Assistant Physician.

Metropolitan Hospital, Kingsland-road, N.E.—Assistant Surgeon

Middlesbrough, North Riding Infirmary.—Assistant House Surgeon, unmarried. Salary £75 per annum, with bed, board, and washing.

National Hospital for the Paralysed and Epileptic (Albany Memorial), Queen-square, Bloomsbury.—Junior House Physician Salary £50 a year, with board and residence.

Oxford, Radcliffe Infirmary.—House Physician (salary at rate of £80 per annum), and Junior House Surgeon (salary at rate of £[illegible] per annum), each for six months, and unmarried.

Paddington Green Chil[illegible]n, W. Convalescent Home, "Fair View," S[illegible] to Out patients

Robert Browning Settl[illegible]—Honorary Medical Officer during absence of Medical Superintendent.

Sheffield City Hospital for Infectious Diseases.—Second Assistant Medical Officer. Salary £150 per annum, with board, lodging, and attendance.

Tottenham Hospital.—House Physician for six months. Salary £[illegible] per annum, with board, residence, and laundry.

Wigan, Royal Albert Edward Infirmary and Dispensary.—Junior House Surgeon. Salary £80, with board, apartments, and washing.

Worcester General Infirmary.—House Surgeon. Salary £70 per annum, with board and residence.

The Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory Act at Addingham in the county of York, and at Alfreton, in the county of Derby.

Births, Marriages, and Deaths.

BIRTHS.

Brend.—On the 28th Jan., at 43, Campden-hill-court, Kensington, W., the wife of William A. Brend, M B., of a son.

Jackson.—On Jan. 31st, at the Lings, Radcliffe on-Trent, the wife of Arthur M. Jackson, M.D. Oxon., of a son.

Nash.—On Jan. 29th, at Southend-on-Sea, the wife of J. T. C. Nash, M.D., Medical Officer of Health, of a daughter.

MARRIAGE.

Nixon—Stow.—On the 16th Dec., 1903, at the Parish Church, Roodepoort, Edward John Nixon, J.P., District Surgeon, Heidelberg, Transvaal, to Nellie Philipson Stow, R.R.C., daughter of the late George W. Stow, F.R.S.

DEATHS.

Clarke.—On 16th ult., the wife of Fielding Clarke, M.R C S Eng., etc., at Tunbridge Wells, of typhoid.

Miller.—On Jan. 25th, at "Abingdon," Ryde, Isle of Wight, James Miller, L.F.P.S. & L.M. Glasg., L.S.A.L., late of 136, South Lambeth road, S.W., aged 59.

Playfair.—On the 1st inst., at Bournemouth, David Thomson Playfair, M.D., of Bromley, Kent, elder son of the late Rev. David Playfair, of Abercorn, N.B., aged 48.

Raitt.—On the 28th ult., at Prestwich, Manchester, Thomas Raitt, M.D., aged 55.

Withecombe.—On Feb. 1st, at Richmond, Surrey, John Rees Withecombe, M.D., F.R.C.S., Bengal Army (retired), aged 87.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

GUY'S HOSPITAL AND THE SOUTHWARK GUARDIANS OF THE POOR.

An interesting article, portions of which we reprint below, appears in the *Guy's Hospital Gazette* of Jan. 30th. As will be seen it deals with a recent "Hospital Scandal" so called:—

> "I [illegible] m [illegible] recei [illegible] being no bed available for his reception, was sent in a cab to St. George's Workhouse with a recommendation for his admission into that institution. This proper and considerate action on the part of the house surgeon the Southwark guardians chose to regard as a 'scandal,' and proceeded to make an unjust charge against the hospital with such noise and violence as to deceive a large section of the press into accepting the charge as true and publishing it accordingly, with very harmful results to the cause of this great charity.
>
> Now with regard to this particular case, the course followed by the hospital is adequately vindicated by the fact that all its surgical beds were full. The wards at Guy's are not constructed on the principle of concertina, and the strict regulation of the governors against the putting up of extra beds with all the attendant evils of overcrowding is beyond criticism. There is nothing humane or sensible in attempting to cure one evil by the creation of another and a worse. Moreover, it may be remarked that the case in point was one with which the officials of the workhouse, with the assistance of their medical officer, should have been perfectly capable of dealing, and it would appear, when they were put to it, that they did do so. The guardians, however, have stated that the matter is not to be allowed to rest here. Neither, we hope, is it the intention [illegible] it should; and we take this [illegible] upon certain facts which the [illegible] ignore. That body apparently assumes that Guy's hospital exists and is supported for the especial benefit of the borough in which it is situate. In this they are quite mistaken. Whether honest or not the assumption is false. But for the sake of argument assume it to be true and let us see how Guy's fulfils its obligations to Southwark."

The article then goes on to state that the hospital pays some £3000 a year in local rates; that of the 125,000 out-patients yearly attended to by far the larger proportion comes from Bermondsey and Southwark; that there is a regulation requiring the Poor-law guardians to pay 2*s.* per diem for any Poor-law case in the wards and that this regulation has never yet been met by the Southwark authorities; finally, that the contribution of Southwark in 1903 towards the support of Guy's Hospital was £277. The article continues:—

> "But if the guardians are beaten on their own ground, as they unquestionably are, by the force of concrete facts, they are yet more hopelessly astray when the case is judged, as it should be judged, on the principle. May we be excused for reminding the guardians, or informing them if they are unacquainted with it, of the existence, intent, and provisions of the statute under which they hold sway. So long ago as the year 1601 the legislature of this realm adopted the principle that no necessitous person was to suffer want either in hunger or sickness and proceeded to enact a measure, still in force, known as the Act of Elizabeth and constituted an authority charged with the duty of giving effect to the measure. That authority in Southwark is not Guy's Hospital but the guardians of the poor, and the existence of the hospital does not relieve them from their own legal responsibility. If the arrangements at St. George's workhouse are so bad as not to enable the guardians to deal with the sick cases which properly come within their province those arrangements need altering and we make the friendly suggestion that they should establish a reception station at the workhouse where such cases can be retained until it is possible to safely transfer them to the Infirmary at Champion Hill. At any rate, it should be understood that Guy's Hospital will continue to send to the workhouse cases which the hospital cannot accommodate and which need shelter and medical attention, and if the guardians neglect to properly deal with these cases it will rest with the hospital to refer their dereliction of duty to the Local Government Board."

LICENCES FOR THE SALE OF COCAINE IN INDIA.

We have received a copy of a petition which has been addressed by the Ahmedabad Medical Society to the Governor-General of India in connexion with the recent order of the Government requiring medical practitioners to obtain licences for which an annual fee of one rupee is charged for dispensing cocaine to their patients. The petitioners assume that the object of the Government is not so much to find a new source of revenue as to put a stop to the pernicious habit of cocaine-eating, and they accordingly adduce a variety of arguments against the order in question. The society is in complete sympathy with measures directed against the abuse of cocaine by the general public and points out that the object of the order complained of would [illegible] no general medical practi- [illegible] no specialist in diseases of [illegible] e ounce of cocaine for dispensing to patients during the course of one year, except with a special licence.

THE "COLMO" DISINFECTOR.

This is an ingenious and simple little appliance for the automatic supply of a disinfectant fluid to the flush water for the water-closet. It consists of a block encased in tinned iron containing a glass vessel into which crystals of permanganate of potassium are placed. By the alternate rise and fall of the water in the cistern the glass vessel is charged with water which dissolves part of the permanganate of potassium. When the cistern is emptied a solution of permanganate is automatically syphoned out of the glass vessel and a disinfectant flush is discharged into the pan. The method has obvious advantages, the most important being that the water in the trap is kept sweet and clean, while should any gases escape backwards through the trap they come into contact with the disinfectant and are to some extent deodorised. A drawback, however, to the use of permanganate of potassium as a disinfectant in the closet pan is its tendency to deposit a brown stain upon the enamel. The dis- [illegible]

Old Ford, E.

A QUACK'S LECTURE.

The *Accrington Observer* of Jan. 23rd contains an account of a lecture delivered at the Accrington town hall on the subject of "Our Diseases," by "Mr. George Hall of Dr. Hall's Hygiene Co., Manchester." Whatever Mr. Hall's views may be upon the causation and cure of disease, he is apparently not averse from using the title of "doctor" in order to advertise his pretensions to deal with it, although no doubt he considers that the words added veil his offence and do not "*imply that he is a registered person.*" The nature of the nonsense which the local newspaper reproduced in a condensed form may be gathered from the following extracts. Mr. Hall of "Dr. Hall's Hygiene Co." is stated to have "in vigorous style declared his object was to show a better way of curing disease than by drugs and butchering." "Indigestion and constipation were the parent of all their diseases and every tumour, cancer, fever, and disease known were attributable thereto." "Cancer in the breast could be cured in most cases by pure herbs within and without, good food, and honest living." "Any case of appendicitis could be cured in one day with herbs and without any operation." The worst of this kind of thing is that it is not only delivered to an audience of uneducated and unintelligent persons but is believed in at least by some of them and that the law claims no power to save foolish people from their own folly or to protect them from any glib-tongued mountebank who may impose his absurdities upon them.

DEATH CERTIFICATES FOR INSURANCE COMPANIES.

To the Editors of The Lancet.

Sirs,—Many insurances offices require special forms of certificates of deaths of their policy holders. Who ought to pay the fees for these certificates, the office or the executors? What is the usual fee?

I am, Sirs, yours faithfully,
Qui deo.

Feb. 2nd, 1904.

⁂ The general custom is, we believe, for the executors to pay a fee of one guinea It is obviously to the interest of the executors to obtain the sum insured for, in the interest of the legatees, and it is they therefore who should pay the fee.—Ed. L.

FASHION PAPERS AND MEDICAL ADVICE.

We have received a copy of a fashion paper called *Myra's Journa* against which as a fashion paper we have nothing to say. But we cannot think that the editor is wise in accepting advertisements of "Towle's P. & S Pills," which are indubitably used to procure abortion, although we do not presume that in 99 cases out of 100 the desired result would be secured. We commend to the notice of the editor the issues of The Lancet of Dec. 10th, 17th, 24th, and 31st, 1898, and Jan. 21st, Feb. 4th, and especially June 24th, p. 1740, 1899, where he will find an account of Towle's pills. On p. 46 [illegible] which is dated Feb. 1st, [illegible] "con- [illegible] other matters connected with personal appearance. Two correspondents are, however, much troubled about the size of their mammary glands. "Miss Fatima" is too big and "Undine" is too small. To the former the writer of the article recommends "Dr. Horn's Reducing Paste," to be obtained from Dr. Otto E. Horn, Bournemouth. The following somewhat mysterious directions are given for its use. "Warm a little of this in the palm of one hand, then apply it with circular movements of the finger tips of the other, beginning underneath and working upwards until the skin has absorbed all it can." Now we know nothing of Dr. Horn or his paste but we are quite certain that the treatment recommended will not aid "Miss Fatima" in any way. "Undine" is recommended to apply to the Espanola Medicine Company for the Diano treatment. Now The Espanola Medicine Company is run by A. L. Pointing, concerning whom we have had a good deal to say recently, and so has our contemporary, *Truth*. The Diano treatment is nothing more or less than a fraud and for a respectable journal like *Myra's Journal* to admit such advertisements as Towle's or to recommend its clients to go to a man like Pointing is disgraceful.

THE INJURY TO MADRALI.

To the Editors of THE LANCET.

SIRS,—I was present at the contest between Hackenschmidt and Madrali for the "wrestling championship" on Saturday last. I examined Madrali's injured arm on the platform and afterwards in the dressing-room. Madrali was suffering from a severe injury of his right elbow-joint resulting from a fall on his hand accompanied by a twist. As a consequence there was an irregular and partial dislocation of the right elbow with some rupture of ligament, the radius coming forwards and the ulna going backwards. It is impossible to say exactly how long it will be before he recovers, but I should think in six weeks he will be quite well and in two months it would be safe for him to wrestle again.

I am, Sirs, yours faithfully,

Kensington, W., Feb. 2nd, 1904. F. G. LLOYD.

THE LAY PRESS AND MEDICAL TERMINOLOGY.

WE have often had good reason to call attention to the extraordinary errors into which certain of the daily papers fall in their use of medical terms. When describing the nature of the illness of His Majesty the King, for instance, some bewildering errors were made by papers taking a high position in the journalistic world. One first-class paper mistook the liver for the kidney, others thought that suturing drainage tubes was necessary to preserve continuity of gut. We thought that the climax of absurdity had been reached in this way, but an instance of the danger of using technical terms when the user is ignorant of their meaning which now lies before us is in some ways the most ludicrous that we have ever seen. In the issue of the *Express* of Jan. 29th is a paragraph concerning the scarcity of bodies for dissection in Scotland. The writer of the article in question finishes his statement as follows: "They"—i.e., bodies for dissection—"are kept in spirits and anæsthetised. The latter process is now made imperative as in years gone by students have contracted fatal blood poisoning during the process of dissection." To try to anæsthetise a dead body seems a work of supererogation. What does the writer think the word "anæsthetised" means?

THE OXYGEN TREATMENT.

A CORRESPONDENT asks:—"Can anyone favour me with details of the oxygen treatment for chronic ulcers or refer me to literature on the matter?"

◆

Quack.—The "Famous Specific" in question is composed of alum, borax, and sulphate of soda, made up *in a fatty vehicle. If there* were nothing the matter no particular harm would result from using the stuff, although the unnecessary employment of applications to the vagina is always to be deprecated. If any diseased condition existed the application would be perfectly useless.

Indibis.—The "Professor" is an obvious and rampant impostor. If the electric machine, price £8, which cures stammering would really do its work in a month he would be perfectly happy to be paid at the end of the month by a grateful patient. As, however, he knows that the machine, which, by the way, is probably not worth more than 8s., can do no good he is careful to take his money first.

F. J. F.—1. The position of such men would be very precarious. Their action would possibly be construed by the General Medical Council as "covering," and result in their removal from the Register. 2. He was removed for advertisement of a sort which was considered by the General Medical Council to constitute infamous conduct in a professional respect. 3. We do not know.

R. W. G.—The assistant can only be employed in accordance with the regulations of the General Medical Council.

Etc.—We have read the article. There is a considerable amount of rubbish enveloping its modicum of sense.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received: *The Star (Guernsey), Muswell Hill Times, Hertfordshire Mercury, Windsor and Eton Express, Standard, South Wales Daily News, Walsall Advertiser, Surrey Advertiser, Coventry Herald, Birmingham Daily Mail, Reading Mercury, Mining Journal, Local Government Chronicle, Liverpool Courier, Westminster Gazette, Pall Mall Gazette, Daily News, Irish Times, Nottingham Guardian, Aberdeen Free Press (Weekly), Highland News, &c.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 4th, 1904.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radia in Vacuo.	Maximum Temp. Shade	Min. Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
Jan. 29	29·98	S.W.	0 23	66	49	40	40	41	Fine
" 30	29·58	S.W.	0·09	49	48	41	45	46	Raining
" 31	29·40	E.	0 35	56	43	43	42	43	Overcast
Feb. 1	29·39	S.W.	0 22	61	45	35	36	37	Foggy
" 2	29·23	S.W.	0·14	51	46	37	41	42	Overcast
" 3	29·18	N.E.	0·34	52	49	41	42	43	Raining
" 4	29 34	S.W.	0 18	68	48	40	40	42	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 [illegible]

TUESDAY (9th).—London (2 P.M.), [illegible] Thomas's (3.30 P.M.), Guy's (1.30 [illegible] minster (2 P.M.), West London [illegible] (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.).

WEDNESDAY (10th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's [illegible] St. Mary's (2 P.M.), National Orthopædic [illegible]), Samaritan (9.30 A.M. and 2.30 P.M. [illegible] Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), [illegible] (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M).

THURSDAY (11th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat. (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.). Guy's (1.30 P.M.).

FRIDAY (12[illegible] (1.30 P.M.), St. Thomas's [illegible] Cross (3 P.[illegible] (2 P.M.), [illegible] Northern Central (2.30 P.M.), West London [illegible] Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.)

SATURDAY (13th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (8th).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8 30 P.M. Clinical Cases will be shown

TUESDAY (9th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8 30 P.M. Paper:—Dr. J H Drysdale and Dr H Thursfield: Anæmia Pseudo-leukæmia Infantum.

MEDICO-LEGAL SOCIETY (20, Hanover-square, W.).—8 15 P.M. Mr. J. H. Targett: Homicide by Introduction of Foreign Bodies (with specimens).—Prof A. B. Hill: A Case of Abortion by Drugs.—Dr. F. J. Smith: Notes on Employers' Liability.—Mr. S. B. Atkinson: Live-birth - in Theory and Practice.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN (17, Bloomsbury square, W.C.).—8 P.M. Additions to the Museum and Library and Exhibition of Specimens by the Curator. Papers:—Mr. H B. Farr and Mr. R Wright: (1) The Distribution of the Alkaloids in Conium Maculatum; (2) Note on the Disputed Presence of a Mydriatic Alkaloid in Lactuca Virosa.

WEDNESDAY (10th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8 P.M. Annual Meeting 8 30 P.M. Dr. J. F. Woods: The Psychic Side of Therapeutics. (Hunterian Oration.)

DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—[illegible] Demonstration of Cases of Interest. [illegible]

SOUTH-WEST LONDON [illegible] Wandsworth Common). 8 30 P.M. [illegible] Remarks on Topics of Professional Interest

THURSDAY (11th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, [illegible] W.).—8 30 P.M. Papers:—Mr. E. [illegible] Recto-vesical Pouch.—Mr. E W. [illegible] Obstruction with Gangrene of the Cæcum, Recovery.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8 P.M. [illegible]

[illegible] Light-blindness; (2) Lens Couching.

FRIDAY [illegible] OF HE[illegible] Stephe[illegible] HUNTER[illegible] CLINICA[illegible] Papers [illegible] with [illegible] Diabet[illegible] Dalton [illegible] tive F[illegible] Carles [illegible] Clarke [illegible] Joints [illegible] culosis of the Thyroid.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (8th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.)—5 P.M. Dr. Saunders: Examination of the Stomach and Gastric Contents.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. E. Dore: Clinique. (Skin.) 5.15 P.M. Dr. A. Morison: On the Treatment of the Hæmic and Mechanical Factors in Cardiac Failure.

UNIVERSITY OF LONDON.—5 P.M. Lecture:—Dr. A. E. Wright: Physiology of Immunisation.—Demonstration of Methods of Measuring the Agglutinating Bactericidal, Bacteriolytic, and Phagocytic Powers of Human Blood.

TUESDAY (9th).—POST-GRADUATE COLLEGE (London County Council Lunatic Asylum, Claybury, Woodford Bridge, Essex).—3 P.M. Dr. [illegible]

[illegible] Dr. E. Cautley: Intermediate and Secondary Anæmias.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Buzzard: Remissions and Relapses in Disseminated Sclerosis.

WEDNESDAY (10th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Beddard: Practical Medicine.

MEDICAL GRAD[illegible] W.C.).—4 P.M. [illegible] Mr. J. Poland [illegible]

HOSPITAL FOR [illegible] ton).—4 P.M. [illegible] Chest Disease.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Discussion on Road Sanitation (opened by Mr. J. P. Barber and Dr. L. C. Parkes).

LONDON TEMPERANCE HOSPITAL (Hampstead-road, N.W.)—4 P.M. Lecture:—Diseases of the Stomach. (Post Graduate Course.)

THURSDAY (11th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Practical Surgery.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. [illegible] M. Dr. G. Brodie: [illegible]

SAMARITAN FREE [illegible] 3 P.M. Dr. C. [illegible]

CHARING CROSS HOSPITAL.—[illegible] Demonstration [illegible]

M[illegible] DISEASES OF THE [illegible] Weber: The Rela-[illegible] (Post-Graduate Course.)

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester square, W.C.). 6.15 P.M. Dr. M. Dockrell: Fungus Diseases of Hair. [illegible]).—

[illegible] Dr. F. J. W[illegible] P.M. [illegible]

NORTH-EAST [illegible] pital, N.).—[illegible]

FRIDAY (12th).—POST-GRADUATE COLLEGE (West London Hospital, Hammer[illegible]

MEDICAL [illegible] W.C.).—[illegible]

NATIONAL [illegible] square, [illegible] Nervous System.

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THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1903, which was completed with the issue of Dec. 26th, were given in THE LANCET of Jan. 2nd, 1904.

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A Clinical Lecture

ON

A CASE OF ADAMS-STOKES DISEASE

(PERSISTENT SLOW PULSE WITH EPILEPTIFORM FITS).

Delivered at the London Hospital on Oct. 28th, 1903,

By PERCY KIDD, M.A., M.D. Oxon., F.R.C.P. Lond.,

PHYSICIAN AND LECTURER ON MEDICINE TO THE LONDON HOSPITAL.

GENTLEMEN,—The patient, a woman, aged 58 years, has been ill for about four years and complains of symptoms which may be briefly summarised as follows: weakness, fainting fits, vomiting, swelling of the feet and legs, headache, sharp pain round the heart, slight hacking cough, occasional night sweats, swelling of the abdomen at times, and increasing stoutness. She has not had rheumatic fever but she had scarlet fever when a child. Fifteen years ago she had influenza very badly; she has had it four times since but mildly. She had small-pox 30 years ago. The patient is a stout, flabby-looking woman and is very pale. She complains of dyspnœa, especially on exertion, and of fainting fits usually brought on by exertion or excitement The first fit occurred five years ago and since then she has been unable to go out alone in consequence.

The following is a description of the fits. There is no warning; they have always the same character; the duration varies from two or three minutes to half an hour. She has had from five to six fits in a day at times, though they may be absent for weeks. Sometimes on recovering from one fit she immediately has another. She also complains of pain in the region of the heart which is described as sharp but the pain does not radiate. She often has the pain without the fits, though at times the pain comes on as the fit is passing off. The pulse on admission varied from 25 to 28 The tension was moderate and the artery was not thickened. The heart's impulse was not felt. The apex beat was apparently in the nipple line in the fifth space. Cardiac dulness was slightly increased outwards but not in other directions. On auscultation a faint systolic murmur was heard replacing the first sound in all areas; it was loudest at the mid-sternum, about the level of the third rib. The second sound was present in all areas, occasionally reduplicated. Vomiting occurred occasionally, usually after food but often on rising in the morning; it sometimes occurred as the fit was passing off. The vomit was watery, sometimes coloured yellow with bile. The urine was healthy. The menopause occurred nine years ago

The patient's general condition did not vary much at first but a few days after admission a fit occurred and was observed by the clinical clerk, Mr. M. Wyler, whom I have to thank for his careful notes. The patient suddenly cried out, her head was retracted, the pupils were widely dilated, the face was cyanosed, and the pulse was imperceptible for 40 seconds. She was quite unconscious, her whole body being rigid and extended Incontinence of urine occurred and as she gradually recovered retching took place. On recovery the pulse rose to 52. The whole fit lasted for five minutes. In another fit a few days later the pulse ceased for 90 seconds and this fit lasted for three minutes.

At first the patient was treated with strychnine, ether, and ammonia. Later, $\frac{1}{100}$th of a grain of trinitrine was substituted three times a day and occasional inhalations of amyl nitrite. After this $\frac{1}{60}$th of a grain of strychnine was given hypodermically three times a day. Latterly she was given thyroid extract, three grains in the day, which was gradually increased to 15 grains daily. Two ounces of whisky were allowed and the patient was put on light solid diet. She has improved in all respects since her admission There are less dyspnœa and cardiac pain and she has only had one slight attack subsequently to the two previously described. The thyroid extract was given at the suggestion of Dr. O F. F. Grünbaum, our medical registrar who had seen it recommended by a French observer, Dr. Gautier. It is doubtful whether the improvement can be attributed to the use of thyroid extract as nitro-glycerine and strychnine were being administered at the same time. Subsequently the patient was for a time put on thyroid extract and nitro-glycerine separately and continued to improve steadily. She now takes an occasional trinitrine tabloid and has had no epileptiform attack for over two months. At times she experiences a slight pain in the cardiac region.

The foregoing curious group of symptoms was first described by Robert Adams in the Dublin Hospital Reports[1] in 1827. Adams described the following case. A man, aged 68 years, of full habit, had for a long time been incapable of exercise and subject to oppression of breathing and cough. The patient was seen as he was recovering from an apoplectic attack which had seized him three days previously. At this time he was able to go about the house but was still oppressed by stupor, a constant disposition to sleep, and troublesome cough. Adams says: "What most attracted my attention was the irregularity of his breathing and the remarkable slowness of the pulse, which generally ranged at the rate of 30 a minute." The patient's medical attendant, Mr. Duggan, gave Adams the following history. "The patient had had at least 20 apoplectic attacks in the last seven years, preceded for a day or two by vertigo and loss of memory. During the fits the pulse would become even slower than usual." (No statement as to the frequency is given here.) Death occurred in a fit six months after he was first seen by Adams. At the necropsy fatty degeneration of the heart was found. In his comments on the case Adams says: "When the heart is slow in transmitting the blood it receives we find, I imagine, even in this a means of accounting for the lethargy, loss of memory, and vertigo which attend these cases"

The next reference to this disease appears to have been by W. Stokes,[2] where he published a paper on Observations on Some Cases of Permanently Slow Pulse. The first case was thus described. "*Repeated pseudo apoplectic attacks not followed by paralysis; slow pulse, with valvular murmur.*—A had a fainting fit three years previously and

lump in the stomach, 'passing up through the right side of the neck into the head where it seems to explode and pass away with a loud noise resembling thunder, by which he is stupefied.' This is often accompanied by a fluttering sensation of the heart. No convulsions or frothing at the mouth during the fit, but he has occasionally injured his tongue. Fit seldom lasts more than four or five minutes During the fit the patient is entirely unconscious; but he has no paralysis after any fit. He never heard that his pulse or heart was affected He had found that spirits were the best restoratives but he had not used them latterly, being 'afraid to die with spirits in his belly.' He always feels cold unless he is near the fire On admission there was slight cough and expectoration, and large mucous râles over the lungs The heart's impulse was slow, dull, prolonged, and heaving, giving the idea of painful as well as slow action. The first sound was accompanied by a blowing murmur heard very distinctly up along the sternum and even into the carotid arteries; second sound also imperfect, though very slightly so. Pulse 28, prolonged, and sluggish Arteries pulsate visibly all over the body and appear to be in a state of permanent distention. Urine sp. gr. 1010; free from albumin" The pulse varied from 28 to 30, at times rising to 36 The patient had two threatenings of a fit after admission but the attacks were warded off by turning on his hands and knees and keeping his head low. This often averts a fit Stokes says that occasionally "some of the beats" occurred between the regular contractions unattended with impulse or pulse. Stokes did not observe any of the fits himself and the patient had no fits after admission. He was discharged improved and was lost sight of.

Stokes described briefly another case which was summarised thus: "Anæmia, very slow pulse, valvular murmur, death apparently from syncope. Post mortem, aortic stenosis was found." No further details A third case was communicated to Stokes by Dr. Law. The patient, a man, aged 44 years, had a pulse of from 24 to 30 and suffered from apoplectic attacks, in one of which he died. No necropsy was made.

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[1] Vol iv., p. 396.

[2] Dublin Quarterly Journal of Medical Science, 1846.

Very little attention seems to have been directed to this disease subsequently, as shown by the fact that the late Dr. J. S. Bristowe in his presidential address to the Medical Society of London in October, 1893, On the Influence of Extreme Slowness of Pulse in the Causation of Epileptiform Convulsions,[3] stated that the earliest recorded case was published in THE LANCET of 1885 by Mr. F. St. George Mivart.[4] A man, aged 61 years, had been subject to epileptic seizures for six years and the pulse varied from 20 to 26. There were a slight systolic murmur at the base and a prolonged first sound at the apex. The urine contained a trace of albumin. Mr. Mivart regarded these symptoms as "simple slowness modified by the patient's epileptic tendency." The next case Dr. Bristowe mentions is to be found in THE LANCET of the same year by Dr. A. T. Gibbings.[5] The patient, a man, aged 66 years, stated that his pulse had been intermittent as long as he could remember. He was first seen in 1882, suffering from weakness, dyspnœa on exertion and occurring spontaneously at night, and cough. The pulse was 60 and intermittent and the heart was free from murmur. Ten months later the pulse was 44 but regular. Subsequently dyspnœa and faintness appeared and the pulse fell to 34. Consultations were held with Sir Andrew Clark and with Dr. Walter Moxon. Fainting and epileptiform attacks recurred. During each attack the pulse became very slow, at times falling to 12 Towards the end it varied from 15 to 31. The first indication of an attack was the non-occurrence of the usual pulse beat. The patient died in a fainting fit ten months after he was first seen. A post mortem examination in the presence of Dr. Moxon showed that the heart and other organs were all healthy. Dr. Gibbings attributed the epileptiform seizures to anæmia of the brain and suggested that the slow action of the heart was due to an irritative lesion of the vagus or degeneration of the cardiac ganglia.

The next case was recorded by Dr. Bristowe also in THE LANCET of the same year.[6] A man, aged 31 years formerly a soldier, had had syphilis, fever, and ague in India. He was discharged after 12 years' service for "weakness of the constitution." He had never had rheumatism nor had he suffered previously from dyspnœa Two weeks before admission into St. Thomas's Hospital he had an attack of faintness after mental excitement and the next morning he had heavy breathing. On the following evening he had shortness of breath and he lost consciousness. Since then similar attacks had recurred frequently, both night and day. The fits were preceded by faintness and followed by flushings and insensibility. He once bit his tongue. There was no pain in the chest. During his stay in the hospital fits occurred frequently and seemed to come on always after long periods of cardiac intermission, the pulse rate being 26 or slightly more as a rule. When intermission was prolonged to five seconds a fit generally followed. A loud, roaring, systolic murmur was heard above and to the right of the apex of the heart and was prolonged to the base. The fits recurred frequently. Their duration varied much but unconsciousness only lasted a few seconds. The pulse became more frequent, rising once to 80, sometimes regular, at other times very irregular. The patient lost his palpitation, dyspnœa, and fits and was discharged and lost sight of.

The fourth case was seen by Dr. Bristowe with Dr. John C. Ferrier. A widow, aged 54 years, had had acute rheumatism, followed by cardiac uneasineas one year previously. In September, 1891, she had an attack of giddiness,,and similar attacks followed in which she lost consciousness. The attacks lasted a few seconds and were attended with pallor, a cessation of respiration, unconsciousness, and slight convulsions. During the attack the pulse was about 30. The attacks became more frequent and the pulse fell to 17. The urine became slightly albuminous. On the day before death the pulse became regular, from 108 to 120, but then it fell to 20 and later to 18. Occasionally a soft systolic murmur was heard at the apex, but nothing further was detected. Death occurred quietly about three months after the first fit and was preceded by a disappearance of fits for the last three and a half hours.

The fifth case was not seen by Dr. Bristowe during life but the history was obtained subsequently to the postmortem examination. The patient had had fits off and on for about two years. On admission the pulse varied from 25 to 30, the cardiac dulness was abolished, the first sound at the apex was blowing, and the sounds at the base were weak. The pulse at times rose to 72 The fits came on when the pulse became very infrequent (from 20 to 25), but not invariably. Death occurred in a fit one month after admission. At the post-mortem examination the heart weighed 15¼ ounces. The left ventricle was hypertrophied, but not dilated. There was slight atheroma of the aorta and coronary arteries and of the mitral and aortic valves. Big toe-joints contained urate of soda.

Although this affection received little attention in England after Stokes's paper above referred to continental and American authors were well aware of its existence. Huchard in his work on cardiac disease speaks of it as the "Stokes-Adams syndrome." He regards the slow pulse as the result of changes in the vagus centre due to arterial disease and describes the affection as "the cardio-bulbar form of arterio-sclerosis." He mentions the fact that Stackler and Lannois each published a case of permanently slow pulse with syncopal attacks due to compression of the vagus nerve. Dr. W. Osler in his lectures on "Angina Pectoris and Allied States" in 1897 refers to this disease which he regards as having close connexion with angina. Dr. Osler considers that transient disturbances of the cerebral circulation are responsible for the syncope and apoplectiform attacks which remind one of the transient hemiplegia, monoplegia, aphasia, and paraplegia to which the subjects of advanced arterio-sclerosis are liable. He mentions a case fully described by Prentis of Washington of a man, aged 53 years, the subject of arterio-sclerosis who had innumerable fainting spells and a slow pulse which for two years varied from 11 to 40. The patient was delirious for some days before his death. At the post-mortem examination the heart was enlarged but there was no atheroma of the aorta or coronary arteries. Sections of the medulla oblongata showed congestion only.

Dr. Osler describes one case himself. A man, aged 46 years, who had never had rheumatism, chorea, or syphilis, had not been alcoholic, and had not been subjected to hard labour, complained of præcordial uneasiness on waking which had been coming on for two years. The patient could not lie flat on his back but could lie on either side with his head raised. There was no sharp pain in the chest but he had an uneasy sensation and a feeling of suffocation. There was no agonising sensation or palpitation. At times severe vertigo was present but not loss of consciousness. A year previously he noticed that his pulse was very slow and in the early morning it had been as low as 20 per minute. When seen by Dr. Osler his pulse was 34, the tension was increased, the up-stroke was laboured, and the wave was well sustained. Cardiac dulness was normal, impulse was not visible, and there was no abnormal pulsation. Hypertrophy was not evident. There was a systolic murmur at the aortic cartilage but no accentuation of the aortic or pulmonary second sound. The patient was relieved somewhat as regards the vertigo but his slow pulse persisted.

Huchard gives a useful classification of "bradycardia" as follows: (1) physiological (an idiosyncrasy seen in some healthy persons, for instance, Napoleon, whose pulse was said to be 44); (2) convalescence from typhoid fever, pneumonia, and other acute diseases; (3) toxic (digitalis, aconite, colchicum, opium, tobacco, tea, coffee, and uræmia); (4) reflex from the digestive organs; (5) nervous (meningitis, insanity, melancholia, neurasthenia, hysteria, epilepsy, cerebral disturbances of various sorts, lesions of the spinal cord and vagus trunks); and (6) cardiac (fatty heart, aortic stenosis, coronary sclerosis, and cardio-bulbar arterio-sclerosis).

Robert Adams who first described this affection clearly regarded the slow action of the heart as the primary factor This view was more precisely stated by Dr. Gibbings Huchard boldly stamps the complaint as the cardio bulbar form of arterio-sclerosis. Dr. Osler is more cautious and would explain the syncope and other cerebral symptoms as the result of transient disturbances of the cerebral circulation analogous to the temporary paralyses that occur in arterio-sclerosis. Cases like those of Gibbings and Prentis make one hesitate to accept Huchard's view that the affection is due to organic disease of the bulbar arteries as universally true. The cases that have been described illustrate the fact pointed out by Osler that slowness of the heart's action may cause different grades of cerebral disorder, vertigo, syncope, or epileptiform attacks. The case that I have brought forward is an instance of the severest form and it is interesting to note the length of time during which in two attacks the pulse disappeared at the wrist—viz., 40 and 90 seconds. Unfortunately the heart was not examined during this period. But I repeatedly examined the heart myself when the pulse was 30 and I always found that the pulse and heart sounds exactly corresponded. This patient shows no sign of general arterial degeneration though lesions of the coronary arteries cannot be excluded. It is probable that she is suffering from aortic stenosis.

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[3] Transactions of the Medical Society of London, vol. xvii.

[4] THE LANCET. Jan. 3rd, 1885. p 10

[5] THE LANCET, Feb 14th, 1885, p. 288.

[6] THE LANCET, March 7th, 1885, p 447.

THE SIGNIFICANCE OF THE ZOOLOGICAL DISTRIBUTION, THE NATURE OF THE MITOSES, AND THE TRANSMISSIBILITY OF CANCER.[1]

BY E. F. BASHFORD, M.D. EDIN.,
GENERAL SUPERINTENDENT AND DIRECTOR, CENTRAL LABORATORY OF CANCER RESEARCH FUND OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND;
AND
J. A. MURRAY, M.B., B.SC. EDIN.

[We are informed by the assistant-secretary and librarian of the Royal Society that excepting the summary which was sent to the "Times" the day after the paper was read any version which has already appeared in the press is an unauthorised version. We received permission to publish the paper on Monday last, Feb. 8th.—Ed. L.]

THE object of this communication is to relate some results of the work conducted under the immediate direction of the executive committee of the Cancer Research Fund during the past year. We believe that these results will convince others of the important practical assistance which biologists generally can give in the further elucidation of certain problems of cancer which must be settled before scientific preventive and curative measures can be devised. It will also be made evident that the elucidation of cancer is something more than a problem of human pathology only. We shall adduce evidence tending to show that the wide zoological distribution, the character of the mitoses and the transmissibility of cancer are nearly related phenomena with a common basis. The fundamental significance of ascertaining the extent of the zoological distribution of cancer was recognised by the Cancer Research Fund from the first and determined the prosecution of definite lines of inquiry with all the means at the disposal of the organisation, not only with the object of eliciting new facts in regard to the zoological distribution itself, but also with the object of discovering cancer in animals well adapted to cytological and experimental observations.

Zoological Distribution.

Within the past year specimens of malignant new growths have accumulated from all the domesticated animals and from many other vertebrates. The appended list shows the abundance of the material which has thus been examined. The list includes also specimens which we have been privileged to examine through the courtesy of investigators abroad, who, subsequently to the inauguration of the Cancer Research Fund, have published descriptions of malignant tumours in the lower vertebrates. It is noteworthy that such growths have been obtained not only in domestic animals but also in animals living in a state of nature—wild mouse, codfish, gurnard. The clinical, pathological, anatomical, and microscopical characters of these new growths are identical with those found in man in all essential features, although the animals themselves are drawn from the different classes of the vertebrate phylum. A detailed histological description of the various tumours examined will not be attempted here. Only the general significance of the observations in relation to the incidence of cancer in man will be emphasised.

The great diversity of the habitat, food, and conditions of life generally of the forms in which malignant new growths occur relegates such external conditions to a subsidiary rôle in determining the incidence of the disease and shows that the essential factors must be sought in the potentialities which reside in the cells constituting the living body. The list of specimens, while giving no safe basis of deduction as to the relative incidence of cancer in the different classes of vertebrates, or of the comparative susceptibility of the different sites of the body, is extremely suggestive. The large number of epitheliomata obtained in the horse and dog indicates very clearly that malignant new growths are recognised according to the ease with which animals can be examined and the length of time they are kept under observation. The larger ratio of malignant new growths occurring in the internal organs of cows have been discovered during meat inspection at abattoirs and form a welcome corollary to the other observations. Stated generally, it may be said that malignant new growths are frequent according as animals are carefully examined, and are unrecorded in forms which are difficult to examine or do not reach old age in considerable numbers. The figures are not sufficiently extensive to determine accurately the age incidence of the various types of new growths in different animals, but a relatively higher incidence in old age is apparent.

The Phenomena of Cell-division in Malignant New Growths.

The progressive increase in size of malignant tumours is due to the division and increase in size of their constituent cells The process of cell-division is usually indirect, mitotic division of the nuclei preceding the division of the protoplasm. The protoplasm division is frequently omitted and multi-nucleated cells are formed and these may subsequently enter on mitosis, giving rise to pluripolar figures. Amitosis or direct nuclear division also occurs, but its full significance has not yet been determined. It is, however, evident that the occurrence of amitosis does not signify degeneration. The amount of chromatin entering into the equatorial plate of the mitoses of malignant new growths had long been recognised as subject to variation (hyperchromatosis, hypochromatosis of von Hansemann, 1893), but a new light has been thrown on this phenomenon by a paper communicated to the Royal Society on Dec. 10th, 1903, by J. B. Farmer, F.R.S., J. E. S. Moore, F.L.S., and C. E. Walker, entitled "Resemblances exhibited between the Cells of Malignant Growth in Man and those of Normal Reproductive Tissues." These observers found that while the growing margin of carcinomata and sarcomata presented mitoses similar to those found in other tissues in repair and inflammation, certain cells in the deeper layers, after a slight increase in size, entered on mitosis with ring chromosomes similar to those found in the heterotype division of spore-mother cells of plants and spermatocytes of animals, and like these, with chromosomes in number only half that characteristic of the mitoses of somatic cells. Mitoses similar in character to the somatic divisions but with reduced number of chromosomes were also seen (homotype) corresponding to the divisions in the sexual generation of plants and the second ripening divisions of animals. From these observations the authors concluded that malignant new growths were virtually reproductive tissue arising in abnormal situations and possessed of an independence and power of growth like that of the testis in the mammalian body.

This striking sequence of characteristic mitoses had been found in all malignant tumours examined and was absent in those of benign character. We at once determined to communicate with the authors who with great courtesy afforded us an early opportunity to examine their preparations. It was then decided to determine how far similar phenomena were characteristic of the malignant new growths occurring in animals. The result has been a complete confirmation of Farmer, Moore, and Walker's observations in tumours from the trout (Mr. Gilruth's and Miss Plehn's cases of adeno-carcinoma), the mouse (two cases of adeno-carcinoma, Jensen's epithelioma), and the dog (mixed cell sarcoma, round cell sarcoma, squamous cell carcinoma). In the columnar cell carcinoma of the trout the phenomena were especially distinct, the small number of chromosomes[2] (24,

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[1] A paper communicated to the Royal Society by Dr. J. Rose Bradford, F.R.S.

[2] The achromatic figure has always been carefully studied as a control to the observations made on the chromatin of the mitosis. When the chromosomes have been counted, this has been done on sections 5—10 μ thick, mounted in series.

ILLUSTRATION OF THE THREE TYPES OF CHARACTERISTIC MITOSES IN ADENO-CARCINOMA.

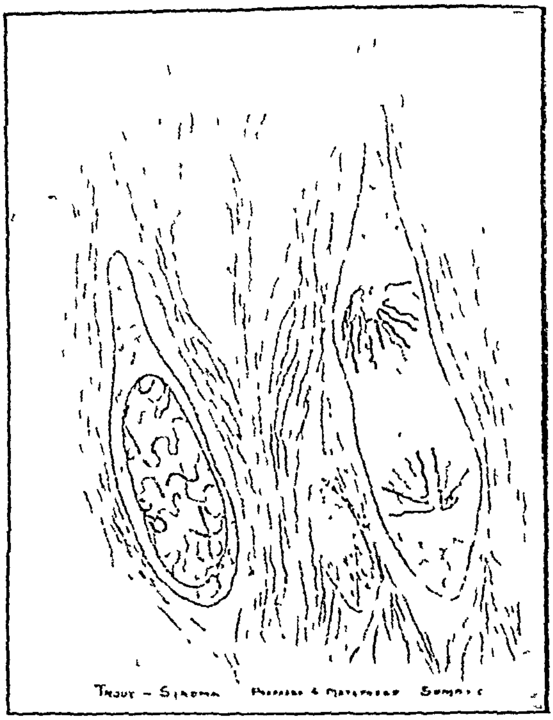

FIG. 1.—The chromosomes in the stroma mitoses are long, slender, V-shaped loops which split longitudinally, 24 in number. They are somatic in type; cf. Fig. 2 from the tumour.

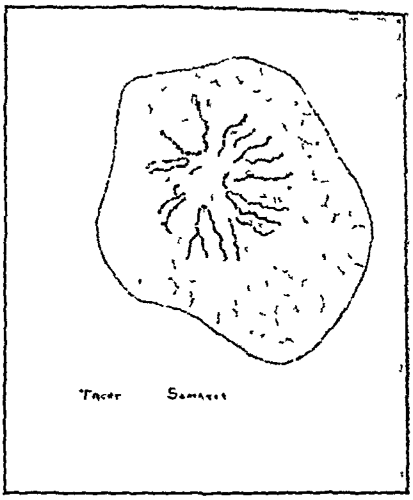

FIG. 2.—Somatic equatorial plate in margin of tumour seen from the pole. Slender V-shaped chromosomes, 24 in number, arranged transversely on the spindle showing longitudinal splitting. All the chromosomes are not reproduced in the figure.

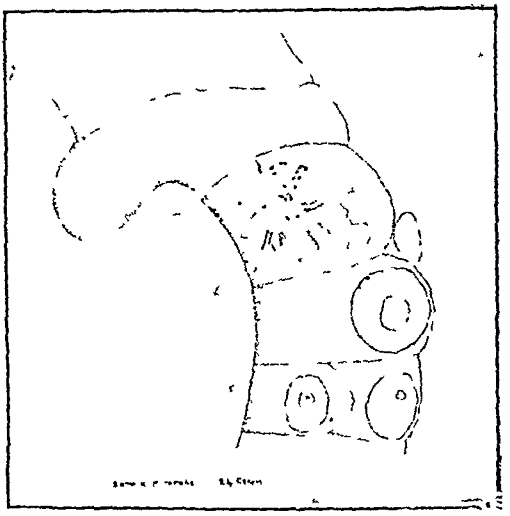

FIG. 3—Somatic metaphase, polar view. The angles of the V-shaped daughter chromosomes are directed upwards towards the observer and appear as two dots on deeper focussing 24 chromosomes. (Illustrates method of counting chromosomes and is not included in the Royal Society's reproductions.)

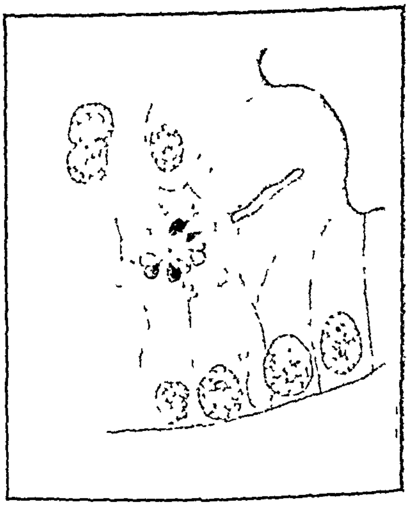

FIG. 4—Heterotype mitosis seen from pole chromosomes present i reduced number (12) and in the form of short thickened rin (vide Fig. 5). All the chromosomes are not reproduced in th figure.

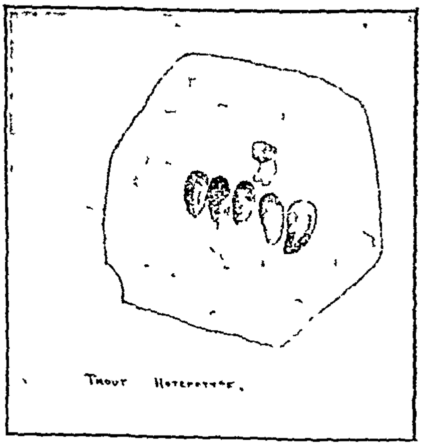

FIG. 5—Heterotype mitosis seen from side Ring chromosomes in reduced number, arranged lengthwise on the spindle.

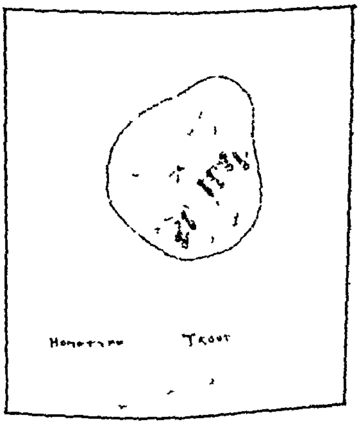

FIG. 6—Homotype mitosis Longitudinal split chromosomes arra transversely on the spindle. *Reduced* number as in hetero (12). All the chromosomes are not reproduced in the figure.

[illegible] the long slender chromo-
be rings of the heterotype
clearness. Homotype mitoses occurred but were very few in number. Mitoses in the stroma are relatively scanty in the tumours at our disposal, but such as have been seen are somatic in character. Farmer, Moore, and Walker record a similar result. In the mouse it has been possible to compare the mitoses in the testis and those occurring in the irritation produced by iodine, with the result that the significance of the mitoses in cancer has been further confirmed.

The following points are of great importance in these observations. A complicated sequence of cell-changes has been found to be characteristic of carcinoma and sarcoma alike. This sequence is the same as that which initiates the origin of the sexual generation in plants from the asexual and is terminal in the history of the sexual cells in animals. It must be noted also that all the cells of the malignant new growths do not undergo the reducing division, a certain number differentiate in the direction of the tissue among which they have arisen, and in the secondary growths when present somatic mitoses occur in the growing margin, which it will subsequently be shown is also a feature in the growth of cancer when transferred to a new host.

The Transmissibility of Malignant New Growths from one Animal to Another.

The transmission of cancer from man to animals, or from one animal to another of different species, has never been successfully performed. Successful transplantation experiments have been made, however, from animals suffering from malignant new growths to others of the same species. The most exhaustive observations in this connexion have been made by Jensen and Borrel on mice. Professor C. O Jensen of Copenhagen most generously placed at the disposal of the Cancer Research Fund a portion of one of his experimental tumours,[3] and with this and another tumour occurring naturally in a tame mouse similar experiments have been performed. We have thus been able to confirm Jensen's observations by microscopical examination of the tissues at the site of inoculation at short intervals and have found that the new tumours which develop arise from the actual cells introduced. While many of these degenerate a few remain of normal appearance and these gradually increase in number. In the earliest transplanations mitotic division is absent and it is not till later, when a considerable mass has arisen, that mitoses appear. The earliest mitoses we have been able to observe have been of the somatic type. Transplantation is, in fact, identical with the process of metastasis as it occurs in the individual providing the tumour. It is remarkable, however, that the tumour of Jensen's experiments does not produce metastases naturally and its malignancy is only evidenced by its progressive growth and the undifferentiated character of the cells. The process is in no sense an infection, the tissues of the new host not participating in the formation of the new parenchyma. In this interpretation we are in agreement with Jensen and differ from Borrel who conceives the results to be due to the agency of a *virus cancéreuse*.

The origin of the stroma has not been accurately determined. The power of growth of this tumour is remarkable. In every mouse in which the transplantation succeeds the new growth may attain a weight equal to that of the animal itself, and over 400 such transmissions have been effected by Jensen in Copenhagen and the Cancer Research Fund in London. A mass of tumour, 16 pounds in weight, has thus actually arisen from the original one, and that without participation of the cells of the various hosts and without manifest change in structure. This great power of growth is a phenomenon unparalleled in the mammalia and indicates the potentialities in cases in which widespread dissemination has occurred before death in a human patient.

The experimental transmission of carcinoma shows that we must distinguish between the problem of the genesis of a malignant new growth and that of the conditions which permit of [illegible]
While the conditions lead-
t tumours are relatively in-
[illegible] wards of 1000 tame mice and have discovered two with cancer; once begun, this proliferative activity can persist, given favourable conditions, for a long time unaltered and can give rise to masses of tissue of great size, having no relation to the restrictions which

List of Specimens of Malignant New Growths examined by the Cancer Research Fund during the Year 1903.

Animal.	Age	Primary site.	Microscopic character.
Cow.	Aged	Orbit.	Carcinoma, large polygonal cells.
"	"	Rumen.	Carcinoma spheroidal cell.
"	"	"	Carcinoma squamous cell.
"	"	"	"
"	"	Liver.	Carcinoma, cubical cell.
"	"	"	" "
"	"	? Pleura (secondary).	Carcinoma, squamous cell.
"	"	? Gastric gland (secondary)	"
Heifer.	1	Perineum.	Melanotic sarcoma.
Cow.	Aged.	Ovary.	Sarcoma.
"	—	Suprarenal.	"
"	Aged	Ovary.	Carcinoma.
"	—	Jaw.	Osteo-sarcoma.
"	—	Adrenal.	Sarcoma.
"	Aged	Liver.	Carcinoma, cubical cell.
"	—	Bowel.	Sarcoma, spindle cell.
"	—	Neck.	" "
"	Aged	Face and neck.	Carcinoma, squamous cell.
Heifer.	2	Side of thigh.	Melanotic sarcoma.
Dog	14	Mammæ.	Carcinoma (scirrhus).
"	10-11	Upper lip.	Epithelioma.
"	—	Testis.	Sarcoma, mixed cell.
"	—	Upper lip.	Fibro sarcoma.
"	10-11	"	Carcinoma, squamous cell.
"	—	Abdominal gland.	Sarcoma, round cell.
"	—	Sympathetic glands.	Fibro-sarcoma.
"	10	Liver.	Carcinoma, columnar cell.
"	—	Mouth	Carcinoma squamous cell.
"	—	Anus.	"
"	12?	Leg (subcutaneous)	Sarcoma, round cell.
"	—	Superior maxilla, orbit, gland, and lower jaw.	" spindle cell.
"	10	Anal tumour.	Carcinoma (sebaceous adenoma).
"	11	Spleen, liver, and stomach.	Sarcoma, spindle cell.
"	12	Leg	Sarcoma, small round cell.
"	10	Palate and cervical gland.	Carcinoma, squamous cell.
"	—	Mammæ.	Osteo-sarcoma.
"	10–12	Axilla.	Carcinoma squamous cell.
Horse, gelding	10	Penis.	Epithelioma.
" "	7	"	Carcinoma squamous cell.
" stallion	15	"	"
Mare.	10	Vulva.	"
Horse	Aged	Lung.	Carcinoma, columnar cell.
"	10	Penis.	Carcinoma squamous cell.
Mare.	14	Vaginal growth.	"
Horse	—	Parotid.	Medullary carcinoma.
Sheep.	2	Mandible.	Osteo-sarcoma.
"	—	Liver.	Carcinoma, cubical cell.
Pig.	—	Submaxillary glands.	Sarcoma, mixed cell.
White mouse.	—	Inguinal mammæ.	Adeno-carcinoma (localised keratinisation).
Yellow mouse.	—	Axillary tumour.	Adeno-carcinoma.
Wild mouse.	—	Mammary glands.	Carcinoma, spheroidal cell.
Mouse (Jensen)	—	Leg (subcutaneous)	Epithelioma.

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[3] Sent by post under such precautions as to preserve sterility. The transplantations were effected by the Cancer Research Fund five days after the tumour was posted in Copenhagen.

List of Specimens of Malignant New Growths examined by the Cancer Research Fund during the Year 1903.—(Continued.)

Animal.	Age	Primary site.	Microscopic character.
Mouse (Borrell)	—	Axilla (subcutaneous).	Adeno-carcinoma.
,, ,,	—	Groin ,,	,,
,, ,,	—	,, ,,	,,
,, ,,	—	Jaw ,,	Epithelioma.
,, (Pick)	—	Back ,,	Adeno-carcinoma (sweat glands).
Cat.	10	Tongue.	Carcinoma, squamous cell.
Hen (Pick).	—	Floor of mouth.	Squamous cell epithelioma.
Indian parakeet.	—	Pectoral muscle.	Myxo-sarcoma.
Giant salamander (Pick)	—	Testis.	Cystic adenoma, malignant.
Cod.	—	Air-bladder.	Sarcoma, spindle cell.
Gurnard.	—	Abdominal tumour.	Adenoma, malignant.
Trout (Gilruth).	—	Floor of mouth.	Carcinoma, columnar cell.
,, (Plehn).	—	,, ,,	,,
,, ,,	—	,, ,,	,,

limit the growth of adult organisms in a large proportion of healthy animals. The phenomena of cell division, indicating a similarity to the normal reproductive tissues, may help to explain the nature of this great power of multiplication but leave the problem of cancer genesis practically untouched. They give, however, important indications of the character of the processes on whose elucidation the solution of the question depends. The wide zoological distribution of malignant new growths—its limits are not yet determined—indicates that the cause of cancer is to be sought in a disturbance of those phenomena of reproduction and cell life which are common to the forms in which it occurs. Our observations on animals show that malignant new growths are always local in origin and of themselves produce no evident constitutional disturbances whatsoever. These facts are in full accord with accumulated clinical experience in man. In connexion with diagnosis and statistics we have already emphasised the importance of the absence of specific symptoms. The evidence we have advanced that cancer is an irregular and localised manifestation of a process otherwise natural to the life cycle of all organisms probably explains why it is that malignant new growths, and their extensive secondary deposits *quâ* cancer, are devoid of a specific symptomatology.

[We desire to add the accompanying dated note because we find that conclusions which have been drawn by others are attributed to us.

Note.—We find that the guarded terms in which the points of importance are emphasised may lead to a misconception of our interpretation of the facts. The cells which have undergone the reducing division are not responsible for the active invasion of surrounding tissues nor for the production of metastases; the cells dividing somatically are responsible for both. The number of heterotype mitoses may not stand in any relation to the degree of malignancy, and their absence is only presumptive evidence of the benign character of the tumour. We postulate nothing as to the future of the cells which have undergone the reducing division, though we believe the latter to be a terminal phase in the life-cycle of cancer cells as it is in the history of sexual cells in animals. The local origin and the expansive and infiltrating growth of cancer in its relation to surrounding tissues, while respecting its own proper elements, is the criterion of its malignancy. This stamps it as belonging to a new cycle comparable in its entirety to the whole organism which it is invading rather than to any one of its tissues, reproductive or otherwise. We intentionally restricted our original statement to recording the facts and only such general conclusions as could be irrefutably drawn from them.—Jan. 25th, 1904.]

We cannot here make full acknowledgment to those who have assisted our inquiry in this country but our indebtedness may be expressed to those observers abroad who have recorded isolated instances of cancer in animals and have so generously furthered our investigations by placing material or specimens at our disposal. In particular we desire to thank Professor Borrel of the Pasteur Institute, Professor C. O. Jensen of Copenhagen, Mr. J. A. Gilruth, chief of the Veterinary Department, New Zealand, Professor Landau and Dr. L. Pick of Berlin, and Dr. Marianne Plehn of Munich. Without the generous coöperation of these and many others it would not have been possible within so short a time to have covered the extensive ground indicated in this paper.

THE ETIOLOGY AND TREATMENT OF SUPPURATION OF THE LABYRINTH.[1]

By WILLIAM MILLIGAN, M.D. Aberd.,
LECTURER ON DISEASES OF THE EAR AT THE OWENS COLLEGE, MANCHESTER.

Septic disease of the labyrinth demands our most careful consideration in the first place on account of the damage which may be done to the acoustic or to the static segments of the internal ear and, in the second place, on account of the risk which exists of the pathogenic process extending to the basal meninges or to the adjacent lobes of the cerebellum. The most frequent causes of infection of the internal ear are: (1) suppurative lesions of the middle ear extending through the external labyrinthine wall; (2) suppurative processes originating at the base of the brain and extending along the perivascular or perineural sheaths of the auditory or facial nerves; (3) deposition of pathogenic organisms by the general blood stream in some portion of the internal ear; and (4) injuries. The most frequent, and from the practical point of view the most important, cause is extension from the cavity of the middle ear. In the great majority of cases due to this particular cause perforation into the labyrinth has taken place either as the result of erosion of the bony labyrinthine wall or as the result of maceration of the fibrous structures uniting the foot-plate of the stapes to the margins of the foramen ovale or of the membrana secundaria covering the fenestra rotunda.

Perforations leading into the cavity of the internal ear may also be of traumatic origin as in cases of fracture of the base of the skull, direct injuries—e.g., foreign bodies introduced into the meatus—or as the result of operative interference, the labyrinth being opened either intentionally or accidentally. The virulence of the infection and its exact exciting cause determine to some extent at least the nature, extent, and behaviour of the resulting inflammatory process. In cases which run a slow and almost painless course a cario-necrotic process is induced which may result in the whole or considerable portions of the labyrinth being exfoliated in the form of sequestra. In such cases the disintegrating process is frequently of a tuberculous nature. In other cases, however, the infective process may be so acute as to lead to the rapid transference of infective organisms along the perivascular or perineural sheaths of the auditory or facial nerves to the base of the brain.

The frequency of labyrinthine suppuration is difficult to gauge, partly because in most clinics sufficiently detailed statistics are but rarely kept and partly because the attention of the profession has not as yet become sufficiently focussed upon this particular complication of middle-ear disease as a factor in the production of high degrees of deafness and of intracranial involvement.

The route of most frequent infection from the middle to the internal ear is through a fistulous tract in the horizontal semicircular canal and the second most important pathway is through the fenestra ovalis. In a recent paper by Victor Hinsberg out of 198 cases of labyrinthine suppuration collected by him from various sources the pathway of infection was definitely established in over 60 cases. In 27 a fistula was found in the horizontal semicircular canal, in 17 the infective organisms had entered the internal ear by way of the fenestra ovalis, in two by way of the fenestra rotunda, in three through both windows, in seven a fistula was found in the pars promontoria, and in eight through the posterior or superior semicircular canal.

Labyrinthine suppuration is rare as the result of acute

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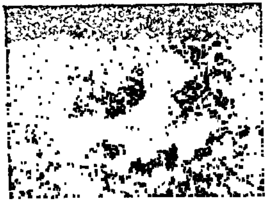
[1] A paper read before the Otological Society of the United Kingdom on Feb. 1st, 1904.

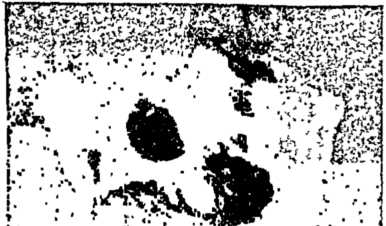
middle-ear sepsis and for precisely the same reasons as intracranial complications are comparatively uncommon after acute suppurative otitis media. Considerable time is required [illegible] cro-organisms is able to [illegible] the labyrinth or the com- [illegible] ch close in the fenestræ. The precise point of invasion and the virulence of the pathogenic process determine the particular segment of the internal ear which is involved and the extent of the involvement. In 18 cases out of a total of 89 collected by Hinsberg the labyrinthine involvement was due to acute otitis media; in 71 to chronic disease. In 21 of the 71 cases following chronic suppurative otitis media cholesteatomata were present. In some cases the septic process becomes localised to the region of the semicircular canals, to the vestibule, or to the cochlea. Usually, however, the contiguity of these various segments determines their almost simultaneous infection. Circumscribed necrosis most usually affects the external lamella of the pars promontoria which is thrown off in the form of a thin plate of bone. Occasionally the whole or a considerable portion of the cochlea may come away as a sequestrum. In other cases portions of the semicircular canals become detached and exfoliated. The accompanying illustrations (Figs. 1, 2, and 3) show a [illegible] canals removed [illegible] suffered from [illegible] 20 years and [illegible] ital had been [illegible] vertigo, and profound deafness upon the affected side. A radical mastoid operation was performed and extended into the labyrinth

FIG. 1.



Sequestrum consisting of portion of horizontal semicircular canal from patient suffering from labyrinthine suppuration. Vertigo was a very pronounced symptom.

FIG. 2.

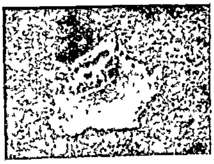


Large sequestrum consisting of portions of the three semicircular canals.

where the se[illegible] tissue. Aft[illegible] and local [illegible] tuberculous [illegible] of the external labyrinthine wall is frequently invaded. Of 33 cases of labyrinthine tuberculosis collected by Barnick both fenestræ were found perforated in five cases, the oval window alone in two, and the round window alone in three.

When the inflammatory process remain circumscribed the round celled infiltration which takes place becomes ultimately organised with the result that the spaces existing in the internal ear become filled up by a dense fibrous tissue which ultimately becomes ossified. Once the labyrinth has become the site of purulent invasion the risks of extension to the base of the brain are obvious. The normal pathways which exist between the internal ear and the basal meninges are the tracts along which pathogenic organisms travel. In the great majority of cases infection from the labyrinth attacks structures within the posterior fossa. A few cases, however, are on record where the pathological process has caused carious erosion of the anterior crus of the superior semicircular canal with the result that the middle cranial fossa becomes opened up and infected. Most usually the resulting intracranial infection takes the form of a diffuse suppurative pia-arachnitis. Occasionally it remains as a localised process—e.g., an extradural abscess in the posterior fossa or over the tegmen tympani in the middle fossa. The contiguous portions of the lateral lobe of the cerebellum are also prone to become infected. [illegible] from 20 to 30 per cen[illegible] in practice are due to labyrinthine infection.

FIG. 3.



Sequestrum consisting of portion of cochlea from case of labyrinthine suppuration.

Septic invasion of the labyrinth may run an acute or a chronic course. When acute, certain striking symptoms present themselves. Thus deep seated boring pain is complained of, there are a rapid elevation of temperature and other febrile indications, sickness or nausea is almost invariable, and vertigo is so pronounced as to necessitate the patient's remaining in the horizontal position. Nystagmus either in the vertical or in the horizontal plane is common, whilst rapid and at times complete nerve deafness is almost invariable. In the more usual class of case, however, the invasion of the labyrinth runs an almost chronic course, the external labyrinthine wall slowly crumbling away as the result of repeated micro-organismal attacks. In such cases symptoms, although fairly characteristic, are not nearly so well marked as in acute infections. Pain is frequently absent, vertigo is not so pronounced, often being more of the nature of a swimming sensation in the head, there is slight if any elevation of temperature, and sickness is by no means constant. The existence of these symptoms combined with a rapid onset of nerve deafness and the frequent presence of nystagmus should at once attract attention to the probability of the internal ear being affected. Another important symptom is the presence of facial paresis or paralysis. Facial paralysis supervening in the course of a chronic suppuration of the middle ear is always a signal of the presence of deep-seated disease. Too often, I think, it is regarded as an indication of middle-ear disease. I am satisfied from clinical and from post-mortem experience that its onset frequently indicates a labyrinthine lesion, the nerve being implicated in its passage through the pars petrosa and before it has reached the cavum tympani. In exceptional cases where the process is localised the symptoms will depend upon the particular portion of the internal ear which is involved—viz., the static or the acoustic segments. Where the cochlea is involved symptoms referable to disease of the terminal filaments of the auditory nerve will be present. Thus tinnitus is always complained of, whilst a varying amount of loss of perception for high tones will be met with according to the extent and situation of the existing lesion. In the great majority of cochlear lesions high degrees of deafness are found. Should the suppurative process, however, be confined to the region of the semicircular canals or vestibule the predominant symptoms will be vertigo, nystagmus, and intermittent attacks of nausea or actual sickness. In 57 out of 97 cases of uncomplicated fistula of the horizontal semicircular canal Jansen found marked vertigo to be present, whilst Lucae in 30 out of his 50 cases found the same conditions prevailing.

In localised suppuration of the semicircular canals or vestibule a fair degree of hearing may exist. The occurrence of rapidly advancing nerve deafness in a case of chronic suppurative disease of the middle ear should at once direct attention to the probability of labyrinthine involvement. If accompanied by vertigo, attacks of sickness, nystagmus, and constant tinnitus, the diagnosis is, of course, rendered somewhat easier although the possibility of a concomitant lesion of the cerebellum must not be lost sight of. In actual practice we have to deal with cases where the lesion secondary to the middle-ear infection is confined to the labyrinth, probably a much more frequent condition of affairs than is usually supposed, where it is confined to the cerebellum and where both a labyrinthine and a cerebellar lesion coexist. An accurate differential diagnosis is at times a problem of the utmost difficulty, the symptoms being in many cases so similar.

In uncomplicated labyrinthine suppuration without any intracranial lesion greater degrees of nerve deafness are usually present, vertigo is more of the nature of the subjective sensation of extreme dizziness than of that form of staggering gait known as the cerebellar gait, sickness and prostration are less marked, occipital pain and retraction of the head are absent, optic neuritis, which is present in about 70 per cent. of the cases of cerebellar abscess, is also absent, whilst the dull and somnolent condition of the patient is more suggestive of a cerebellar than of a labyrinthine lesion. In addition the peculiar coiled-up position of the patient when lying in bed and the occasional existence of motor paresis or paralysis of the same side of the body are highly suggestive of a cerebellar abscess. Nystagmus is comparatively common in labyrinthine suppuration. Jansen and Lucae found it present in all their cases of traumatic perforations. Jansen also found it present in 24 out of 97 cases of carious perforation—practically 25 per cent.—whilst Lucae found it present in 31 per cent. of his cases of fistula of the external semicircular canal.

The coexistence of cerebellar abscess with labyrinthine suppuration, although by no means uncommon, is extremely difficult of diagnosis and is frequently only found out in the course of operative procedures or as the result of the after history of the case. The following notes present a typical picture of an uncomplicated case of labyrinthine suppuration.

CASE 1.—The patient, a male, aged 29 years, had suffered for 11 years from profuse discharge from his left middle ear following a severe attack of scarlet fever. The discharge was fœtid and blood-stained. The hearing power had for long been much impaired and had become rapidly worse a few weeks prior to the patient being seen in consultation. Severe vertigo was complained of and on two occasions vomiting had occurred quite suddenly and quite independently of the partaking of food. No definite pain either in the ear or in the head was complained of but the patient felt ill and was quite unable to follow his usual occupation. When first seen the following notes were made: "Patient pale and anæmic, tongue thickly furred, bowels constipated, temperature 97·8° F., pulse 70. Left auditory meatus blocked by a large œdematous polypus in a bath of putrid pus. Bare bone felt by means of a probe in the depths of the meatus. Hearing upon affected side one-sixtieth of the normal Tuning-fork tests show want of perception for high tones; no nystagmus; no optic neuritis." Under chloroform anæsthesia a complete radical mastoid operation was performed and a careful toilet of the external labyrinthine wall was made. The stapes was found imbedded in granulation tissue and when gently grasped with a pair of forceps at once came away. Succulent granulation tissue was seen to fill the vestibular cavity. By means of a small burr the fenestra ovalis was carefully enlarged and a quantity of disorganised tissue was removed from the vestibule. Either during the enlargement of the fenestra ovalis or during the subsequent process of curetting the facial nerve was injured and for a short time after operation facial paresis existed. This, however, ultimately entirely cleared up. The cavity thus made in the labyrinth was lightly packed and the subsequent treatment of the radical mastoid operation was carried out upon recognised principles. The patient made a good, although slow, recovery and is now at work as usual. All vertiginous symptoms disappeared after the operation. He is, however, completely deaf upon the affected side.

To illustrate the practical difficulties encountered in making an accurate diagnosis where labyrinthine and cerebellar suppuration coexist the following case, which was diagnosed as one of labyrinthine suppuration, may be cited. Unfortunately the possibility of a coexisting cerebellar abscess was not entertained at the moment. Four days after the labyrinthine operation, however, a cerebellar abscess was opened but with an unsuccessful result.

CASE 2.—The patient, a male, aged 33 years, was admitted to hospital complaining of deep-seated pain in his left ear, marked vertigo, and constant nausea. Examination showed chronic left-sided purulent otitis media, deep-seated caries, bone granulations, and severe nerve deafness upon the affected side. The temperature on admission was 102° F., the pulse was 64, and the respirations were 20. For three or four days prior to admission the patient had complained of severe dizziness and on two or three occasions he had been sick. A diagnosis of labyrinthine suppuration was made. Under an anæsthetic a complete radical operation was performed, the facial spur being freely removed so as to gain a good view of the external labyrinthine wall. A fistula was at once seen in the region of the horizontal semicircular canal leading into the internal ear. A small sequestrum was scooped out and some succulent granulation tissue was removed with the curette. The after-treatment was conducted upon ordinary principles. The patient did not, however, rally from the operation as was expected. The temperature became subnormal (96·4°) and he sank into a dull, listless, and apathetic mental condition. Occipital pain increased slightly and one or two attacks of vomiting during the two days subsequent to the operation made it evident that some other complication existed. It was accordingly decided to explore the adjacent portion of the cerebellum. Four days after the first or labyrinthine operation the cerebellum was opened and an abscess occupying the anterior portion of the left lateral lobe was at once found. After evacuation of pus and a few shreds of disorganised brain tissue a drainage tube was inserted. The patient, however, did not rally and he died on the following day. Unfortunately, a post-mortem examination could not be obtained.

In this case had a correct diagnosis of labyrinthine plus cerebellar suppuration been made and had both purulent foci been evacuated at the same time the result might have been different. On the other hand, the symptoms of labyrinthine suppuration may so resemble symptoms of cerebellar abscess as to lead to the diagnosis of a mixed lesion when the labyrinth is the part alone involved. The fact also that in suppurative labyrinthitis the amount of cerebro-spinal fluid is increased with a corresponding increase of intracranial tension, as evidenced by depression of the various vital centres, slow pulse, subnormal temperature, and slow respiratory movements, tends materially to increase the difficulties of differential diagnosis. The following case illustrates this point.

CASE 3.—The patient, a male, aged 31 years, had suffered for many years from left-sided suppurative middle-ear disease. For some days prior to being seen in consultation he had complained of marked vertigo, pain in the head, and general lassitude. Upon examination a small perforation was found in the upper and posterior part of Shrapnell's membrane. The discharge, which was scanty, was very offensive. His hearing power measured $\frac{4}{10}$ of the normal and tuning-fork tests pointed to labyrinthine involvement. The attic was carefully cleansed by means of an attic syringe, leeches were applied round the ear, and a large dose of calomel was ordered. The effect upon the patient's symptoms was practically *nil*. When seen again ten days afterwards he was lying in bed complaining very much of pain in his head and neck, of great photophobia, of sickness, and of swimming sensations whenever he moved in bed. The temperature was 97·4° F., the pulse was 56, and the respirations were 16. Marked horizontal nystagmus was present. There was no optic neuritis. The mental condition of the patient was such as to arouse the suspicion of a cerebellar abscess being present and operation was advised. The preliminary steps were as in the previous case and a free opening was made into the labyrinth through the region of the horizontal semicircular canal by the enlargement of a small fistula which was found. A disc of bone was then removed over the left cerebellar lobe and the dura mater was incised. A very free flow of cerebro-spinal fluid took place, the amount being obviously much in excess of the normal and under considerable tension. The cerebellar lobe was explored in four different directions but no pus was found. The patient made an uninterrupted recovery and is now in the enjoyment of excellent health. His hearing upon the affected side, which previously to operation had measured $\frac{4}{60}$, is now quite gone, the labyrinthine operation having destroyed the little that he formerly possessed. The case was thus one of suppurative labyrinthitis complicated with a serous meningitis.

In such cases lumbar puncture might prove to be an aid to diagnosis. Where a perfectly clear fluid escaping under tension is drawn off a serous meningitis may be assumed to exist. Where, however, the fluid escaping under tension is turbid and microscopically is found to contain micro-organisms and pus cells the existence of a purulent meningitis is certain.

PROGNOSIS.

In all cases of labyrinthine suppuration the prognosis is necessarily grave. The ever-present proximity of the pia-arachnoid membranes and the intimate relationship which exists between the subarachnoid cavity and the perilymphatic and endolymphatic spaces necessarily render the spread of septic processes from the internal ear to the base of the brain by no means improbable. The relation also of the corresponding cerebellar lobe to the posterior surface of the pars petrosa is another factor always to be remembered. Various other points must also be considered—viz., the acuteness or otherwise of the inflammatory process, its particular cause and nature, its extent and situation, and the age of the patient.

So far as the function of audition is concerned it will be found that in the great majority of cases irreparable damage is done, whilst in some cases complete destruction of the internal ear and auditory nerve takes place. In acute cases suppuration may come to an end spontaneously. Healing may then result, the affected portions of the internal ear filling up with granulation tissue which subsequently undergoes ossification.

In chronic cases the risk of extension to the base of the brain or to the adjacent cerebellar lobe must always be borne in mind and this risk is the greater the younger the patient. *According to Bezold* 20 per cent. of the subjects of labyrinthine *necrosis* die from consecutive brain and sinus affections.

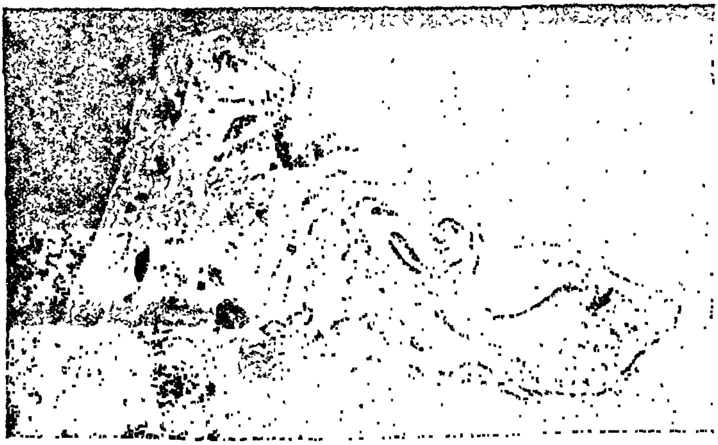
Labyrinthine [illegible] owing the exanthemata, [illegible] which are of a tuberculous [illegible] are those due to more [illegible] causes. Where disease is localised and confined to the region of the semicircular canals the prognosis is better than where the whole contents of the labyrinth are involved. In such circumstances from 20 to 30 per cent. of the cases prove fatal.

COMPLICATIONS.

Intracranial complications are frequent. From a study of recorded statistics and from observations of my own I have arrived at the conclusion that from 40 to 50 per cent. of the cases are followed by complications, usually intracranial in nature. By far the most frequent pathway of infection is *viâ the internal auditory* meatus along the sheaths of the auditory or facial nerves and the second most frequent route is *viâ* the aqueductus vestibuli.

Suppurative pia-arachnitis is the lesion most frequently met with, usually diffuse, occasionally localised. Extradural abscesses around the sigmoid sinus or over the superior semicircular canal in the middle fossa are also encountered, as are also cerebellar abscesses, developing as a rule in that portion of the lateral lobe nearest to the original focus of infection. As a factor in the production of cerebellar abscess suppurative disease of the labyrinth is of the first importance. Phlebitis of the sinus and/or of the jugular vein at times owes its origin to disease in this region. Jansen has described cases of jugular phlebitis following labyrinthine suppuration, the septic process travelling along the cochlear or vestibular veins. Of the 198 cases collected by Hinsberg the cranial cavity was infected in 108. In 43 of these cases the pathway of infection was definitely traced and was as follows. In 25 cases through the internal auditory meatus; in one case through the internal auditory meatus and [illegible] the aqueductus vestibuli; [illegible] tus cochleæ; and in eight [illegible] canals.

FIG. 4.



Temporal bone showing relation of the first whorl of the cochlea to the carotid artery and to the fenestra ovalis.

The operative exposure of the cavity of the middle ear may be the cause of the extension of latent suppuration of the labyrinth to the cranial cavity. In 169 cases of radical mastoid operation performed by Brieger for prophylactic reasons there were five deaths from meningitis and in all five the meningitis was due to a concealed labyrinthine suppuration. In one of my recent cases menin- [illegible] after the radical operation and was due to an [illegible] of the labyrinth [illegible] utcome of surgical [illegible] posterior segments [illegible] empyema of the [illegible] this situation may suddenly rupture into the meninges and produce a rapidly spreading pia-arachnitis.

TREATMENT.

In order to secure access to the external labyrinthine wall a free exposure of the middle-ear cavity must be effected. This is best secured by the performance of the typical radical mastoid operation. Sufficient bone must be removed to secure a good view of the region of the oval window. Careful search should be made under good illumination for any fistulous tract leading through the bony wall or through one or other fenestra. When found the tract should be carefully enlarged by means of the bur and the path of infection followed until all granulation tissue and purulent débris have been got rid of. This may require a prolonged and deep exploration. As the fistulous tract is in the majority of cases found in the horizontal semicircular canal the operation does not present unusual difficulties. By extending the dissection along the anterior crus of the horizontal semicircular canal the vestibule may be opened, or by extraction of the stapes and enlargement of the fenestra ovalis in a downward direction the same result may be obtained.

The cochlea may be opened up by removing the pars promontoria in a direction forwards and inwards. The first whorl is in this way rendered accessible (Fig. 4). Great care must, however, be exercised when working in this region on account of the near proximity of the internal carotid artery which occasionally runs an aberrant course and projects inwards towards the tympanic cavity. Provided, however, the field of operation is kept well illuminated and dry there *should be no fear of wounding the artery.*

In discussing the indications for operation we are faced by the fact that clinical experience has taught that in cases running a severe and acute course resolution may take place, whereas cases which appear slight and comparatively symptomless may suddenly light up and end in acute intracranial infection. I would venture to lay down the following points as guides to operation: 1. In any case of suppurative middle-ear disease where well-marked nerve deafness upon the affected side is accompanied by frequent attacks of vertigo and sickness and by nystagmus, either constant or intermittent, a careful search should be made for the presence of any fistulous tract leading into the labyrinth. If found such tract should be opened up and explored; if not found, however, an exploratory opening through the horizontal semicircular canal or foot plate of stapes is justifiable. 2. In all cases of suspected labyrinthine disease of septic origin the vestibule should be promptly opened. 3. In cases of chronic suppurative middle-ear disease accompanied by the presence of cholesteatoma and erosion of the external labyrinthine wall free opening of the area of involvement should be effected. 4. In cases of suspected cerebellar abscess accompanied by symptoms indicative of labyrinthine involvement the operative pathway should be *viâ* the middle and internal ear to the posterior surface of the pars petrosa—in other words, through the median wall of the mastoid antrum. In this way the labyrinth is opened up, the anterior portion of the corresponding cerebellar lobe is exposed, and any extradural abscess lying upon the posterior surface of the pars petrosa would at the same time be located and drained.

Bibliography.—C. A. Ballance: Transactions of the Otological Society of the United Kingdom, vol. i., 1900. Barnick: Die Tuberkulösen Erkrankungen des Gehörorgans, Klinische Vorträge aus dem Gebiete der Otologie, Band iii., No. 4. Barr: Diseases of the Ear, third edition. Bezold: Archiv für Otologie, Band xvi., p. 297; Zeitschrift fur Ohrenheilkunde, Band xvi. Brieger: Archiv fur Otologie, October, 1902, p. 415; Breslauer Statistik, Band xx., No. 1. Bull: Transactions of the Otological Society of the United Kingdom vol. ii., p. 136. A. H. Cheadle: Ibid., vol. iv., 1903. Dench: Diseases of the Ear, third edition. Ephraim: Archiv fur Ohrenheilkunde, Band liv., p. 240. Fagge: Archiv fur Otologie, February, 1902; Transactions of the Otological Society of the United Kingdom, vol. iii., p. 17; ibid., vol. ii., 1901. Gruber: Monatsschrift fur Ohrenheilkunde, 1897, No. 1. Grunert: Archiv fur Ohrenheilkunde, Band xxvi. Habermann: Ibid., Band xlii., p. 128. Hartmann: Archiv fur Otologie, Band xvi., p. 252. Haug: Archiv fur Ohrenheilkunde, Band xlvii. Herzfeld: Berliner Klinische Wochenschrift, No. 35, 1901. Hinsberg: Zeitschrift fur Ohrenheilkunde, Band xxxviii., p. 131; Archiv fur Otologie, Band xxxi., Nos 2 and 3, 1902. Hovell: Diseases of the Ear, second edition. Jansen: Operation [illegible] Encyclopadie der Ohrenheilkunde; Archiv [illegible] xlv.; ibid., p. 193; ibid., Band xxxv., p. 290. [illegible] e 35. H. Jones: Transactions of the Otological Society of the United Kingdom, vol. iv., 1903. Kirchner: Congressbericht in Rome, 1894. A. Knapp and Jordan: Archiv fur Otologie, April, 1903; ibid, April, 1902; ibid., February, 1902; ibid., October, 1902. Lake: Transactions of the Otological Society of the United Kingdom, vol. iii., p. 4. Lannois and Armand: Archives Internationales d'Otologie, 1903, p. 14. Lucae: Archiv für Ohrenheilkunde, Band xlvii., p. 85. Max: Wiener Medicinische Wochenschrift, 1891, Nos. 48—51. Mygind: Zeitschrift fur [illegible] Okada: Haug's Klinische Vortrage, Jena, [illegible] Ohrenheilkunde, Band ii., p. 88; Diseases [illegible] 1902. Pyle: Archiv für Otologie, Febru [illegible] October, 1902. Roosa and Emmerson: Zei [illegible] Band xv. *Schulz: Archiv fur Ohrenheilkunde, Band lvii.*, p. 67. V. Stein: Ibid., Band xliii., p. 162. Toeplitz: Archiv fur Otologie, August, 1902, p. 337; ibid., June, 1902, p. 245. Toynbee: Archiv fur Ohrenheilkunde, Band i. E. Waggett: Transactions of the Otological Society of the United Kingdom, vol. i., 1900. Zeroni: Archiv fur Ohrenheilkunde, Band xliii., p. 68.

Manchester.

FILARIA PERSTANS AND THE SUGGESTION THAT IT BELONGS TO THE GENUS TYLENCHUS (BASTIAN).

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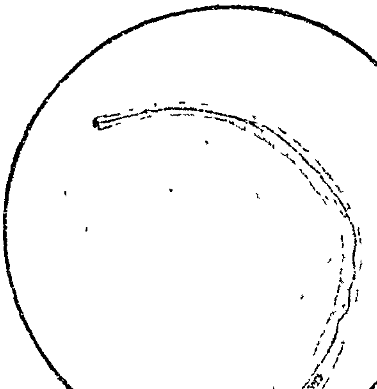
IN THE LANCET of Jan. 30th, p. 286, Dr. H. C. Bastian contributes a paper in which he states that it is probable that the nematode filaria perstans may really belong to some species of tylenchus and suggests the eating or other uses of bananas as the possible mode of infection. The idea of the banana having a relationship to this special filaria is based on a statement made by Christy that the distribution of filaria perstans in East Equatorial Africa corresponds almost exactly with the area of distribution of the banana cultivation and clothed people, and also *on the fact* that Bancroft has found a species of tylenchus infesting the roots of this plant in Queensland, Australia.

In a recent paper on filaria perstans[1] I pointed out that the only physical features of the land the distribution of this parasite could be found to correspond with were high temperatures and dense tropical forests, cleared zones such as the sugar cultivation areas of British Guiana or open areas such as the high grass lands of British East Africa being without it That the banana has nothing whatever to do with the occurrence or spread of this parasite is at once evident if one considers that in the West Indian islands and other areas where bananas and plantains are extensively eaten it is not found, while, on the other hand, in the virgin forests of British Guiana, in areas where there are no bananas, it exists in 50 per cent. of the aboriginal Indians. Its abundant presence in Uganda I consider to be due, not to bananas but to the fact that there is much dense tropical forest spread all over the country and that its proper intermediate host inhabits such areas. Whenever one passes out of Uganda eastwards to Kavirondo, where the land changes and grass and bushes become the predominant feature of the landscape, there the filaria disappears.

FIG. 1



Adult form of filaria perstans, head end. × 24.

Dealing next with the probability of filaria perstans belonging to the genus tylenchus, it is evident that the author of the paper has fallen into a misconception respecting the anatomy of the adult and embryonic forms of this filaria. A drawing of a species of tylenchus is reproduced and the statement is made that "this species has a blunt posterior extremity, such as is found in filaria perstans, but in others it is sharp and pointed, as in the closely allied filaria Demarquaii" A glance at this diagram shows a worm with a well marked alimentary structure, a feature which is entirely absent in the embryos of filaria perstans or Demarquaii, and, further, the anatomy depicted in the drawing in no way resembles that found in the adults of either of those two filariæ The drawing, instead of bringing out any resemblance, shows clearly that we are dealing with two entirely different nematodes In my paper already mentioned I have fully described and given measurements of the adult and the embryonic forms of the filaria perstans and it is needless to go into those in detail again here It will be sufficient to state that the adults of the filaria perstans have club shaped heads, have no spine at the cephalic end have no pharyngeal bulb and have the cuticle at the tip of the tail thickened to form two triangular appendages The embryos have the little spine which Dr Bastian mentions, have the body filled *with a column of cells, but have* no signs of an alimentary canal or any sexual differentiations The following diagrams show the difference between the adult and the embryonic forms of filaria perstans and also the difference between the embryonic forms of this parasite and filaria Demarquaii

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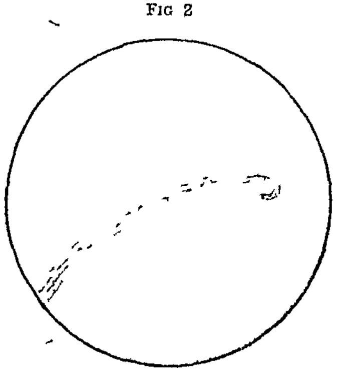
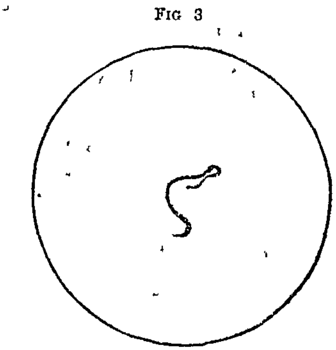
[1] Brit. Med. Jour., March 28th, 1903.

FIG 2



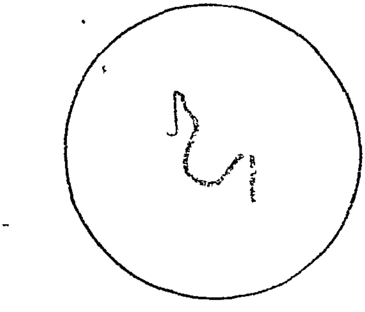
Adult form of filaria perstans tail end × 24

FIG 3



Embryonic or larval form of filaria perstans × 330

FIG 4



Embryonic or larval form of filaria Demarquaii × 330

The embryos of filaria perstans do not undergo any further change in the blood of man and the analogy of the embryonic forms of filaria nocturna and filaria immitis under*going metamorphosis* in mosquitoes shows clearly that some insect must act as an intermediate host for the further development of this parasite also From the peculiar distribution it would seem to be some mosquito or fly inhabiting forest areas

To conclude, then, filaria perstans has nothing to do with the genus tylenchus nor do bananas play any part in the distribution or spread of this filaria

London School of Tropical Medicine, Albert Docks E.

IODIDE RASH IN A SYPHILITIC PATIENT RESEMBLING A VARIOLOUS ERUPTION.

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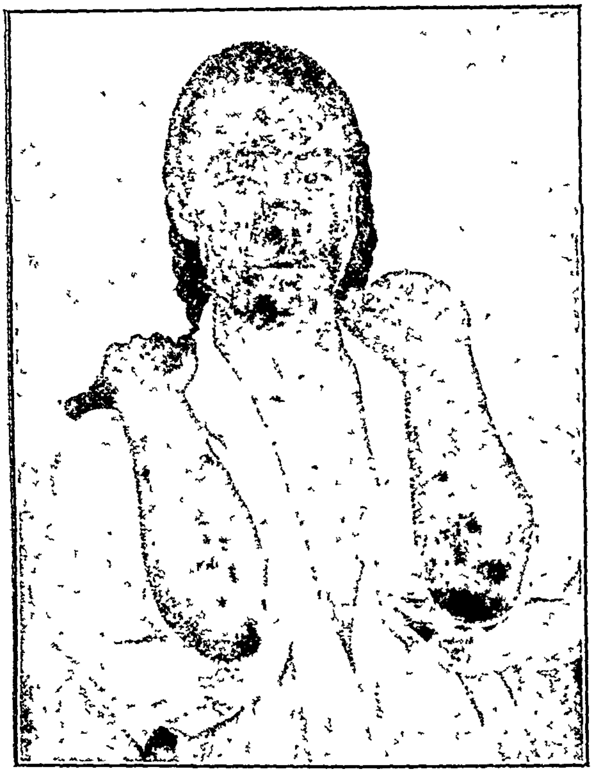
THE following case seems to be of interest from two points of view, as illustrating a difficulty in the diagnosis of small-pox and also *per se*

On May 6th, 1903, a notification was received at the Public Health Department to the effect that an in patient of a general hospital was suspected to be suffering from small-pox In short, though the history negatived that diagnosis, the appearances present were such that the medical officer of health deemed it necessary as a precautionary measure to remove the patient for isolation and observation The following history was obtained The patient, who was an unmarried woman, aged 26 years, about two years previously was laid up for a month by an illness accompanied by a severe sore throat and a rash She recovered after three months' treatment. In December, 1902, some spots appeared on the calf of the right leg, these became sores and then ulcers Similar ulcers appeared on the left leg For several days previously to the appearance of the spots there was aching of the limbs On May 4th, 1903, she went to the hospital as the ulcers were getting worse She was admitted as an in patient and fomentations were applied On the 5th her throat became sore and she was given medicine of which she took three doses On the 6th she woke in the morning and found herself covered with spots On the afternoon of the same day she was removed to an isolation ward in the sanatorium

Condition on admission —There were three good vaccination marks the total area being one and a half square inches The patient was vaccinated in infancy but not since The temperature was 100 4° F and the pulse was 100 She did not appear to be very ill She complained of pain in the tongue and throat and difficulty in speaking and swallowing Her voice was reduced to a hoarse whisper The tongue was dirty, with a deep sloughy ulcer in the mid dorsum and fairly deep serpiginous ulcers on the edges and the tip Similar ulcers were present on the tonsils, the roof of the mouth, and the soft palate. The mouth was too sore to permit examination of the larynx. There were several deep punched out looking ulcers on the calf of the right leg and others over the anterior tibial region on the left leg There was an eruption all over the body

Character of eruption —The eruption consisted of round pearly vesicles presenting exactly the appearance of those seen in small pox just before the pustular stage The vesicles were all of about equal size, the contents of many of them being blood stained There was a bulla about half an inch in diameter on the left elbow, another was on the dorsum of the right hand, and there were several over the sacrum. The contents of all these were dark and blood-stained. There were no papules

Distribution of the eruption.—The vesicles were most numerous on the face and the scalp. They were numerous on the limbs, on both flexor and extensor surfaces, more so on the forearms and legs than on the upper arms and thighs. There were a good many on the hands and feet on both palmar and dorsal surfaces. They were numerous on the back of the trunk, especially in the lumbar region and over the buttocks. There were very few on the chest and fewer on the abdomen. Unfortunately I was unable to take the photograph here reproduced (see illustration) until the third day after the appearance of the eruption, when it had lost to a considerable degree its resemblance to small pox.



Showing extent of eruption.

Previous treatment—On inquiry it was found that the patient had been given three doses of ten grains of iodide of potassium on the day previous to the eruption of the vesicles. She stated that she had taken no medicine before she went to the infirmary.

Course of the eruption.—On the second day the contents of many of the vesicles had become blood-stained and a considerable number of bullæ had appeared. They then gradually subsided, scabbed over, or burst and dried up. A few of them left small circular ulcers. The bulla on the dorsum of the hand and one over the sacrum grew to about two inches in diameter. Cellulitis developed in the adjacent tissues They were incised and extensive sloughing ensued, in the case of the hand destroying the extensor tendons and necessitating the ligature of arteries on several occasions to stop hæmorrhage When the eruption had subsided and as the syphilitic ulceration was getting worse a freely diluted mixture containing five grains of iodide of potassium with arsenic and mercury was administered three times a day. After a few doses had been taken a fresh crop of vesicles appeared and they continued to appear during the administration of the drug, which had again to be discontinued The syphilitic ulceration grew worse, the sloughing of the tissues of the back and hand continued, the tissues round some of the small ulcers left after the subsidence of the eruption began to slough, numerous petechial cutaneous hæmorrhages occurred, and the patient gradually grew weaker. On May 19th she had a hæmorrhage from the bowel, followed by another on the next day and on the 21st she died.

Necropsy.—At the post-mortem examination sloughy ulcers were found in the larynx partially destroying both vocal cords; the ulceration extended into the trachea. The epiglottis was partially destroyed by ulceration. The heart and the lungs were normal. Old pleuritic adhesions were found on the right side. The liver was small and cirrhotic. The kidneys, bladder, and uterus and its appendages were normal; the spleen was large, soft, and congested. The intestine showed patches of congestion of the mucous membrane with here and there punctiform hæmorrhages throughout its length. The condition was most marked in the upper part of the small intestine. There was no ulceration.

Diagnosis.—The patient certainly had tertiary syphilis. The diagnosis rested between (1) syphilis with small-pox (modified by vaccination); and (2) syphilis with an iodide rash. The only points in favour of small-pox were (1) the prevalence of the disease in the town; and (2) the character and distribution of the eruption. The points by which small pox was excluded were (1) the absence of any of the constant prodromal symptoms of small-pox; (2) the mature, vesicular nature of the eruption, though it had been present less than 24 hours (even on the palms and soles the spots were vesicular); and (3) the hæmorrhagic nature of the eruption unaccompanied by (at first) grave illness of the patient The diagnosis of iodide rash was confirmed by the subsequent course of the eruption, by the appearance of bullæ, and by the reappearance of crops of vesicles when iodide was re administered.

Huddersfield.

CANCER IN AUSTRALIA: A COMPARISON WITH OTHER COUNTRIES, TOGETHER WITH A SPECIFIC TREATMENT FOR THE PREVENTION AND ARREST OF THE DISEASE.

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THE following investigation and study into the cause and treatment of cancer were begun in 1893. Having in that year received special appointments as a gynæcologist exceptional opportunities were given me for studying this dread disease in the Commonwealth of Australia In venturing therefore to introduce to the profession what I believe to be a specific treatment in the prevention and arrest of cancer I desire at the outset to state that the theory upon which this treatment is based was arrived at only after having made a very careful study into the cause and increase of the mortality from the disease throughout the Commonwealth of Australia. Having achieved a great amount of success in arresting the pathological progress and process of the disease by preventing secondary deposits and recurrence in a large number of cases treated in connexion with my own practice I have no hesitation in stating that I believe we possess in the products of the Australian indigenous foliage—the eucalypts—all the necessary therapeutic properties for preventing and arresting malignant disease. I trust therefore that I may be able in this article to supply sufficient data, crude as they may be, to merit a fair trial of the treatment suggested.

It may be explained that in Table I. the increase of population between 1788 and 1841 was due to 70,040 male and 12,210 female, or a total of 82,250, convicts being landed in Sydney. Between 1831 and 1841 it was due to State aided immigration. In the year 1851 no less than 15,000 immigrants arrived by sea and in 1853-54-55 nearly 250,000 arrived in Victoria, which was due to the discovery of gold and the rush to that State in consequence. From 1861 to 1901 (41 years) the increase was due to the excess of births over deaths accounting for 1,910,392, and excess of immigration over emigration accounting for 780,895, or a total increase of 2,691,287. It will be noted therefore for the period between 1788 and 1851 that the large increase in population was not due to native births. It was not until 1856 that the first systematic report of deaths from cancer was recorded, at which date it showed a death rate of 14 0 per 100,000 living. It will be noted that at this period the native born death-rate was practically *nil*, owing to the fact that very few had arrived at the time of life (nearly middle age) at which cancer principally manifests itself. Therefore, as the British born proportion of the population was at this period over 50 per cent. of the total inhabitants of the Commonwealth their death-rate would show 28·0 per 100,000 living British born. In the year 1861 the Australian born proportion of the population was about 45 per cent. and the British born 46 per cent. of the total inhabitants of the Commonwealth. The Australian born death-rate at this period appears to be 5·6 per 100,000 living Australian born, while the British born was 30·5 per 100,000 living British born. In 1901 the Australian born proportion of the population had increased to 77 per cent. of the total inhabitants of the Commonwealth and the British born had diminished to 16 per cent., but it is interesting to note the fact that during this period of 40 years, while the Australian born proportion of the population had increased by about 3,000,000, their cancer death-rate had only increased to 22 6 per 100,000 living Australian born, whereas the British born proportion of the total inhabitants had only increased by about 354,000, yet their cancer death-rate had increased to 203·1 per 100,000 living British born. In other words, between the years 1861 and 1901 the Australian born death-rate had increased by only 17 per 100,000 living Australian born as against 172 per 100,000 living British born. As Table I. shows only the crude cancer death-rate it is necessary therefore before coming to any definite conclusions to study the corrected cancer death-rates for the age period 35 years and upwards of the Australian, British, and foreign born inhabitants of the Commonwealth respectively, not only in respect of the total population but also as they affect proportionately the individual nationalities themselves. These calculations I have carefully made and they are shown in the accompanying table (Table II.).

TABLE I.—*Showing the Comparative Increase in the Death-rate from Cancer per 100,000 living among the Australian born and the British born Proportion of the Population respectively and the Increase in the Cancer Death rate per 100,000 living of the Total Population from 1856 to 1901 (exclusive of the Aborigines).*

Year.	Total population of the Commonwealth of Australia.	Proportion of death-rates from cancer per 100,000 living.		
		Australian born.	British born.	Born of all nationalities
1788	1,030	—	—	—
1801	6,508	—	—	—
1811	11,525	—	—	—
1821	35,610	—	—	—
1831	79,306	—	—	—
1841	206,095	—	—	—
1851	403,889	—	*28 0	14 0
1861	1,153,973	5 6	30·5	19 0
1871	1,668,377	9 7	56·7	25·0
1881	2,252,617	16·8	72 9	32 6
1891	3,183,237	19 8	119 8	45 9
1901	3,771,715	22 6	203·1	57·3

* Calculated for the year 1856.

The death-rates are calculated for the year 1900. It will be observed that the crude cancer death-rate for the whole of the Commonwealth was 57 3 per 100,000 living, of which the Australian born cancer death-rates accounted for 17·1 and the British and foreign born 40·2, but when these death-rates were corrected for the age period 35 years and upwards the total Commonwealth death-rate was 195 3 per 100,000 living, of which the Australian born proportion was 58 2 and the British and foreign born 137·1. The relative difference between the Australian, British, and foreign born death-rates appears all the more striking when we compare them in respect to each of their proportions of living population. This I have also carefully calculated for each State separately, corrected for age period and averaged these results. Thus it will be seen that the crude cancer death-rate of the Australian born was 22·8 per 100,000 living of their population, whilst the British born is 202·1 per 100,000 living of their proportion of the population, and when these figures are corrected for ages of 35 years and upwards the difference between the two death rates is most amazing, the Australian born being only 81·3 per 100,000 living native born, whilst the British born is 490 0 per 100 000 British born. It will also be observed that for the whole Commonwealth cancer claims one death out of every 20 deaths from all causes. The Australian born proportion is one death from cancer for every 66 deaths from all causes, whereas the British born proportion is one death from cancer for every 28 deaths from all causes. When these figures are corrected for the age period of 35 years and upwards the death-rate from cancer for the whole Commonwealth is found to be one death in every ten, the Australian born one death in every 33, and the British born one death in every 14. The Australian born proportion of deaths from cancer to 100 deaths of the native born inhabitants from all causes and at all ages was 2 3, or one death in every 43, whereas the [illegible] cancer deaths to 100 deaths of the [illegible] all causes and at all ages was [illegible] e death-rates are corrected for the age period of 35 years and upwards it is found that the Australian born proportion is 6 9, or about one death in every 15, whereas the British born proportion is 12·5, or one death in every eight. The cancer death rate of the foreign born inhabitants of the Commonwealth of Australia is also very high when compared to that of the native born. The figures in Table II. show the foreign born death rate from cancer per 100,000 living foreign born to be 208·3, and corrected for the age period 35 years and upwards the death-rate is 351·6.

TABLE II.—*Showing the Crude and Corrected Death-rates from Cancer per 100,000 living, also the Proportion of Deaths from Cancer to 100 Deaths from all Causes for the Commonwealth, its Metropolitan and Country Districts; and the Comparative Death-rates among the Australian, British, and Foreign born Proportion of Inhabitants respectively for the Year 1900 (exclusive of the Aborigines).*

The Commonwealth of Australia.	Crude cancer death-rate.		Corrected cancer death-rate for ages 35 years and upwards.	
	[illegible]	[illegible]	[illegible]	Proportion [illegible] alities.
Commonwealth ...	57 3	5·0	195·3	10 0
„ metropolitan districts... ...	81 3	6 4	326 0	12 8
„ country districts	44·7	3 9	134 0	8 4
„ The native born proportion of population	17·1	1 5	58 2	3 0
„ The British and foreign born proportion of population	40 2	3 5	137·1	7·1
„ The native born proportion of population	22 8 (to 100,000 living native born).	2·3 (to 100 deaths native born).	81·3 (to 100,000 living native born).	6·9 (to 100 deaths native born).
„ The British born proportion of population	202·1 (to 100,000 living British born).	8 8 (to 100 deaths British born).	490·0 (to 100,000 living British born).	12·5 (to 100 deaths British born).
„ The foreign born proportion of population	208·3 (to 100,000 living foreign born).	8·5 (to 100 deaths foreign born).	351·6 (to 100,000 living foreign born).	11·8 (to 100 deaths foreign born).

The foreign born proportion of deaths from cancer to 100 deaths from all causes and at all ages of the foreign born inhabitants is 8·5, or about one death in 11, and these figures corrected for the age period of 35 years and upwards show 11·8, or about one death in every eight deaths from all causes. The death-rate from cancer of the foreign born inhabitants varied considerably according to their nationality, as the following list will show (Table III.). It is calculated for the year 1900. It will be noted that Italy and the United States of America show a comparatively low death-rate when compared with the other foreign countries; on the other hand, Germany, France, Austria, Norway, and Sweden show even a much higher death-rate than the British born inhabitants of the Commonwealth. The Chinese, who form the largest proportion of the foreign born inhabitants of the Commonwealth, also show a low death-rate when compared with the other foreign countries. From 1316 deaths of Chinese registered in Victoria between the years 1894 and 1900 from all causes 49 were recorded as having died from cancer. For the same period in Victoria it is interesting to learn that of 70 cases of deaths registered as having occurred amongst the aboriginals of the State only one case of cancer was recorded.

TABLE III.—*Showing the Death-rate from Cancer of the Foreign Born Inhabitants.*

Country.	Death-rate from cancer per 100,000 living.	Proportion of cancer deaths to 100 deaths from all causes, 35 years and upwards, of each nationality.
Germany	252	11·0
France	375	16·6
Austria	300	16 0
Russia	80	5·4
Sweden and Norway... ...	289	15·6
Chinese Empire...	72	5 0
Italy	65	5·0
United States of America	61	2·0

TABLE IV.—*Showing the Death-rate from Cancer per 100,000 living for each State of the Australian, British, and Foreign born Inhabitants respectively, according to their Percentage of the Total Population, for the Year 1900 (exclusive of the Aborigines).*

State.	Australian born.		Natives of the United Kingdom and other portions of the British Empire.		Foreign born.	
	Percentage to the total population.	Cancer death-rate per 100,000 living, Australian born	Percentage to the total population.	Cancer death-rate per 100,000 living.	Percentage to the total population.	Cancer death-rate per 100,000 living.
New South Wales	80·52	21·0	16·28	201·1	2·61	207·2
Victoria...	79·42	28·6	17·92	283·0	2·15	245·3
Queensland	65·20	23·4	25·42	107·8	8·71	195·6
South Australia ...	80·06	22·7	15·69	192·2	3·73	202·4
Western Australia	70·51	15·4	22 60	81·5	5 65	120·0
Tasmania	86·82	20·0	11·54	223·0	1·29	230 0
Commonwealth of Australia ...	77·02	22·8	19·50	202·1	3·28	208·3

From Table IV. it appears that Victoria shows a higher death-rate from cancer than any of the other States, Western Australia showing the lowest. The State of Tasmania, it will be observed, shows a high death-rate from cancer among the British born inhabitants.

A study of Table V. tells its own grim tale of the steady increase in the number of deaths and the death-rates from cancer in each State from 1870 to 1900.

TABLE V.—*Showing the Number of Deaths and the Death-rates from Cancer in each State since 1870 (exclusive of the Aborigines).*

Number of Deaths.

State.	1871–1875.	1876–1880	1881–1885.	1886–1890.	1891–1895.	1896–1900.
New South Wales	772	934	1,146	1,876	2,587	3,548
Victoria	1,245	1,712	2,065	2,799	3,621	4,086
Queensland	125	225	336	508	731	1,071
South Australia ...	199	352	475	592	803	968
Western Australia	16	23	52	85	102	248
Tasmania	249	255	308	341	371	459
Australian Commonwealth ...	2,606	3,501	4,382	6,201	8,215	10,380
Death-rate per 100,000 Living.						
New South Wales	28·3	28 2	27·2	36·2	43·1	54·1
Victoria	32·6	41·6	45·3	53·2	61·9	63·9
Queensland	17·4	22·0	24·9	28 1	35 3	45·9
South Australia ...	20·4	29·1	32 3	38·4	47·7	54·5
Western Australia	15·4	16·4	33·0	40·7	30·6	31·8
Tasmania	48·3	46·9	50·4	49 8	49·1	55·5
Commonwealth of Australia	27·6	32·3	34·6	42·2	49 7	57·3

TABLE VI.*—*Showing Death-rates from Cancer in various Countries for the Purpose of Comparison with the Death-rates from Cancer in Australia shown in Previous Tables (mostly for the Year 1900).*

Country.	Death-rate from cancer per 100,000 living.	Proportion of deaths from cancer to 100 deaths from all causes at all ages.	Proportion of deaths from cancer to 100 deaths from all causes of persons 40 years of age and upwards
England and Wales...	82·8	4 5	8 5 (35 years and upwards)
Scotland	81·0	—	—
Ireland	61·0	—	—
France (towns only, cancer and tumour) ...	104·0	4·3	7 6
German Empire	72·7	3·3	6 6 (15 years and upwards).
Austria	70·4	2·7	7 5
Italy	52·1	—	—
Switzerland ...	132·0	—	—
Holland	91·3	—	—
Norway	84·5	—	—
United States of America (registration area) ...	60 0	—	—

* This table was compiled from Mr. Alfred Wolff's figures in an article on "Increase of Cancer" (*The Nineteenth Century and After*, June, 1903).

Death-rate from cancer in respect to distribution of sex.—For a number of years deaths from cancer in every State of the Commonwealth have been more numerous among males than among females. Thus, in the State of Victoria for 11 years (from 1890 to 1900) there were 8533 deaths from cancer, of which 4445 were males and 4088 were females; and in the State of New South Wales for seven years (from 1894 to 1900) of a total of 4619 deaths from cancer 2528 were males and 2091 were females. From a calculation I made of the crude cancer death-rate for the whole of the Commonwealth there was very little difference between the death-rates of males and females, but having carefully corrected the cancer death-rates for the age term of 35 years and upwards I found the average death-rates for the whole of the States to be in the proportion of six males to seven females From Tables I., II., IV., and V. it is evident (1) that the death-rate from cancer of the British and foreign proportion of the population is abnormally high when compared with that of the Australian born proportion and also when compared with Table VI, showing the death rate from cancer in their individual countries, and (2) that the death rate of the Australian born is exceptionally low, so much so that it would appear that they are almost immune from the disease when compared with the death rates of the British and foreign inhabitants and after allowing for any inherited tendency I might here mention that Mr T A. Coghlan, the chief statistician of the Government of New South Wales, has made an estimate of the children of parents dying from cancer and from the experience of seven years (from 1893 to 1899) he found that the average families of married males who died from cancer was 6 11 and of females 5 99 Of 761 persons dying from cancer in the State of New South Wales in the year 1899 of whom 281 were born in Australia 599 (285 males and 314 females) were married and of these 523 left families [1]

The question may now be asked, What then is the cause of this high death rate which has abnormally increased among the British and foreign inhabitants of the Commonwealth of Australia? A brief study of the early history of the country from 1788 to 1856 in respect to the moral and social conditions of the inhabitants, will, I venture to state throw a great light on this question It is a well known fact that Australia was the dumping ground for convicts for the first 50 years, over 82 000 having been landed between 1788 and 1841 The first population began on Jan 26th 1788 when Captain Phillip arrived in Sydney Harbour with the "first fleet' bringing with him an establishment of about 1030 people It may be as well to note the composition of those despatched from England in the six transports which made up the above establishment They had on board 564 male and 192 female convicts, 178 marines officers and men, five medical men, a few mechanics, 40 women wives of the marines, and 13 children Several shiploads followed in the same year, and in consequence of overcrowding and insanitary conditions on the voyage, it was discovered that out of a total of 1700 who had been placed on board in England, 200 died on the voyage, while hundreds of others were in an enfeebled or dying condition when they reached Port Jackson In 1803 settlement extended from New South Wales to Tasmania and later to the other States From 1800 to 1806 during Governor King s period of office, serious trouble arose from the fact that officers sent out in charge of convicts began trafficking in the rum trade and actually imported large quantities which they retailed at large profits, some of them even set up stills on their own account in defiance of Government orders This condition of affairs continued until the Imperial authorities appointed Governor Bligh to succeed Governor King believing that he would correct the abuses which his predecessor seemed powerless to suppress, particularly in regard to the rum trafficking Governor Bligh on arrival issued a stringent proclamation forbidding the bartering in spirits in exchange for other commodities but without success, as the illicit trade went on throughout his term of office It was not until he was succeeded by Governor Macquarie that this illicit traffic in spirits was rigidly suppressed and the normal and industrial condition of the colony was improved upon

From the above it is evident that *alcoholism* has played a great part as a factor in the causation of disease, from the very foundation of the country Between the years 1851 and 1861 the large increase in the population was due to the gold discoveries, and the class of individuals who arrived in Australia in consequence of these discoveries and the condition of affairs existing at this period are best told in the words of Mr Coghlan [2] "All classes and all distinctions were levelled the thirst for gold seizing upon the entire community The shops were empty, the streets deserted, the doors of the counting houses barred, the plough left resting in the furrow sheep and cattle wandered unattended while the Port of Melbourne was filled with unmanned vessels dropping to pieces for lack of attention and repair Brisk business was done by saloon proprietors and the shanty and dancing hall keepers, who became veritable 'first robbers' of fortunate diggers The public service was however, reduced to abject inefficiency, the police decamped like their superiors in search of fortune and even domestic servants male and female, joined in the general stampede The Governor was reduced to a condition of absolute powerlessness and ruled in Melbourne with hardly any to obey his behests—like a monarch without a realm Society was, in truth, utterly disorganised and it was not long before the position became even more em-

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without reckoning the other colonies, something like 11 000 people poured into Melbourne, bound for the fields in the latter half of the year 1851 The arrivals from Europe in the early days included not only what has been described by an Australian writer as the 'brain and brawn' of the whole world, but many that could have been easily spared—viz, fugitives from justice adventurers from California and the South Pacific escaped convicts and disguised bushrangers, sharpers, and professional gamblers from every city on the Continent' or in the States,' and hordes of Asiatics from Canton and the Straits Settlements, there being not less than 25 000 Chinese whom the gold fever allured to the various fields Week after week and month after month vessels sailed into Hobson s Bay, landing passengers and discharging cargoes in the most primitive fashion, for their crews deserted as soon as the ships dropped anchor or came to their moorings The nobly born and the gently nurtured, professional men and navvies, artisans farm labourers, deserting soldiers and runaway sailors 'forty niners from the fields of California, political refugees from France and Germany and Russia—representatives, in short of every civilised, and almost every uncivilised, people beneath the sun—poured in never ending stream into Port Phillip *en route* for the gold fields Upwards of 15 000 immigrants arrived by sea during the latter half of 1851, 94 000 during the year following, and in 1853-4-5 nearly a quarter of a million

To complete the above real and graphic statement of the condition of affairs existing at this period it is only necessary for me to add what Mr Coghlan may have for special reasons purposely omitted—viz, that syphilis (as well as alcoholism) was most prevalent at this period of the history of the country This dread disease in the Commonwealth of Australia has gone on its way unchecked, unnotified, and, in the majority of cases untreated for the necessary length of time to prevent the horrible ravages of this disease in later life favouring the development of malignant disease In support of this statement I may say that since 1893 from among notes on 55 cases (all females) of cancer occurring in connexion with my own practice in Melbourne I find of this number 32 or about 60 per cent, had a syphilitic history, of which 11 cases or 20 per cent, had inherited the disease and 21 cases, or 38 per cent, had acquired it from ten to 30 years previously and in nearly every instance a history of having undergone little or no treatment was elicited It may be worthy to note the region attacked by the disease in connexion with these cases The whole of the 11 cases with a history of inherited syphilis developed cancer of the breast and of the 21 cases that had acquired it 17 developed cancer of the uterus and only four developed cancer of the breast Another interesting fact was in respect to the ages of these cases The 11 cases with the inherited history were all under 40 years of age and varied from 28 to 39, whereas the ages of those with the acquired history were (with the exception of one whose age was 36 years) all over 50 years, the ages varying from 53 to 72 years Of the remaining 23 cases 17 developed cancer of the breast and six cancer of the uterus, also 12 or 21 per cent, had a history of alcoholism, eight or 14 per cent, rheumatism and three, or 5 per cent, a family history of phthisis

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one father and six mothers, whereas in the remaining 23 cases 12 or about 21 per cent gave a history of cancer having existed in their families—two fathers six mothers two sisters and two brothers The birthplaces of these 55 cases were as follows Australia 6 England 23 Ireland 12 Scotland 9 Germany 3 and France 2 It will be noted therefore that only 10 per cent were Australian born that 80 per cent were born in the United Kingdom, and that about 10 per cent. were foreign born The diagnosis in all the cases under review was confirmed by microscopical examinations As space will not permit in this article and

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[1] Vide p xlii Report on the Vital Statistics of New South Wales 899

[2] Coghlan The Wealth and Progress of New South Wales 1900–01

as full notes on all these cases will be published at a future date, I will confine myself to the following notes on one case only which may be well worth recording, as it bears particular relation to syphilis as a factor in the cause of cancer.

A woman, aged 33 years, with her husband, was a passenger on board a steamer on which I was travelling in 1893. On the second morning after our departure the husband asked me if I would see his wife in consultation with the surgeon of the steamer who feared she was suffering from cancer of the mouth. I consented and on examination found that she was suffering from what appeared to be a syphilitic gumma of the palate, having a perforation about one-third of an inch in diameter and a thick nasal discharge. A subsequent interview with the husband left no doubt as to the specific nature of the disease. He informed me that nine years previously he had contracted syphilis and that about three months afterwards his wife was operated upon by a specialist who curetted the womb and treated her for an ulceration of the cervix, which no doubt fixed the time of the primary chancre. His wife never received any treatment beyond this and showed no further symptoms until she complained about two weeks before sailing of having a relaxed throat and a thick post-nasal discharge. Large doses of iodide of potassium were administered and the perforation had practically closed by the time we had arrived at our destination and her general condition was much improved. I continued treatment for about six months when they went to Africa. Three years later the wife consulted me for metrorrhagia. She informed me that her husband had died three months previously in Africa from cancer of the tongue and that two months before his death she had given birth to what her medical attendant described as a hydatid mole. Subsequent examination gave every evidence of this and after curetting a microscopical examination of the scrapings revealed the fact that she was suffering from deciduoma malignum or chorion epithelioma.

The chief points to be noted in this case are: (1) that both had acquired syphilis prior to developing malignant disease; (2) that the husband at the time the wife became pregnant was evidently suffering from cancer of the tongue; (3) that the molar pregnancy was either due to the syphilitic condition of both parents or to the malignant condition of the father; and (4) that this malignant tumour of pregnancy was apparently of fœtal origin. As recent research into the cause of chorion epithelioma favours that of fœtal origin, the above case may throw some light on this vexed question.

My investigations as to the prevalence of cancer among the aborigines of Australia elicited the fact that they are practically immune from the disease. Very little statistical evidence could be obtained of cases of cancer having occurred among the aborigines, although a great number had lived to the age period at which cancer chiefly manifests itself and its death rate is at its highest. On the other hand, they were particularly susceptible to bronchial and phthisical conditions, the majority dying from these causes. What, then, is the cause of this apparent immunity among the aborigines and the low death-rate from cancer among the majority of the Australian born white population? I am of opinion that the indigenous foliage—the eucalypts—exerts a great influence in this direction. The sanitary effects of this vegetation against malaria (a rare disease in Australia) are well known, as it appears to have a beneficial effect on the atmosphere in the region of its growth. The eucalyptus trees, unlike any other forest trees, have a great capacity for absorbing moisture from the soil and any stagnant water at their roots and they possess the power of giving off fresh from their leaves the water thus absorbed. The powerful disinfecting action of the volatile oils emanating from their leaves and other parts is mainly due to the fact that they change the oxygen of the atmosphere into ozone and peroxide of hydrogen. The foliage dropped on the ground does not decompose like that of most forest trees but purifies any germ-infected matter in pools of stagnant water on the ground. The indigenous soil of Australia which grows the food for the cattle possesses sanitary properties which may have an indirect action on the health of the same. Although I have made investigations and examined many indigenous animals such as the opossum and kangaroo for malignant growths, I have never been able to obtain any evidence of cancerous disease among them; whether living on the gum leaves is the cause of this immunity would be interesting to know. I am inclined to believe such to be the case. On the other hand, malignant growths are prevalent among the cattle but not nearly so prevalent as among the cattle of other countries, as statistical evidence proves.

Mr. Wolff's investigations into the cause of the increase of cancer in various countries appear to prove conclusively that regions of high cancer mortality are also for the most part regions of woods and forests. He states: "The facts on this point were everywhere so striking that they seem to establish beyond question that a focus of cancer infection is to be found in regions abounding in woods and water." Lloyd Jones, writing in 1899 on the different conditions in Cambridge under which cancer was observed, says: "Proximity to trees, especially large ones, is connected in some way with the prevalence of cancer. The part of the town which is most free from cancer is singularly devoid of trees and vegetation, while the disease is very prevalent in well-wooded parts of the town and among houses hemmed in by trees." Other observers have noted similar facts. Therefore, should Mr. Wolff's conclusions be correct they only add additional weight to my theory that the Australian eucalypts and their soil possess some specific action in preventing malignant disease among the aborigines and the majority of the white Australian born proportion of the population of the Commonwealth. It is interesting to note that these countries, such as Italy, the United States, Portugal, and Algeria, which have transplanted or possess the eucalyptus foliage, show a low death-rate from cancer. India, which possesses the cajuput tree—belonging to the same natural order as the eucalypts and producing a volatile oil having medicinal properties somewhat similar—also shows a low death-rate from cancer among the native born population In fact, the native born population of all countries possessing trees and foliage belonging to the same natural order (myrtaceæ) as the eucalypts or their allied species (lauraceæ) appear to have a great immunity from cancer, the sanitary properties of the various species no doubt exerting an influence in this direction. Compare this with that of the wooded forest regions referred to by Mr. Wolff, the dropping foliage of which decomposes, becomes germ-infested, influences the stagnation of the water, and renders the soil insanitary, thereby becoming a great factor in the cause of the high death-rate from cancer in these regions

Another important fact which appears to support this view and at the same time throws much light on the cause of cancer is that the native population of countries possessing this foliage, although subject to all varieties of neoplasm, very rarely have malignant new growths. Scirrhus of the breast and rodent epithelioma of the face are instances in point, the scarcity of the former being no doubt due to the fact that the corset, which to my mind is the principal exciting factor in the cause of cancer of the breast, is an unknown quantity, and of the latter probably being due to the fact that the pigmented skin of the native is better protected from irritation by the rays of the sun. My investigations have proved that most cases of cancer occurring among the native populations where the various sanitary foliage referred to is indigenous to the country, such as Australia, India, Batavia, Singapore, Ceylon, China (Formosa), Japan, Zanzibar, Penang, Bencoolen, Amboyna, and other places, are undoubtedly due to some prolonged local irritation acting on a debilitated constitution. Take India for instance, kangri cancer is very prevalent among the kangri wearers, due to the constant irritation of the kangri on the skin of the abdomen; Dr. W. J. Elmslie, Dr. J. N. Mitra, and Dr. Neve have conclusively proved this to be the case. Dr. Neve has quoted over 400 cases and has shown that the disease is no doubt an epithelial cancer, accompanied by glandular infection, ending in death unless cured by operative means. Then, again, it has been clearly pointed out by many observers that epithelioma of the penis is very prevalent among that portion of the native population —the Hindoos—who have long foreskins and do not circumcise. On the other hand, it is almost absent among the Mussulman portion of the population who are all circumcised The Jews for the same reason appear almost immune from this form of the disease, while on the other hand phimosis appears to be a great factor in the causation of cancer of the penis in most European countries.

Cancer of the lip appears to be very rare among natives of India, owing no doubt to the absence of smoking the short clay pipe; whilst, again, cancer of the mouth is very common, which is no doubt due to the constant habit of chewing irritating substances such as tobacco, betel leaf, &c. Now when we consider these facts and also the amount of malignant disease in European countries due to similar causes—such as the prolonged irritation of the pipe on the lip, phimosis on the penis, soot on chimney-sweeps' skin, chewing tobacco on the mouth, corset on the breast, stiff collars and shirt on the skin, and constant use of pessaries on the uterine organs—I venture to say that there is sufficient evidence to warrant one in believing that next to hereditary causes prolonged local irritation is the principal exciting factor in the cause of malignant disease. But from the number of individuals who live up to, and long past, the cancer age, and who are subject to prolonged local irritation on all their tissues from more or less all of the above causes and who never develop malignant disease, it would appear that some other factor is wanting in addition to prolonged local irritation. I venture to state that I have found no evidence in my investigations to warrant me in believing that this factor will be found in the laboratory by those searchers after the bacterial and parasitic cause, but I have found ample evidence in favour of my theory that this factor is to be looked for by the chemist in the form of a chemical constituent in the blood, occurring chiefly in the debilitated constitutions of those arriving at the cancer age, due to such neglected and untreated diseases as syphilis, alcoholism, obesity, rheumatism, gout, tubercle, &c. There is every evidence also to believe that sugar and alcohol play a great part among the exciting causes inasmuch as they enter very largely into the manufacture of beer, sweet wines, and spirits. This fact probably accounts to a large extent for the great contrast in the death-rate from cancer in Australia between the metropolitan and country districts as seen in Table II., the larger amount of beer which is consumed in the metropolitan districts favouring a higher death-rate than in the country districts where less beer is consumed. The same reason may partly account for the very high death-rate among the British and foreign born proportion of the Commonwealth, compared with the Australian born, as the former consume considerably more beer than the latter, who drink more wines and spirits. This fact was particularly striking in France where, according to Mr. Wolff, the contrast was very marked between the departments of high cancer mortality, in all of which beer is very largely drunk, and the departments in the centre and the south, where the death-rate from cancer among the wine-drinking population was persistently low, his conclusion being "that the consumption of beer has a distinct influence on the development of cancer."

Hereditary causes.—My investigations lead me to believe that the hereditary causes of malignant disease may be subdivided into two groups—viz., "inherited" and "congenital," the former being those that in the strict sense are inherited as the result of direct action of the malignant virus upon the sperm cells and germ cells prior to, or at the time of, impregnation, either parent at the time suffering with a malignant diathesis, such cases no doubt being those which develop late in life, the pathological development being accelerated by some one or other of the exciting or irritating causes. Numerous cases are on record of members of the same family having developed malignant disease. I might here mention that in one of my cases—that of a woman who developed cancer of the uterus at 60 years of age—there was a history of two brothers [illegible]

The latter or congenital group are those that are acquired by the fœtus during its intra-uterine life, in which case the medium of infection would be the placental circulation; this group of cases develop either in utero or in early life. As instancing this class of case there was reported in the State of New South Wales in the year 1898 one death from cancer, the patient being two years of age. In 1899 there were deaths registered of two children aged two months, and of three aged three years, and there were altogether six deaths of children under five years of age. The fact that the whole of these cases were certified to by qualified and experienced medical practitioners proves beyond doubt that they were congenital, unless grave errors of diagnosis were made by the medical practitioners concerned. Many such other cases are on record.

Is malignant disease infectious or contagious?—The fact that numerous observers in many countries have of late years collected a large amount of evidence showing its frequent occurrence in certain streets and houses which latter have been termed "cancer houses," also the numerous instances which have been recorded of the disease having been transmitted from husband to wife and *vice versâ*, and to different individuals who have been drinking from the same vessel or have smoked the same pipe which had been constantly used previously by one suffering from cancer, leave very little doubt that some forms of malignant disease are contagious. I have no hesitation in my own mind in stating that the majority of the infectious or contagious types of cancer will be found on careful investigation to be a form of malignant syphilis.

The theory that I venture to advance as the result of this investigation and upon which the following specific treatment was based is briefly as follows. That the origin of cancer (carcinoma and sarcoma) is not due to a bacterial, parasitic, or local cause, but is to be looked for in the blood in the form of an unknown chemical constituent (which, for the purpose of description, I will call "malignic acid"), capable of gradually becoming virulent under certain bad climatic, hygienic, dietetic, and social conditions of life, chiefly manifesting itself at its greatest virulence after 40 years of age, the degree of virulence and the age at which it may manifest itself being entirely dependent upon the age and constitutional condition of parents at the time the "malignic acid" diathesis is transmitted and according to the mode of living, environment, and exposure to the exciting causes after birth. This "malignic acid" when excited into virulence in its passage through the blood stream may attack any soft or bony tissue in any part of the body the physiological resistance of which has been weakened by one or other of the exciting causes. It matters not whether this tissue be epithelial or connective, a matrix of detached embryonic inclusions; existing benign tumours derived from a congenital, inherited, or post-natal origin; syphilitic, scrofulous, tuberculous, or lupoid lesions; ulcerations and lacerations of the cervix uteri; inflammatory deposits, old scars, burns, wounds, or skin lesions excited by soot or [illegible] or any other irritating cause. Th[illegible]sses the power by a process of [illegible]nsforming any of the aforesaid weakened tissue into malignant tissue, having particular effect upon debilitated epithelial and connective tissue which has been subjected to prolonged local irritation, attacking and infecting its intracellular matrix and cells. At the same time, it sets free the latter to group together in nests or to migrate through the blood and lymph channels either to escape as excretory products or to become deposited on other distant debilitated parts of the body. I am of opinion that the various so called intracellular and cellular inclusions which have been isolated and so fully described by Plimmer, Schueller, von Leyden, and others to be parasites and by Nosske and Greenhough as secretion deposits are nothing more or less than the transformed remains or deposits (which also for the purpose of description I will term "malignates") of the parent intracellular matrix, some of which has been included in the cells during the process of chemical reaction.

The many varieties of malignant growths and lesions, cellular and otherwise, which already have been determined by pathologists, favour, I venture to say, the above theory. Malignant lesion or growth, it is now well known, does not depend upon the amount of cellular elements found therein, as this to a great extent depends upon the structure of the tissue involved. The numerous cases of malignant disease which the microscope has failed to determine prior to operation or ante mortem and which have subsequently been [illegible] such after removal or post-mortem examination [illegible] theory." The severe con- [illegible] form of emaciation and cachexia, frequently accompanying malignant disease, and which are out of all proportion to the severity of the local or primary lesion, also support this view.

The following case which came under my notice in 1893 clearly demonstrated to me that any successful treatment for the arrest of cancer should not depend alone upon attacking or removing the accessible primary lesion. I had occasion to perform a post-mortem examination for a coroner's inquest upon an old man, 72 years of age, who had committed suicide by cutting his throat and hacking the same in a most deliberate manner, and although the cause of death from suicide and hæmorrhage was apparent, the law demanded a complete necropsy. Upon performing this the real motive for the poor old man's suicide was made evident. Masses of cancer nodules were found to be studded over the liver, the kidneys, under the pleura, the pericardium, and the endocardium, and although I made a careful search both externally and internally for some primary lesion of considerable size to account for such extension I could not discover one.

In the report in THE LANCET[3] of a meeting of the Pathological Section of the Royal Academy of Medicine in Ireland Dr. J. T. Wigham showed a cancer of the breast and various internal organs secondarily affected, with sections. The cancer was of the scirrhus type, the interest of the case lying in the route by which the disease is said to have spread to the internal organs. Cancer nodules could be discovered in the liver and under the pleura, the pericardium, and the endocardium, and the sections showed the growth pushing through the heart fibres between the last two. Similar growths were also found in both ovaries and along the course of the Fallopian tubes. Many other similar cases have been recorded. From the above facts it is plainly evident that treatment of a so-called accessible primary lesion (which oftentimes may be only a secondary growth) *alone* after the malignant virus has become active is tantamount to treating a syphilitic chancre, gouty, rheumatic, or tuberculous deposit locally, while permitting the secondary lesions to form. I hold, therefore, that as the origin of cancer is in the blood numbers of so-called primary lesions or growths may manifest themselves simultaneously in different parts of the body, which may be internal or external, inaccessible or accessible. That from the moment the malignant virus becomes active, proliferation and degeneration of the tissue and cells in the region attacked commence, and secondary infection and deposits occur. That the only method of arresting these pathological conditions is to charge the blood with some antidote to the malignant virus which it contains capable of rendering both the virus and the infected migrating cells in the blood and lymph channels inert, at the same time removing or attacking directly the primary lesions when accessible at the earliest possible moment.

(*To be continued.*)

AN UNUSUAL CASE OF CEREBRAL ABSCESS; BILATERAL TEMPORO-SPHENOIDAL ABSCESS; OPERATIONS; RECOVERY.

BY A. L. WHITEHEAD, M.B., B.S. LOND.,
OPHTHALMIC AND AURAL SURGEON TO THE GENERAL INFIRMARY, LEEDS.

SUCCESSFUL operations upon abscess in the temporo-sphenoidal lobes of the cerebrum secondary to disease in the temporal bone are now comparatively frequent, so that isolated cases are rarely published. Many cases also are known in which operations have been performed upon two or more abscesses on the same side of the cerebrum, but after a careful search no record has been found of a case in which the temporal lobes on both sides have been destroyed by abscess secondary to ear disease. Such a condition must necessarily be very rare and recovery after operation, if not unique, is sufficiently remarkable to justify publication.

On May 9th, 1901, I was asked by Dr. C. Oldfield of Leeds to see a young woman, aged 20 years, who was then comatose and had a purulent discharge from both ears. The history, as supplied by her friends and the medical attendant, was that she had suffered from an intermittent discharge from both ears for six years but was otherwise very healthy. About the middle of March she had had severe pain in the left ear which lasted a few days, and subsequently, although not feeling very ill, she had not been able to resume her usual work. For three weeks there had been constipation and almost constant headache on the left side and during the same period she frequently complained of dizziness. Three days before I saw her she complained of diplopia but no distinct strabismus could be detected. For two days periods of mental dulness had been noticed and there had been marked drowsiness, gradually passing into complete unconsciousness on the last day. Vomiting had only occurred twice, once seven days and once two days before coming under my care, each time after food. No paralysis of any of the limbs had been noticed before May 9th and no pain, swelling, or tenderness over the mastoid region. The temperature had been normal or slightly subnormal.

The patient was removed to the General Infirmary for operation. On admission she was found to be profoundly unconscious and could not be roused. The limbs were motionless but there were some rigidity of the right arm and occasional involuntary contractions of the pectoral muscles on the same side. The knee-jerks were present and brisk. Both eyes deviated outwards, the right deviating more than the left. The pupils were equal and reacted slightly to light. They were for the most part very small but at fairly regular intervals of from 20 to 30 seconds they suddenly dilated almost to the fullest extent possible. Synchronous with this the breathing for four or five respirations was deeper and there were slight movements of the arms and legs; the breathing then suddenly became feeble and the pupils contracted at once. There were no gradual rise and fall in the amplitude of the respirations, as in the usual form of Cheyne-Stokes breathing. The respiration-rate was from 18 to 22 per minute, the pulse was 56 and somewhat irregular, and the temperature was 98·2° F. The outer margins of the optic discs were blurred, the inner margins being distinct. Examination of the ears revealed pus in both auditory canals. On the right side there was a perforation in the membrana tympani involving the lower third; on the left a polypus filled up a perforation in the anterior half of the drum. Within an hour of her admission she was anæsthetised and the left mastoid region having been exposed by the usual curved incision the outer surface of bone was removed and the antrum and mastoid cells were found to be full of pus, caseating material, and granulation tissue. The usual radical mastoid operation was performed, all diseased bone being removed. In the performance of this the dura mater over the tegmen antri was exposed but appeared smooth and healthy. A portion of the squamous portion of the temporal bone immediately above the tegmen antri was removed with a trephine; the surface of the dura mater was healthy but the brain did not pulsate. The dura mater was opened by a curved incision and the brain was explored with a glass tube three-eighths of an inch in diameter. An abscess was found about one inch from the surface and more than three and a half ounces of stinking greenish pus and broken-down brain matter were evacuated. Two drainage-tubes were inserted and the amount of semi-solid material in the abscess being large the cavity was syringed out with boric acid lotion. One tube was left in and the mastoid wound was packed with iodoform gauze. On the following day the pulse was 82, the respirations were 20 and quite regular, and the temperature was 98·8°. The pupils were equal, reacting to light and not exhibiting the periodic variations noted above. The rigidity of the right arm persisted and she remained unconscious but resented interference.

On the second day some return of consciousness was noticed and the rigidity of the right arm passed off. The excreta were still passed involuntarily. In the afternoon there was a short rigor during which the temperature rose to 104·8°, afterwards falling to normal, from which it did not again rise during the convalescence.

On the fourth day after the operation she recognised her friends and regained control over the urine and fæces. As discharge persisted from the abscess cavity for some time the tube could not be removed until 26 days after the operation. As soon as consciousness was recovered a marked amnesic aphasia was noticed which only slowly passed away. Three weeks after the operation she wrote the names of her brothers as "Tom" and "Alfrom," knowing, however, that the latter was incorrect. Her perception of colours was accurate and her sense of taste and smell was quite unimpaired. Ammonia could not be named until she had taxed her memory for nearly three minutes, although she at once remembered that it was used for washing purposes and was to be obtained at a druggist's shop. A certain amount of mental instability was present; she was very easily excited and would laugh immoderately on the least provocation and was also easily moved to tears.

The patient left the hospital 37 days after the operation, the wound being healed and her mental condition being almost normal. 18 months later she was apparently perfectly well and got married. She was advised to have a radical operation upon the right mastoid, discharge from that ear still persisting, but her hearing power for conversation being almost perfect she could not be persuaded to consent to this

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[3] THE LANCET, Dec. 26th, 1903, p. 1784.

On Nov 11th, 1903, I was again asked by Dr Oldfield to see the same individual She had been in excellent health, with the exception of a persistent painless otorrhœa on the right side, up to eight weeks previously, when she commenced to suffer from headache chiefly on the right side For three weeks she had felt ill, the appetite being poor and the bowels constipated For a fortnight there had been occasional vomiting, some days not at all, on others two or three times in the 24 hours During the preceding three nights there had been slight delirium and during the days an increasing drowsiness, the temperature being constantly subnormal and the pulse about 80 When seen on the 11th she was very drowsy but resented interference and complained constantly of intense pain on the right side of the head The temperature was 97°, the pulse was 72 and the respirations were 24 The pupils were equal, they reacted to light, and were of average size There was no optic neuritis The knee jerks were present and there was no rigidity or paralysis of any limb There was no tenderness or swelling over the mastoid The right auditory canal was full of pus, the drum was absent, and the bottom of the canal was filled with granulation tissue The diagnosis was complicated by pregnancy of three months' duration, but it seemed clearly to point to intracranial suppuration secondary to the ear disease on the right side

The patient was removed to the General Infirmary for immediate operation The right mastoid was opened in the usual way and was found to be completely excavated and filled with stinking pus and broken down cholesteatomatous material A radical mastoid operation was performed The bone forming the roof of the antrum and middle ear had been entirely destroyed by the disease and the dura mater, covered with granulation tissue, was exposed Pus could be seen exuding through a small opening in the dura mater The ridge of bone between the tegmen antri and the squamous bone was removed, together with a portion of the latter bone itself The dura mater over the inferior temporo sphenoidal lobe being thus well exposed was opened, the incision being carried downwards to the point where pus was exuding The underlying brain was incised and more than three ounces of very offensive pus gushed out The abscess cavity was cautiously explored with the little finger and was found to extend upwards for more than two inches and forwards and backwards for about one and a half inches in each direction The lining membrane feeling very delicate the cavity was not washed out but a large drainage tube was inserted The pus was found to contain a pure culture of the bacillus coli communis

On the following day there was a slight discharge from the tube, the temperature was 100°, the pulse was 92, and the patient's mental condition was much improved On the fifth day the discharge was very slight the pulse and temperature were normal, her mind was quite clear, her appetite was good, but constipation was still marked The tube was removed on the sixteenth day She left the hospital a month later, the wound being healed and her mental condition being perfectly natural

On both occasions the points by which the diagnosis was established were the presence of a chronic otorrhœa, severe unilateral headache, subnormal temperature, slow pulse drowsiness progressing into coma, and occasional vomiting These are the only signs usually present in uncomplicated cases of temporo-sphenoidal abscess From the size of the abscess the second and third temporal lobes on both sides must have been practically destroyed On the first occasion the rigidity of the right arm and the aphasia indicated pressure upon, or extension of inflammatory œdema to, the [illegible]

. . . . .

In the case now recorded taste and smell have been very carefully tested with a variety of objects, each side and the tip of the tongue and each nostril being separately examined, but no defect whatever can be elicited The hearing power on the left side, upon which the first operation was performed, is the same as after that operation and is reduced to ability to hear a loud whisper at a distance of six inches The deafness is fully accounted for by the extent of the ear disease present before the operation was performed On the right side a low whisper is heard at a distance of 30 inches, a watch at ten inches which a normal ear hears at 40 inches, and the ordinary speaking voice can be clearly heard at five feet Although the disease must have destroyed the lower temporal lobes of the cerebrum on both sides taste and smell are absolutely perfect and the hearing power is so little affected that ordinary conversation can be followed with the greatest ease The memory and general mental power are also absolutely unimpaired

Leeds

ON LATENT OR INTERMITTENT NASAL OBSTRUCTION.[1]

BY MAYO COLLIER, M B, M S LOND, F R C S ENG,
SENIOR SURGEON TO THE NORTH WEST LONDON HOSPITAL AND EX PRESIDENT OF THE BRITISH LARYNGOLOGICAL ASSOCIATION, ETC

THE object of my communication to day is to ask you to consider with me a condition of things within the nose that up to the present has scarcely been entertained by rhinologists and certainly not with the apprehension that this condition was one of any moment or worthy of much consideration I want to point out to you that there is a condition of things within the nose which is extremely common, that this condition, although extremely common, has escaped general recognition, and that this condition of things is potent for harm and is a source of many of the affections found within the throat, ear, nose, and post-nasal space The terms "latent" or "intermittent" nasal obstruction are sufficiently descriptive of the condition I wish to discuss with you this afternoon I suggest to you that apart from the various forms of nasal obstruction due to growths, out growths, deflections, or what not, with which we are all familiar, there is a form of nasal obstruction that is more common and more harmful than all these put together This form of nasal obstruction is latent—that is to say, it may come on in a nose that is physiologically perfectly patent and in which there is nothing abnormal to be seen This form of obstruction may alternate with a condition of things in which the functions of the nose are perfectly performed and yet for 12 hours out of the 24 the nose may be absolutely occluded and the patient in a condition of extreme misery and discomfort This intermittent form of nasal obstruction often eludes recognition and the surgeon is led astray because at the time of his examination the nasal chambers are perfectly free and patent and the functions of the nose are perfectly performed I feel sure that no one present would resent the suggestion that more or less complete obstruction of the nasal chambers might be harmful to the individual and might lead to ear, throat or nose troubles If you admit that constant nasal obstruction is in many cases a cause of ear, throat and nose troubles, I am not straining your imagination when I ask you to believe that intermittent nasal obstruction is also powerful for harm in the same direction Or in other words, if continuous loss of the functions of the [illegible] throat, and ear I am here [illegible] of the functions of the nose has a similar effect

This then, is the subject matter of my remarks to you to day In order to understand properly this question we must have a clear idea of what are the functions of the nose and how the physiology of this organ is related to the physiology of the surrounding organs and to the economy in general The nose has important relations with respiration, with digestion with audition, with speaking and singing, with taste and smell, with sight, and with the various emotional states The nose may also be looked upon as a respiratory organ in itself, as it is certain that a considerable interchange of gases takes place in its recesses and cavities There is also some reason to believe that the nose is the safety valve of the brain In order to appreciate fully the effect of the loss of the functions of the nose and the harm that may in consequence accrue to the individual we must first be in a position to appreciate their value This can only be done by a careful survey and accurate knowledge of these functions as far as we are able In order to obtain this we will discuss *seriatim* the nose in relation to the various functions I have enumerated

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[1] A communication read before the British Laryngological, Rhinological, and Otological Association on Jan 29th, 1904

And first of all with respiration and so through respiration with the circulation and oxidation of the blood. As baldly stated in the physiology books the nose warms, moistens, and filters the air, but how this is accomplished the learned writers of text-books have not attempted to explain. At first it is a little difficult to see how a stream of air some 30 or 40 cubic inches in value can become warmed, moistened, and filtered whilst passing through the nose in the space of two seconds. When, however, we examine the upper respiratory tract as a whole we see that it is not a channel or tube of one uniform calibre but that it presents several remarkable constrictions that alternate with equally remarkable expansions. We then begin to see that these constrictions prevent the very thing from taking place that we are told does take place—viz., that the air from the exterior passes slick through the nose from front to back and on into the lungs in a solid more or less cylindrical stream and does not mix with its surroundings. This is manifestly incorrect. If we look at the upper respiratory tract and view it as a whole we shall be surprised at the variations that it presents. Commencing with the external nares we find that the vestibule becomes narrower as it passes inwards and joins the nasal chamber opposite the nasal process of the superior maxillary bone. The vestibule or inlet to the respiratory function is cone-shaped and at its junction with the nasal chamber becomes so contracted as to constitute perhaps the narrowest point in the whole respiratory tract. It is curious to note that whereas the external nares are capable of expansion and contraction the calibre of the upper respiratory tract at its junction with the nasal chamber is rigid and unalterable, being surrounded by bony and cartilaginous borders. A limit is thus put to nasal respiration by the size of the anterior opening of the nasal chamber. After passing this narrow spot in the respiratory tract we find that the canal expands in a remarkable manner into the nasal chamber, which with its recesses constitutes a cavity of considerable dimensions. These recesses must not be dismissed from our calculations when studying the act of respiration. It is as sure and certain as anything can be that these recesses act *not only* as resonance chambers to the voice but as warming and mixing chambers, so that the air as it is admitted from the exterior in a raw and unprepared state is mixed with the contents of the nose and its recesses and so made ready to pass on into the pharynx and upper tubes.

An observation I had the advantage of making on a healthy frontal sinus will go a long way in substantiating this fact. I opened a frontal sinus for exploratory purposes, and being very careful I removed the button of bone without injury to the lining of the sinus. At each inspiration the lining membrane was depressed and at each expiration bulged into the wound, proving incontestably that part of the contents of the nasal sinus is withdrawn during inspiration, to be replaced during expiration. The air then entering by the cone-shaped vestibule must do so with an increasing rate of speed till it has passed the narrows of the anterior opening. It must here lose much of its velocity and becoming slowed down will distribute itself in all directions, as regulated by the shape of the delivery tube of the vestibule. It is thus seen that as a stream of air it must be subject to and conform to the shape of the tract through which it passes and that the rate of motion of the air will be an average between the rates of motion in the narrowest and widest parts of the respiratory tract.

Passing onwards we come to a second marked narrowing, that of the posterior nares. This is crescent shaped and varies with the size of the posterior end of the inferior turbinal body. The cross section of this opening can only be a very small fraction of the cross section of the nasal chamber. Consequently the air in its passage backwards must be greatly delayed by having to pass this constriction, thus allowing time for the necessary warming, moistening, and filtering of the inflow. Following on this constriction is a remarkable dilatation, that of the pharynx extending from the base of the skull to the upper opening of the larynx. The nasal contents having passed the posterior opening of the nares linger in the pharynx and pass slowly on but with increasing speed to the larynx. The act of warming, moistening, and filtering is continued in the pharynx. So far we have traced the inflowing air to the larynx, and can surmise that the anterior and posterior constrictions of the nasal chamber serve a very good purpose in delaying and slowing down the air in its passage through the nose. The narrow anterior opening or inlet insures that the inflowing air shall be distributed and mixed with the nasal contents. The posterior constriction prevents the too rapid emptying of the nasal chambers by the powerful aspiration of the lungs. It is curious to note the alteration in the positions of the contents of the respiratory tract from the commencement of inspiration. At the commencement of inspiration the air in the bronchial tubes will pass in and fill the bronchioles and vesicles. The air in the larynx and trachea will follow on into the bronchial tubes and the air in the pharynx will pass on and take the place of the air in the trachea and large tubes, whilst the air in the nasal chambers will flow into the pharynx, larynx, and trachea. We thus see that the air passes in and mixes with and dilutes the impure reserve and residual air but cannot displace it. During respiration the impure expirate extrudes the contents of the pharynx and nose and fills the upper respiratory tract. This, no doubt, undergoes considerable purification in the chamber and recesses of the nose in the interval before the next inspiration.

I would here remind you whilst on the subject of respiration that this is the supreme function of the economy. The circulation and oxidation of the blood, not only in the systemic but portal system, is dependent on respiration. It is not unreasonable to suggest to you that any interference with the function of respiration and so with the proper oxidation and circulation of the blood for a considerable period in the 24 hours must be harmful and baneful to the individual. The functions of the nose are closely related to the functions of digestion, both directly and indirectly—directly by the interference with mastication that follows an obstructed nose. A person with his nose occluded cannot shut his mouth sufficiently long to masticate his food properly and consequently bolts the same before it is half divided to the detriment of his stomach. Again, the congestion of the pharynx and post-nasal space incidental to, and associated with, nasal obstruction upsets the stomach in more ways than one—directly by the amount of unhealthy mucus that passes into the stomach and indirectly by the constant irritation of the pneumogastric centre by the branches of the pharyngeal plexus.

The insanitary state of the mouth that follows mouth-breathing and the amount of contaminated and dusty mucus that must pass into the stomach (or what has been properly termed oral sepsis) is a considerable disadvantage to digestion. Seeing that the whole of the circulation of the liver and abdominal organs is carried on by the respiratory act, any interference with this must be of serious detriment to the absorptive functions of the alimentary canal and so a fertile source of slow digestion and other forms of dyspepsia. Digestion and respiration are so intimately associated that I seldom meet with a patient suffering from nasal obstruction in a marked and chronic form who escapes from symptoms of indigestion, sluggish liver, or other abdominal troubles.

Now what relation have the functions of the nose to the eye? The nose is the drain of the conjunctival sac. Nasal obstruction will cause epiphora and conjunctivitis and other troubles. The two functions are intimately and sympathetically associated. The same nerve and the same artery supply both. Any irritation in the nose is responded to by flushing of the conjunctiva and watering of the eye. The nose is the guardian of the eye. A strong light detrimental to the retina will cause sneezing and so prevent further damage by altering the position of the head and casting the

Horizontal cross section through cochlea, tympanum, and external ear of rat about fourth week.

eyes to the ground or closing them altogether. Congestion in the nose will be followed by fulness of the retinal veins and congestion of the conjunctiva. The nutrition of the nose and eye are intimately associated. The ophthalmic and sphenopalatine ganglia are anatomically and physiologically closely related.

Passing on to the relations of the nose to the ear it is not surprising to find that these are peculiarly sensitive. The middle ear or tubo tympanum is developed from the nose by two finger like prolongations. It is simply a prolongation of the nose cavity. The cavities of the nose and ear are practically one. Any increase or decrease of tension within the nose is immediately felt and communicated to the contents of the ear. It is not difficult to realise that whatever affects the main cavity of the nose will affect its various recesses and prolongations. The unity of the nose and middle ear must be taken into consideration and fully realised as the first and essential step in the proper understanding and treatment of many of the affections of this cul de sac. There is little doubt that in normal nasal respiration both inspiration and expiration are felt in the tympanic cavity and that a slight movement of the membrana tympani takes place inwards with inspiration and outwards with expiration, the same as has been recorded in the frontal sinus. In corroboration of this may be mentioned the fact that when one is listening very carefully for a sound the mouth is opened and respiration is suspended or carried on very gently by way of the mouth in order to annul (I suggest) the oscillations incidental to respiration.

The relations between the functions of the nose and the voice are peculiarly apparent. Besides preserving the covering of this organ in a healthy condition the nasal chamber is the delivery tube of the voice as well as its resonator. The functions of smell and taste are almost entirely dependent on the patency and proper functioning of the nose and must be entirely annulled if the nose be occluded. And lastly, there are some grounds for supposing that the nose is the safety valve of the brain by acting as a drain to the arachnoid cavity. We know that the arachnoid sheath is continued through each opening in the cribriform plate and surrounds the olfactory nerves almost to their terminations. The confusion of intellect, the forgetfulness the difficulty of concentrating the thoughts, the headache, the morning drowsiness, and other mental symptoms that are associated with nasal obstruction may well be due to increase of arachnoid fluid and congestion following on nasal obstruction and the consequent arrest of the functions of the nose. There may be some reason also, for believing that some at least of the large quantity of moisture that is taken up by the inspired air comes from the arachnoid fluid. Again the pathological conditions known as hydrorrhœa where pints of fluid are discharged from the nasal cavities, associated with polypi and other abnormal states, can more easily be explained by the assumption of an outflow from the arachnoid extensions into the nose modified possibly by infiltration. In order to remind you of the relation of the functions of the nose to the emotions I would ask you to imagine Mr Tree or Sir Henry Irving in any of their great parts with an obstructed nose and an open mouth. The emotional display of the face would be quite impossible and these actors' efforts ruined.

The relations of the nose to the sexual function is well marked in some of the carnivora but may, I think, be altogether discarded when dealing with the genus homo.

Now you will agree with me that the nose is not an unimportant or idle organ and is well worthy of your best care and consideration. I will now return to our main subject and explain to you more fully what is meant by latent or intermittent nasal obstruction, the mechanism of its production, its diagnosis, and lastly, if I have time, I shall say a few words as to treatment. I can more easily explain to you the exact condition to be known as latent or intermittent nasal obstruction by citing you one or more out of the large number of cases I have records of. In 1895 I was consulted by a medical man who gave the following account of himself. He was 63 years of age and for the last 14 or 15 years he had been troubled with his nose becoming occluded at night and at other times. His general health he said was indifferent he was easily fatigued, and suffered from flatulent dyspepsia headache and deafness. His sleep was constantly disturbed at night and he awoke in the morning unrefreshed and tired. He said that for years he had suffered from catarrh in the nose and head, but lately things had become so much worse that he felt sure he would go out of his mind if something was not done for him. This gentleman was a tall, pale liverish looking person with the look of suffering stamped on his face. I ascertained that he had treated himself with washes, snuff, and inhalations, but with little effect, and that he had been under the care of a distinguished physician who assured him that his heart, lungs, and abdominal organs were sound. I found in his present condition nothing that one could lay one's hands on and label as disease. The throat was pale and anæmic the interior of the nose was pale, and the mucous membrane was if anything anæmic. There was ample room for nasal respiration and nothing abnormal or irregular was apparent save one sign which I venture to suggest was the key to the whole situation. On either side of the septum there was the tell tale hollow or groove the exact cast of the lower turbinal body. Beyond this there was nothing to indicate that the nose had been anything but free night or day. Well, with this physical condition of complete freedom of nasal respiration and the absence of anything abnormal with the nose this patient was on the very verge of melancholia from the misery and discomfort of complete nasal occlusion so soon as his head was placed upon the pillow. The functions of the nose were here intermittently performed. For 16 hours the nose was free, for eight hours it was closed. Yet this nocturnal occlusion was quite sufficient to affect and put out of gear all the correlated functions of the nose and to bring the economy almost to a standstill.

An almost exactly similar case was that of a barrister sent to me from Dublin by a member of this association. These are extreme but typical cases and happily, I am glad to say, are few and far between. The commoner forms of intermittent nasal obstruction present symptoms of less severity. In many cases there is only the slight hoarseness and morning cough and difficulty in clearing the throat on rising in the morning. There may only be a tendency to flatulent dyspepsia or distension after meals. The hearing may not be quite so good as it was, and the patient may tell you he thinks he is getting deafer, until he finds out he is suffering from a marked degree of deafness. This is constantly the only symptom of intermittent nasal obstruction. I believe that in intermittent or latent nasal obstruction we have a valid and sufficient explanation for the existence of that large class of slow insidious painless forms of ear trouble known as chronic progressive deafness. Given an occlusion of the nose for eight out of the 24 hours and you have all the factors ready, and able to produce occlusion of the Eustachian tubes congestion of the tympanic cavity, and depression of the drum head and the subsequent physical changes known as sclerosis. This explanation is worthy of your consideration and the more I live and learn the more assured I am of its soundness.

I have on more occasions than one insisted that there is an intimate relation between intermittent nasal obstruction and the affections of the other recesses and extensions of the nose, and the same anatomical and physiological facts that govern the recess of the middle ear apply equally with all the other extensions of the nose. The tympanic cavity and the antrum or frontal sinus are on all fours with each other. They have a common origin their lining membrane is similar and continuous. They are subject to the same variations in air tension and supply and they are subject to the same affections. I have recently exhibited to you a case of frontal sinus trouble where the suppuration was kept up for three years by occlusion of the nostril on the same side from collapse of the wing of the nose and enlargement of the turbinal body. On reducing the turbinal body and supporting the wing the suppuration promptly disappeared. Uncomplicated chronic suppurations of the accessory cavities of the nose are induced and maintained by intermittent obstructions of the nose. This applies equally to the aural accessory cavity.

The obstinate discharges from these cavities that continue sometimes after operations are to be explained when intermittent nasal obstruction is present. We have heard a good deal lately about the etiology and treatment of polypi. My experience is that when these growths are properly removed and the nose is properly ventilated and nocturnal nasal obstruction is prevented they do not return. I have one case which illustrates my meaning perfectly. I operated on a man whom I exhibited in this room as a typical martyr to asthma and who was relieved by clearing his nose from polypi. Well, these growths recurred and required removal off and on for 11 years. In the earlier periods of my treatment I took no account of the fact that he was completely obstructed at night time and yet was free during the day. The asthma was better when the nose was cleared, but returned with the obstruction. Some four or five years ago I operated on both lower turbinal bodies. I have never had occasion to treat him medically since and his nose remains perfectly free from polypi to this day. I believe that intermittent nasal obstruction plays an important part in the production and recurrence of polypi. Much more could I say on this important subject but the time at my disposal will not suffice for a more extended view.

We pass now to the subject of diagnosis. How do we know when intermittent nasal obstruction is present or not? If there is nothing abnormal to be seen in the nose and if the functions of nasal respiration are perfectly and adequately performed, by what signs shall we be able to recognise this form of obstruction? In latent or intermittent nasal obstruction the obstruction, as a rule, occurs at night time when the head is on the pillow and the body is more or less in a horizontal position. When up and about, as in sitting, walking, or standing, there is seldom obstruction except on passing from a cold to a warm atmosphere and sometimes when drinking hot liquids or taking spiced or pungent meals and after alcoholic drinks. In the vertical position of the trunk gravity retains the venous blood in the great vessels of the neck, the chest, and the abdomen. On assuming the horizontal position the blood flows into the veins and sinuses of the head and neck in response to the same force. When sleeping the arteries become smaller in calibre and the veins become larger so that the veins of the head and neck contain relatively more blood. The cavernous tissue and the mucous membrane of the nose become when lax and atonic distended mechanically by the increased intravascular pressure caused by the mere inflowing of blood to these parts The distended turbinal bodies approach the septum on either side and press upon it so vigorously as to form a groove or exact cast of themselves and completely to obliterate the lumen of the nasal chambers. The erectile tissue on the floor and the lower part of the septum helps to complete this. The groove then is to be sought for and is undoubtedly evidence of the condition I am attempting to describe to you. It is, indeed, more than evidence, it is pathognomonic of intermittent nasal obstruction and is the only objective sign that will present itself to you. With subjective symptoms of laryngeal, throat, nose, or ear trouble, and the objective sign I have described to you you have all the evidence you require to make the diagnosis of intermittent nasal obstruction. I place no credence on the answers of patients to the question as to the method of breathing at night. Some, very often the worst cases, will indignantly repudiate the suggestion that they breathe through the mouth at night, yet will in the same breath tell you that they awake with the tongue dry and are always anxious for a cup of tea in the morning.

The subject of treatment will involve much time and consideration and as I feel I have already occupied a large measure of your time and, like yourselves, am anxious and looking forward to the Presidential address, I will postpone the subject of treatment to a more opportune moment. If in the remarks I have made I have given you any suggestions worthy of your acceptance or set you thinking on this important subject I shall be more than amply repaid for the anxiety and labour attendant on this communication.

Harley-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

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NOTE ON A CASE OF COMA APPARENTLY DUE TO DISTENSION OF THE BLADDER

BY ROBERT MAIN, L.R.C.P., L R C S. EDIN., M.D. BRUX.

ON Saturday, Jan. 23rd, at 5 30 P.M., I was asked to see a middle-aged man who was said to be in a fit. I found him in bed in a completely unconscious condition, with twitching of the facial muscles, lividity of the face, no eyelid reflex, and stertorous breathing. The only history obtainable was to the effect that he had come from Southend on a visit to a near relative and that at the time of his arrival he appeared to be in good health. He had gone to bed on Friday night perfectly well and intending to keep an appointment on Saturday morning. He had his breakfast in bed about nine o'clock but at that time he had some pains in his back and in a general way did not feel well. He had his dinner in bed about 1.30 P.M. and said he was going to sleep. The symptoms were suggestive of uræmic coma. The chamber utensil, however, was half full of urine which I examined. It only deposited a trace of phosphates on heating and otherwise was normal. In the abdomen there was a fairly hard mass extending up to the umbilicus. I immediately passed a soft indiarubber catheter (No. 6) which entered the bladder with ease and drew off a large quantity of blood and urine. I passed the catheter again at 10 P.M. and withdrew half a pint of smoky urine. The patient did not recover consciousness until 4 A.M. next morning, having therefore been quite unconscious for a period of nearly 11 hours. He has been quite well ever since with the exception of inability to micturate. On Jan. 27th I again examined the urine and found it to be normal with an excess of acidity. There was no stricture or prostatic enlargement.

Finsbury-park, N.

AN UNUSUAL CASE OF SALICYLIC ACID POISONING.

BY J. KENNEDY MATHESON, M B., CH.B. EDIN.,
HOUSE SURGEON, BRADFORD CHILDREN'S HOSPITAL.

A BOY, aged nine years, was admitted in December, 1903, to the wards of the Bradford Children's Hospital under the care of Mr. Isaac Mossop, suffering from extensive erythema iris. Nearly the whole body was affected, the disease being most marked on the lower part of the abdomen and the upper part of the thighs. In many places the bullæ at the margins had broken, leaving masses of scabs, whilst elsewhere their contents were of a purulent nature. Starch poultices were employed for several successive days until all the scabs were removed and then Lassar's paste, a preparation containing salicylic acid, was applied and iodide of potassium was given internally. Marked improvement took place under this treatment. 17 days later the boy began to complain of severe headache and sore-throat; there was also a slight rise of temperature. The symptoms grew worse, the patient's headache becoming very severe. He was sleepless and verging on delirium, calling out about the noises in his ear His temperature went up on successive nights to 103 6° and 104 2° F. The heart's action became weak and irregular. When visiting the wards on the night when the highest temperature occurred I ordered the Lassar's paste to be omitted and put the patient on stimulants. Three days later all the symptoms had disappeared and the boy's general condition was as before.

The interest in this case lies in the mode of introduction of the poison by absorption through the skin. It may serve as a caution against the too prolonged use of this paste which is no doubt very useful in skin affections, especially those of an eczematous type.

Bradford.

THE VERMIFORM APPENDIX ADHERENT IN A HERNIAL SAC AND BY OCCLUDING THE DISTAL PORTION OF THAT SAC LEADING TO THE FORMATION IN IT OF A HYDROCELE.

BY W. P. GOWLAND, M B., B.S. LOND., M.R.C S. ENG.,
SENIOR HOUSE SURGEON TO THE LINCOLN COUNTY HOSPITAL.

A WOMAN, aged 56 years, was admitted to the Lincoln County Hospital with a tense swelling of, about the size of a hen's egg in the right groin. There was no impulse on coughing and the swelling was quite mobile from side to side but was fixed in the line of the inguinal canal. It was first noticed by the patient three weeks before admission and was then about half its present size; a medical man had withdrawn clear fluid with an exploring needle and the diagnosis made was hydrocele of the canal of Nuck.

Operation was performed on August 15th, 1903. The sac was exposed and isolated. Its neck was found to be rather tightly nipped by the pillars of the external abdominal ring and these were incised. The sac containing fluid was then found to be the distal portion of a peritoneal diverticulum, the proximal part of which contained the appendix. The diverticulum was much narrowed at the external abdominal ring and here the appendix was adherent by its apex to the walls of the sac. The appendix was amputated, the sac was ligatured and its distal portion removed, and a radical cure was performed. Recovery was uneventful and the patient has remained well since.

This case seemed worth recording in view of the fact that according to Erichsen a true hydrocele of a hernial sac—i.e., an accumulation of fluid in a part of the sac that has been cut off from all communication with the cavity of the peritoneum—is somewhat rare. Further, in THE LANCET of Jan. 30th, 1904, p. 296, under the heading of "Clinical Notes," a similar condition was described, though there the appendix itself was mistaken for a hydrocele.

I am indebted to Dr. W. A. Carline, senior surgeon to the hospital, for permission to publish this case

Lincoln.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Anæmia Pseudo-leukæmica Infantum.

A MEETING of this society was held on Feb. 9th, Mr. ALFRED WILLETT, the President, being in the chair.

Dr. J. H. DRYSDALE and Dr. J. H. THURSFIELD communicated a paper on Anæmia Pseudo leukæmica Infantum of von Jaksch. They said that in the year 1889 von Jaksch described a type of anæmia occurring in infancy which he believed to be different from any of the recognised varieties; he accordingly proposed for it the name by which it had been known since upon the continent, though in this country it had been more usually called the splenic anæmia of infants. The chief interest in connexion with the disease had centred in the controversy whether it was to be regarded as a disease *sui generis* or as a mere complication or sequel of any severe anæmia occurring in infancy. Dr. Drysdale and Dr. Thursfield held to the first opinion and endeavoured to set forth the reasons of their belief. A short *résumé* of the clinical features of the disease was followed by a more detailed account of the symptoms which appeared to them to be characteristic of the complaint; briefly enumerated they were a profound anæmia of gradual onset and chronic duration; an enlargement of the spleen, such as was met with in no other form of anæmia of infancy except in the rare cases of true myelogenic leukæmia; a tendency to petechial hæmorrhages; and a constant and peculiar change in the condition of the blood. The precise changes in the blood were explained and summarised on the basis of a considerable number of examinations made in cases of this type and the results were contrasted with those obtained from infants suffering from severe anæmias of other types. Lastly, the relations of this disease with some of the other anæmias, which were commonly met with in infancy, were considered and stress was laid on the fact that this type had never under observation developed from any of the other varieties. Tables were appended giving (1) a statement of the cases on which the paper was based; (2) a detailed account of the blood examinations; and (3) a *résumé* of the blood examinations made in certain other anæmic conditions of infancy.

Dr. R. HUTCHISON said that he wished he was as certain as Dr. Drysdale and Dr. Thursfield seemed to be that the disease was *sui generis*. He doubted if they were justified in regarding the disease as a definite entity whilst the pathology remained so uncertain. The changes in the blood could not be regarded as forming a feature distinctive of this disease, for in severe rickets and in severe congenital syphilis changes in the blood were met with which approximated closely to the condition found in this disease and it was impossible to mark off the disease so sharply as Dr. Drysdale and Dr. Thursfield made out. He thought that the anæmia was probably due to insufficient and incorrect feeding and the rickets which not infrequently accompanied the disease was due to the same cause. He next dealt with the relation of this disease to true leukæmia and stated that in his opinion there were not more than two or three cases reported of true leukæmia in children below the age of two years. He said that there was nothing characteristic in the morbid anatomy and exactly similar changes were found in the organs in fatal cases of rickets. Even the bone marrow presented no characteristic change. He was of opinion that this disease might be a secondary anæmia, possibly due to some specific cause which had yet to be discovered.

Dr. E. P. BAUMANN said that on the main issue—namely, the question of the existence of this disease as an entity—he was in complete agreement with the view put forward in the paper. In other points, however, he differed from some of the conclusions. In the first place, he was of opinion that the title anæmia pseudo-leukæmica infantum was cumbersome and unnecessary. Pseudo leukæmia was the term by which Hodgkin's disease was commonly known abroad. Now there was no apparent connexion between Hodgkin's disease and the disease under discussion. Nor did this disease resemble very closely the condition of leukæmia. He was therefore inclined to adhere to the simple name of splenic anæmia of infants. He was surprised at the number of cases of recovery (from 60 to 70 per cent. according to the table). Of seven cases which he had had the opportunity of observing during the last two years at the Hospital for Sick Children, Great Ormond-street, six patients died in hospital and one went out improved. Among out-patients, where the cases would not all be severe, the mortality would doubtless be lower. Nevertheless, allowing for this he still believed the disease to be a very fatal one. Turning to the consideration of the condition of the blood Dr. Drysdale and Dr. Thursfield obtained an average leucocyte count of 24,100 and their table showed figures reaching in some instances to more than 50,000 leucocytes per cubic millimetre. In his own case an average of from 12,000 to 14,000 per cubic millimetre was present. The largest number found in any case was 20,000. Dr. Drysdale and Dr. Thursfield seemed to attach little importance to alterations in the shape and staining reactions of the blood corpuscles. It had always appeared to him that this alteration in shape formed one of the most striking features of the disease. In some cases the polymorphous character of the blood corpuscles had been so striking as to simulate pernicious anæmia. As regards the etiology of the disease he had noted the large incidence of splenic anæmia among the children of Polish Jews. Syphilis existed in a far larger number of his cases than in those reported in the paper. In only one case could a specific taint be definitely excluded; in three cases the existence of syphilis was

rickets. He, however, agreed with Dr. Drysdale and Dr. Thursfield that splenic anæmia was a disease *sui generis* and that it could not be considered to be secondary to any other disease.

Dr. G. NEWTON PITT suggested that the condition of the blood was evidence of a reaction against some toxic condition. In the cases reported there were periods in which the leucocytosis varied and this seemed to him to point to a process of reaction rather than to a specific infection. He suggested that the disease might bear some relation to splenic anæmia of the adult—Banti's disease.

Dr. NORMAN MOORE said that Sir William Jenner had always taught that an enlarged spleen was a common characteristic of rickets and he thought it probable that the enlargement of the spleen and the rickets were produced by the same cause.

Dr. DRYSDALE, in reply, said that he considered that the clinical features of the disease, together with the condition of the blood, formed a definite picture which entitled the disease to be regarded as an entity. He did not consider syphilis as a cause of the disease. Syphilis was present in a certain number of cases but in others it could be definitely excluded. He did not think that the disease in any way [illegible] anæmia of the adult [illegible] en proved [illegible] form of [illegible] our of the [illegible]

MEDICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Feb. 8th, Dr. CHARLES E. BEEVOR, one of the Vice-Presidents, being in the chair.

Mr. W. G. SPENCER exhibited (for Dr. F. DE HAVILLAND HALL) a case of Ascites occurring in a married woman, aged 30 years. Dropsy first appeared four years ago after a confinement and she had been tapped ten times in the Westminster Hospital. In December, 1902, Mr. Spencer opened the abdomen and stitched the omentum to the anterior abdominal wall. A month later the patient left the hospital free from dropsy but in about six weeks fluid began to collect again. On March 4th, 1903, she was readmitted into the hospital with a large amount of ascites and great œdema of the legs. A soft systolic murmur was audible at the cardiac apex. The urine contained a small quantity of albumin. On March 10th Mr. Spencer made an incision through the old scar, the omentum was pushed aside, a large amount of fluid was evacuated, and the cavity was left to drain. On April 2nd the operation wound was nearly healed. The patient was discharged on April 25th free from dropsy and had re-married since. At the present time there were slight œdema of the ankles and a systolic and a presystolic murmur at the apex.—The case was discussed by Dr. C. THEODORE WILLIAMS, Dr. ALEXANDER MORISON, and Dr. H. A. CALEY.

Dr. V. WARREN LOW showed a case of Extreme Atrophy of both Testicles due to Syphilis in a man, aged 39 years, who had had a chancre followed by rash 12 years ago. He did not notice the diminished size of his testicles till his attention was drawn to it at the hospital some 12 months ago. He was then suffering from tertiary syphilitic ulcers on both legs and for these he had been under treatment off and on for a year. The right testicle could still be felt and was of about the size of a horse bean. There were certain symptoms pointing to incipient tabes dorsalis.

Dr. F. PARKES WEBER exhibited a case of Neurotic Alopecia of the Scalp and Face after Shock. The patient was a man, aged 39 years, who had lost both eyebrows and eyelashes and almost all the hair of his scalp and that of the lower part of the face. There was a history of a mental shock in August, 1902, and of hæmoptysis in November of the same year, and the hair had commenced to fall off in the following March, the eyebrows being affected only for four or five weeks.—The case was discussed by Dr. ALFRED EDDOWES and Mr. G. PERNET who did not agree that the origin of the baldness was neurotic.

Mr. RICHARD LAKE exhibited a case of Menière's Disease in a patient, aged 21 years, who presented four symptoms—viz., deafness, tinnitus, vertigo, and sickness. The tinnitus had been continuous and hissing in character. The attacks of vertigo and sickness varied in frequency and intensity. They had been more frequent and more severe for the last two years. Actual vomiting did not always occur with, and never relieved, the vertiginous attacks. The patient felt inclined mostly to fall forwards or backwards and objects had no regular plane in which they rotated. Several drugs had been tried but had been found useless.

Dr. CAREY F. COOMBS (introduced by Dr. CALEY) exhibited a case of Cerebellar Disease with unusual features. The patient was a boy, aged 13 years, who came under the care of Dr. Robert Maguire at St. Mary's Hospital in October, 1903, for inability to walk or to stand. This had come on about three weeks before suddenly and without any preceding headache or other symptoms. The only other thing noticed by his friends was that his speech was altered in character. On Oct. 20th it was noted that the gait was of a reeling cerebellar type, the patient falling more to the right. The hands were ataxic and there were tremor of the eyelids and slight nystagmus; the pupils and optic discs were normal. The knee jerks were increased and there was plantar extensor response on both sides. The sudden onset and the gradual improvement under iodide of potassium were the most notable features.—The case was discussed by Dr. BEEVOR and Dr. WILFRED HARRIS who suggested thrombosis as a probable diagnosis.

Mr. G. E. GASK exhibited a case of Ossification of Tendons of the Leg in a man, aged 45 years. Three weeks before the patient had experienced some pain in the left leg and thigh which he attributed to rheumatism. On rubbing his leg he discovered a hard swelling on the outer side of the left leg, three and a half inches long, apparently in the peroneus muscle. There was no history of injury. The skiagram showed a shadow of a dense substance unconnected with the fibula.—Mr. EDMUND OWEN and Dr. CALEY discussed the condition and mentioned other cases.

Dr. J. KEOGH MURPHY exhibited a case of Meningocele (?) through the Left Parietal Foramen. The patient, aged three months, was otherwise a healthy infant. The swelling on the head was noticed from birth and was said to increase during straining. On Dec. 14th, 1903, there was noted a nævoid umbilicated swelling half an inch square to the left of the middle line, and this was irreducible. On Jan. 4th, 1904, the swelling could be entirely reduced and the bony edge felt. On Jan. 25th there was a slight increase in size but it was still easily reducible. There were no cerebral symptoms.—The case was discussed by Mr. H. S. COLLIER who thought the lesion might be a dermoid cyst.

Dr. MURPHY also brought forward an infant exhibiting Congenital Deformities.

Mr. H. J. WARING showed a case of Repair of Traumatic Deficiency in the Skull by a Gold Plate. The patient was a soldier, aged 22 years, who was shot in the left occipital region on Jan. 28th, 1901, by Boers outside Kimberley. He was said to have been unconscious for three weeks and afterwards remained in a Boer hospital for five months. He was subsequently invalided home. A circular hole two inches in diameter was then found in the left occipital region of the skull and through it protruded a soft fluctuating swelling. The patient was subject to epileptiform seizures. An exploratory operation was performed and a cyst of the arachnoid, which was found bulging through the aperture, was removed. The aperture in the skull was closed by placing a circular gold plate, three inches in diameter, over the hole and fixing it with gold nails, over which the periosteum was sutured. The patient made a quick recovery and had had no further cranial symptoms.

Mr. OWEN showed a case of Ischæmic Paralysis in a man, aged 38 years, who about two years ago had had the upper end of his right ulna fractured in two places by a blow from the spoke of an iron fly-wheel. Two hours subsequently the arm had been put up in a very tight plaster-of-Paris bandage which was passed chiefly round the elbow region. Next day the lower part of the forearm and the hand were swollen and some blebs had appeared and the bandage was then removed. The forearm was now much wasted, the flexor muscles being indurated and rigid. The forearm was pronated and fixed. Sensation was greatly impaired in the hand. The metacarpal bones stood out in strong relief because of the complete atrophy of the interossei and other muscles. Though this condition was unfortunately often met with in children it was rare in the adult. Mr. Owen had, however, shown a similar case at this society about three years ago. The condition was probably due to the tightness of the bandage which had kept the muscles anæmic during the night and had so injured them that a myositis had supervened and this had been followed by atrophy and fibrosis. No doubt the nerves of the forearm had also shared in the pathological disturbance. The outlook as to treatment seemed extremely unpromising.—Dr. WILFRED HARRIS and Dr. BEEVOR both expressed the view that injury to the nerves of the forearm would sufficiently account for the condition without myositis or anæmia of the muscles.

PATHOLOGICAL SOCIETY OF LONDON.

The Organisms of Monkey Malaria and Sleeping Sickness.—Agglutination.—Iron Hæmatoxylin Staining.

A MEETING of this society was held at the Lister Institute on Feb. 2nd, Sir JOHN BURDON SANDERSON, the President, being in the chair.

Mr. H. G. PLIMMER showed the Organisms of Monkey Malaria and Sleeping Sickness under high magnification. The latter organism he demonstrated under a magnification of 5000 diameters. He showed the arrangement of light and lenses necessary for obtaining suitable illumination for such magnification.

Mr. J. ANDERSON CRAW read a paper on the Mechanism of Agglutination. He said that in view of the large number of hypotheses advanced to account for the phenomenon of agglutination and the purely qualitative nature of the observations advanced in support of the same it was considered advisable to investigate the matter from a quantitative and physico-chemical standpoint. Only after a thorough investigation of the physical and chemical actions involved could a definite conclusion regarding the value of agglutination in diagnosis be arrived at. Recently views which he considered to be quite void of foundation had been advanced to account for the mechanism of this reaction and it seemed justifiable to submit these and other hypotheses to the test of criticism and experiment on a physico chemical basis, as an article by Dr. A. E. Wright in THE LANCET[1] lately showed how difficult it was to grasp the significance of the physical forces involved. Gruber's hypothesis that a glutinous substance "glabrificin" was absorbed by the bacilli from the serum forming small adhesive prominences on their membranes which caused the cells to adhere on contact was insufficient, for dispersed non-motile bacilli agglutinated and staining failed to show any abnormality of the membrane. Pfeiffer's hypothesis that the specific serum substance caused a vital paralysis was disposed of by the facts that after absorption of the specific substance the cells remained motile and the addition of salts caused agglutination, but reproduction did not cease; again dead bacilli and fragments of cell membrane agglutinated. Paltauf's hypothesis that a specific precipitate was produced in the fluid which during flocculation mechanically carried the bacilli with it was disproved by the agglutination of washed and young bacilli in media which gave no precipitate and also by the formation of a specific precipitate without simultaneous agglutination. Nicolle's hypothesis eluded the objections to Paltauf's hypothesis by assuming the specific precipitate to be produced in the membrane, but the latter was supposed to dilate and to become glutinous, which was open to the objections raised against Gruber's hypothesis. Dineur considered the *cilia to be chiefly instrumental in agglutination, they became glutinous and adhered, but cells without cilia agglutinated.* The Emmerich-Löwe view that agglutination was the first stage of the bacteriolytic action of enzymes was discredited by the partition of agglutinin between medium and cell, by the specific nature of the agglutinins, and by agglutination brought about by chemical agents of non-enzymic character; again the bactericidal enzymes might be destroyed by temperatures at which the agglutinins remained unaffected Duclaux supposed that the bacilli ejected a coagulable substance which was precipitated by a coagulating enzyme, *the precipitate carrying the bacilli mechanically together.* [illegible]

[illegible] of common salt during agglutination and concluded that Bordet's hypothesis could not be maintained. The important *work of Joos could, however, be interpreted in a manner distinctly supporting the fundamental principles of Bordet's* hypothesis. Joos's admirable experiments were mostly qualitative; exact quantitative measurements were now in progress at the Lister Institute. If dialysed serum was added to dialysed bacilli the specific substance agglutinin was found but the cells remained motile and no agglutination took place. The addition of a "trace" of salt caused agglutination. Joos considered that the agglutinable substance formed a soluble compound with the agglutinin and this was precipitated by such a small quantity of salt that it must be assumed *that the latter* reacted chemically. From the facts that salt entered into the compound agglutinable substance, agglutini- [illegible] took place when bacilli containin [illegible] placed in distilled water he (Jo [illegible] was chemically active and not [illegible] conclusion could not be admitted, as all precipitated albuminoids absorbed the precipitating salts and salt in the second case would diffuse into the media. It was immaterial whether the salt formed a chemical compound or not; the action was probably one resembling *solution.* The second phase of agglutination, the more difficult to explain, could best be investigated by a study of the laws governing sedimentation and precipitation. The first phase had to a certain degree been admirably probed by Eisenberg and Volk, a lucid interpretation of their results being given by Arrhenius. The agglutinin distributed itself between the medium and the bacilli, much as iodine was distributed or partitioned between water and carbon disulphide. In the latter case the ratio of iodine concentration in water to the iodine concentration in carbon disulphide was constant, no matter how much iodine was added. Similarly a constant partition coefficient, but of a more complex nature, could be obtained for the partition or division of agglutinin between aqueous medium and organisms. Arrhenius concluded that the bound and free agglutinin molecules had a different number of parts in the ratio of 2 to 3. It was from results obtained in conjunction with Dr. Allan Macfadyen at the Lister Institute highly probable that the partition coefficient for agglutinin between medium and organism varied for different parts of the cell, flagella, membrane, and cell juice and quantitative experiments in this direction were in progress. As regards the second phase of agglutina- [illegible] current ideas on this subject had been arrived at. Bodländer found that a suspension of kaolin in distilled water was rapidly sedimented by electrolytes. Joly's experiments on [illegible] the alkaline earths [illegible] the monovalent [illegible] had been made to determine the influence of electrolytically dissociated or ionised substances on colloidal solutions. Hardy measured the concentration of hydrochloric, nitric, sulphuric, oxalic, and citric acids necessary to precipitate colloidal iron oxide to the same degree of turbidity in the same time and calculating from his results one citric acid ion had about the same effect as 740 chlorine ions, while one sulphate ion had [illegible] chlorine ions. From the facts that the [illegible] uric acid di- [illegible] it had been [illegible] that the number of electric charges on the ion deter- [illegible] ng value. Bredig had [illegible] mena of sedimentation, [illegible] the action of enzymes, [illegible] pillary phenomena to [illegible] hypothesis of electric double envelopes. According to this hypothesis the layer between colloidal particle and aqueous solution had a "natural" surface tension diminished by the electric repulsion of any positive and negative ions or electrons that happened to form part of the surface of separation. When the "natural" potential difference of a colloid against an aqueous medium was neutralised by the addition of an electrolyte the surface tension of the particle should become a maximum. This was highly improbable Current views were founded on the electro-capillary phenomena of the Lippmann electrometer. From a two years' study of the influence of electrolytes and non-electrolytes on the surface tension and potential difference of mercury against aqueous solutions he had demonstrated that the Helmholtz hypothesis was untenable. Mercury in certain solutions might have a maximum surface tension and at the same time be highly charged with respect to the aqueous phase. Similarly by the addition of non electrolytes to suspensions it had been found that surface tension effects played a more important rôle than electrical potential differences. Amyl alcohol, butyric acid, camphor ethyl benzoate, and other substances influencing the surface tension of water showed marked and similar effects in accelerating sedimentation, precipitation, and agglutination. Ions had all the properties of ordinary chemical units in addition to their electrical effects and the *surface* tension effect of an ion might have no direct relation to its electrical effect. Friedberger showed that grape sugar could induce the second phase of agglutination and electrical effects in this and other cases were practically eliminated. In conclusion, the first phase of agglutination was in many respects similar to solution absorption or staining and the second phase an absorption and surface tension effect.

Dr. A. PAINE read a communication the title of which was a New Method of Staining with Iron Hæmatoxylin. His *object* was to bring forward a new method of using iron hæmatoxylin as a chromatic and cytoplasmic stain, but before doing so he briefly referred to the processes of Benda and Heidenhain, which by acknowledged authorities were the best of their kind. Iron hæmatoxylin belonged to the so-called hæmatin lakes. There were three principal lakes of hæmatoxylin, those it formed with copper, chromium, and iron. Of these only the iron compound had remained in general use and for the purposes of histological research it

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[1] THE LANCET, May 9th, 1903, p. 1299.

Rumley Dawson, Mr. John Henry Ewart, Mr. John Shields Fairbairn, Mr. Charles Arthur Goullet, Dr. David Berry Hart, Dr. Arthur Corrie Keep, Dr. Arnold W. W. Lea, Dr. Cuthbert Lockyer, Dr. William Rivers Pollock, Dr. Harry Campbell Pope, Mr. Edward Reynolds Ray, Dr. Walter C. Swayne, and Mr. Charles J. Wright.

LIVERPOOL MEDICAL INSTITUTION.

Hot-air Cautery.—Poisoning by Antimony and Lead.—Intravesical Separation of the Urine.—Puerperal Septicæmia.

A MEETING of this society was held on Feb. 4th, Dr. JAMES BARR, the President, being in the chair.

Dr. K. A. GROSSMANN gave a short account of the Hot-air Cautery introduced into surgery by Dr. Hollander of Berlin and showed a modification of the instrument adapted for [illegible] employed it with [illegible] elid, in corneal [illegible] it particularly valuable in cases of conical cornea. The different degrees of heat could be easily regulated and he had found the results superior to those obtained by the actual cautery.

Dr. LESLIE ROBERTS exhibited a patient, a compositor by occupation, suffering from Chronic Poisoning by Antimony and Lead. The symptoms complained of were sweating, tenderness of the palms of the hands and soles of the feet, and pains in the muscles of the arms and back. The patient had been forced to give up work on account of the tenderness of the fingers. The palms were of a pinkish-red colour and drenched with perspiration. Scattered all over the palms were small, flat, smooth papules. Microscopic examination of the skin showed the rete to be hypertrophied, the sweat ducts to be much dilated, and the capillaries to be congested. The condition of the palms was not to be distinguished from that seen in some forms of arsenical poisoning. The linotype alloy was composed of tin, antimony, and lead. The patient's urine was free from albumin but contained lead, to which metal the tremors and muscular weakness might be attributed. He had not suffered from colic. The plumbism seemed to have been modified by the presence of antimony.

Mr. ROBERT BICKERSTETH read a note on the Intravesical Separation of the Urine coming from the Right and Left Ureters as an Aid to Diagnosis in Surgical Diseases of the Kidneys. After contrasting the older methods with the only alternative—namely, catheterisation of the ureters—he showed the "separator" introduced by Dr. George Luys of Paris. He said that he had used this instrument for the last six months and he described cases and showed specimens of separated right and left urines which proved the method to be of the greatest utility. During the examination it was neither necessary nor advisable to administer a general anæsthetic, for after the introduction of the instrument the patient should be placed in the sitting posture.—Mr. F. T. PAUL related several cases under his care in which Mr. Bickersteth had by means of the "separator" furnished him with most valuable information.—Mr. K. W. MONSARRAT had been greatly impressed with the value of the instrument in a case under his care that Mr. Bickersteth had examined.

Dr. NATHAN RAW read a paper on the Pathology, Bacteriology, and Treatment of Puerperal Septicæmia with special reference to the value of antistreptococcic serum, based on an observation of 61 cases in the Mill-road Infirmary, Liverpool. He said that the disease in no way differed either in origin or in symptoms from several other infective and septic processes and was not peculiar to the lying-in state. The micro-organisms found in his series were as follows: streptococcus pyogenes in 27 cases; staphylococcus aureus in six cases; mixed infections in 13 cases; bacillus coli communis in 11 cases; and the diphtheria bacillus in one case. In three cases there was no growth of organisms. Before using antistreptococcic serum it was essential to demonstrate beyond doubt that the infection was streptococcic. This could readily be done by staining a little of the secretion from the uterus. In advanced cases the blood might be used for this purpose but it was difficult to recover streptococci from the blood unless it was taken from a vein in large quantity, say, five cubic centimetres, and then they were not always found. His experience went to show that the serum was of the greatest possible value in pure streptococcic infections if employed early in the disease. The dose he employed was 20 cubic centimetres twice or thrice daily and continued for several days. He had never known any harm or bad symptom to arise from its use if obtained from a trustworthy manufacturer and with a bacteriological guarantee of its purity. In the total number of 61 cases under observation there were 32 recoveries and 29 deaths, giving a death-rate of 48 per cent. The patients treated with serum were 37 in number with 24 recoveries and 13 deaths, giving a death-rate of 36 per cent. The number treated without serum was 24 with eight recoveries and 16 deaths, giving a death-rate of 60 per cent. Several of the patients in the last group were admitted to hospital in an advanced stage of the disease when obviously no treatment would be of avail.—Dr. J. E. GEMMELL said that the presence of streptococci in the lochial discharges was not sufficient indication for the use of the serum, for it was known that examinations of normal vaginal discharges and of lochial discharges during a normal puerperium had yielded streptococci.—Dr. HENRY BRIGGS said that he had frequently used the serum but had grave doubts as to its real utility.—Dr. LLEWELLYN A. MORGAN, Dr. E. T. DAVIES, Dr. T. B. GRIMSDALE, Dr. F. B. O'FLAHERTY, and Dr. A. S. F. GRÜNBAUM also took part in the discussion.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Glycogen in the Blood.—General Streptothrix Infection.—Glaucoma.

A MEETING of this society was held on Feb. 3rd, Professor JOHN CHIENE, the President, being in the chair.

Dr. LOVELL GULLAND read a paper on the Glycogen Reaction in the Blood. He described the nature of the glycogen reaction and the method of applying it by staining the granules with iodine. He discussed the conditions under which glycogen was present in the blood, its pathological relationships, and its connexion with leucocytosis.

Dr. STUART MCDONALD read a paper on a case of General Streptothrix Infection. The patient, who was a woman, died in the Royal Infirmary about 18 months ago. She exhibited some obscure nervous symptoms on admission though she had been ailing for some months from cough and there had been a more recent acute illness of some five weeks' duration with definite pleurisy. It was impossible to get a proper history from her or to make a complete physical examination; she gradually became comatose and died two days after admission. At the post-mortem examination numerous small abscesses were found in the brain and kidneys; there were inflammatory deposits in the heart wall [illegible] which [illegible] tuber- [illegible] A typical streptothrix was found in all the lesions and pure cultures were obtained from the kidney. These cultures had been kept alive ever since and the organism studied on various media. It appeared to be either identical with Eppinger's streptothrix or closely related to it. The cultures were found to be definitely pathogenic for rabbits and [illegible] though rats and mice were apparently immune. [illegible] appearance in old cultures of [illegible] were acid fast and alcohol fast after being stained with Ziehl-Neelsen's carbol fuchsin and which in some cases strongly resembled tubercle bacilli.

Dr. J. V. PATERSON read a paper on Glaucoma and the Glaucoma Theories. He described the anatomy of the parts of the eye connected with the secretion and elimination of the aqueous humour and the experimental work and methods recently employed to determine the source of the aqueous, the normal rate of secretion, and the paths by which fluid leaves the eye. Leber's conclusions as to the rate of flow during life were given, as were also the questions of the outflow by way of the nerve, of the permeability of the hyaloid, and of the kind of communication existing between the anterior chamber and the veins. In the monkey's eye [illegible] Dr. Paterson had found that Chinese [illegible] chamber penetrated freely into [illegible] as into the canal of Schlemm and the veins at the [illegible] angle. For estimating the amount of flow through the eyeball under different conditions he had employed an apparatus somewhat modified from that used by Priestley Smith, the graduated tube carrying the air-bubble being of finer calibre so that the readings could be taken every minute. The question of intraocular tension was then discussed and its relation to the blood pressure, arterial and venous, was considered. Secondary glaucoma was usually due to mechanical causes obstructing the flow of aqueous humour. Cases to illustrate this were described—e.g., iris bombé, iris prolapse, traumatic cataract, cyclitis, and intraocular tumours. Primary glaucoma was much more difficult to explain and eyes were removed only in the later stages of the disease when it was difficult to determine the priority and importance of the lesions found. The lesions associated with advanced glaucoma, on which most stress had been laid, were: (1) cupping of the disc with accompanying optic atrophy; (2) closure of the filtration angle; and (3) changes in the intraocular blood-vessels. Dr. Paterson discussed the theories of von Graefe, Knies, Birnbacher, Fuchs, Abadie, and Panas to explain the occurrence of glaucoma. Although no adequate explanation of primary glaucoma had yet been offered he was inclined to think that a theory of retention with blocking of the filtration angle was the one which best explained the acuter forms of the disease. The more chronic forms of glaucoma probably depended on local and general vascular changes which might influence the blood pressure and the intraocular secretion. Priestley Smith's theory was also criticised and Dr. Paterson said that he had never seen any pathological evidence that the circumlental space had been blocked in any of the series of glaucomatous eyes which he had examined.—Dr. BERRY and Dr. GEORGE MACKAY discussed the paper.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF ANATOMY AND PHYSIOLOGY.

Pelvic Fascia.—Pawlow's Gastric Fistula.—Blood Films.

A MEETING of this section was held on Jan. 29th, Dr. E. H. TAYLOR, the President, being in the chair.

Dr. R. ATKINSON STONEY read a paper on the Anatomy of the Pelvic Fascia, with special reference to its surgical importance. He described a new method of demonstrating the connexions of the visceral pelvic fascia by hardening the subject in formalin and then having made a mesial section of the pelvis the prostate and bladder were dissected out of their fascial envelopes. By means of specimens dissected in this way and drawings and diagrams made from them he showed that the visceral layer of pelvic fascia, instead of dividing into three layers as usually described, really gave off three complete sheaths, two in a downward direction surrounding the prostate and rectum and one in an upward direction surrounding the bladder, and that each of these was complete in itself and in no place did one layer of fascia enter into the formation of more than one of these three sheaths. He also pointed out that the visceral layer of pelvic fascia met the urogenital apparatus at the vesico-prostatic junction and the alimentary canal at the junction of the rectum and anal canal.—Sir THOMAS MYLES, the PRESIDENT, Professor ALEXANDER FRASER, and Professor A. F. DIXON took part in the discussion.

Dr. HAROLD PRINGLE exhibited a dog on which he had performed Pawlow's Gastric Fistula Operation. The object of the operation was to produce a stomach pouch which was made to open on the surface, while the remainder of the stomach was left to perform its digestive function as usual. The pouch was formed in such a manner as to retain its nervous connexions intact. Some lantern slides were shown giving the results of experiments which proved that the juice secreted by the stomach pouch varied in amount and rate of secretion, corresponding with the results already published by Pawlow.

Dr. HENRY M. JOHNSTON gave a demonstration on the making of Blood Films by a new method, the apparatus for which was very simple. He also showed specimens of films stained and unstained.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—A meeting of this society was held on Jan. 15th, Dr. J. Porter Parkinson being in the chair.—Dr. G. E. C. Pritchard showed a case of Transposition of the Viscera in a girl, aged 12 years, the heart, the liver, the stomach, and the spleen being transposed. The child had been delicate since birth and at one time had been treated for enlargement of the spleen owing to the liver having been mistaken for that organ. She was also deficient mentally and it was intended to have a skiagram taken for the purpose of seeing whether the aortic arch was on the right side.—Dr. Pritchard also showed a case of Congenital Absence of the Left Arm in a girl, aged 15 years. The stump ended about two inches below the elbow in a small excrescence which presented the appearance of a rudimentary thumb provided with a nail.—Dr. C. O. Hawthorne said that he had seen at least two such cases in which there were processes that might be called digits.—Mr. A. H. Tubby showed a case of Sarcoma with Secondary Deposits in a boy aged two and three-quarter years. Seven weeks previously the child received a knock on the left leg and soon afterwards the mother noticed a swelling there which was poulticed. Three weeks ago he was again struck on the same leg and also fell striking his head. A swelling on the head formed soon afterwards. He now presented a definite tumour over the left leg attached to the fibula and a smaller tumour over the right parietal bone. The left inguinal and iliac glands formed a large adherent mass but were not tender. Mr. Tubby commented on the direct connexion of the growths with an injury. In a paper published in THE LANCET some years ago he pointed out the direct relation of traumatism to sarcoma of bone and he thought that this was now generally accepted. Owing to the implication of the glands he did not consider that any operative treatment was available.—Mr. Tubby also showed a case of Congenital Dislocation of the Fifth Cervical Vertebra in an infant, aged three months. The deformity was noticed the day after birth, the confinement having been a normal one. No symptoms had been observed until the previous week when vomiting came on and had occurred several times a day. At the base of the neck there was a sharp bony prominence which corresponded to the fifth cervical vertebra. The summit of this process was formed by the left articular process and the spinous process could be felt to the right of it and not so prominent. There was also congenital scoliosis, the curve being to the right in the dorsal region and to the left in the lumbar. There were no evidences of paralysis. Mr. Tubby proposed to make an attempt to reduce the dislocation by traction and manipulation but thought that as three months had elapsed the prospect of cure was not good.—Mr. J. Howell Evans suggested that there was an absence of half the fourth cervical vertebra and that the marked prominence felt to the left of the middle line was the superior articular portion of the lamina of the fifth cervical vertebra, which was unopposed. The small projection which could be felt almost in the middle line corresponded to the spinous process of the same vertebra. The scoliosis would be the result of the defective vertebra.—Mr. Howell Evans read a paper on the Relation of certain Extracranial and Intracranial Hæmorrhages in the Newly Born. He considered that these hæmorrhages were dependent partly on an irregularity in the moulding of the fœtal head, this irregularity arising from the presence of accessory sutures in the situations where certain extracranial vessels anastomose with the intracranial vessels; another factor was probably the rise of blood pressure which occurred during the reactionary period when the child was recovering from the birth trauma. These hæmorrhages occurred in non-instrumental labours and as frequently in breech as in vertex presentations, and with approximately the same frequency as the accessory sutures he referred to. Selecting the parietal bones as examples he said that when a parietal bone was developed from two centres of ossification there was left a small space extending from the situation of the parietal foramen to the sagittal suture. At the parietal foramen the occipital artery communicated with the middle meningeal artery and the occipital vein directly or indirectly with the superior longitudinal sinus. In a normal fœtal skull these vessels were secure from injury, but when the accessory sutures were present irregular moulding occurred at them and the vessels were lacerated.—Dr. G. A. Sutherland said that cases described as birth palsies were met with in which the labour was normal, neither too prolonged nor too rapid, and it was difficult to understand how such cases were explained by the ordinary pressure theory.—Dr. Hawthorne said that intracranial hæmorrhages occurred in cases which had not been subjected to any undue pressure and even in infants born at the seventh month.—Dr. W. C. Chaffey (Brighton) read a paper on the sequel of a case of Extreme Wasting which had been shown at a meeting of the society in July,

1903. The patient was a boy, aged ten years, who was extremely wasted, refused all solid food, but drank two and a half pints of milk daily and presented no objective signs of cerebral disease. The case had been regarded by most of the members as one of hysteria. In October he developed bed-sores, had attacks of headache with screaming, and tonic contractions appeared in the extremities. These and other symptoms led to a diagnosis of tumor cerebri or meningitis. At the necropsy there was found to be chronic meningitis, chronic hydrocephalus, and an endothelial tumour of about the size of a walnut attached lightly to the posterior aspect of the right optic thalamus. Dr. Chaffey commented on the rarity of endothelioma as a cerebral tumour. He thought that the growth of the endothelioma might have been excited by an injury sustained by the boy in the school playground some twelve months before his death.

MIDLAND MEDICAL SOCIETY.—A meeting of this society was held at the Medical Institute, Birmingham, on Feb. 3rd, the chair being taken by Dr. R. Saundby.—Mr. W. Billington showed a case of recovery after operation for Cerebral Abscess following upon prolonged otitis media. The patient was a man, aged 27 years, who for many years had had a chronic purulent discharge from both ears. Three weeks before operation he began to suffer from pains in the head. He then had a "fit" while at work, became drowsy and stupid, and presented evidences of intracranial pressure. These increased and at the time of operation the patient was deeply comatose with Cheyne-Stokes respiration. The skull was trephined without anæsthesia and a large abscess containing two ounces of fœtid pus was discovered in the left temporo sphenoidal lobe. This was opened and drained. A week later Stacke's operation was performed on the left side. The patient made an uneventful recovery and two months later he was quite well and back at work. His hearing was distinctly good, a watch being heard at a distance of six inches from the left ear, and he suffered from no mental or physical disablement.—Mr. George Heaton showed a man who had recovered after complete suppression of urine from impacted calculi for a period of eight and a half days. He was 40 years of age and had had occasional attacks of obscure lumbar pain for 15 years. Three months previously he had a severe attack of renal colic with hæmaturia. This was followed by the passage of 20 small calculi. Urinary suppression took place quite suddenly four days before his admission to hospital. It was ushered in with severe abdominal pain which soon passed off. During eight and a half days while he was under observation absolutely no urine was passed or was found in his bladder. Throughout this period he showed no uræmic symptoms whatever until the seventh day, when he began to suffer from muscular tremors and became slightly delirious. There was no vomiting or perspiration or pain and there was no loss of consciousness. An exploratory operation was performed in the left loin but owing to the patient's great size the kidney could only just be reached with great difficulty and appeared to be atrophied. On the ninth day the urinary flow suddenly returned. He passed during the next ten days a very large quantity of urine—173, 178, 136, and 126 ounces being passed on successive days. The urine was pale and clear and the specific gravity was 1008; it contained only a trace of albumin. A few weeks afterwards he passed three small calculi. At the present time he was back at work and was in his usual health. Mr. Heaton was disposed to think that the left kidney—the one explored—had been rendered functionless by old disease and that the obstruction had now taken place in the right ureter or pelvis of the right kidney. The man was enormously stout and it was quite impossible to feel any tumour through the parietes.—Dr. W. D. Lawrie showed a case of Paralysis of both Lower Extremities in a boy due to Acute Anterior Poliomyelitis. The point of interest connected with this case was the ingenious method the patient had of interlocking his legs and moving about with a swinging motion supported on his hands. He could in this way mount and descend from a chair.—Dr. J. D. Stanley showed (for Dr. S. H. Perry) a case of Favus in a boy eight years of age. The disease had been present for six years. It was pointed out that favus is rare in Birmingham. Dr. Perry had made careful microscopic examination of the parasite.—Dr. O. J. Kauffmann read a paper on an interesting series of cases of Cerebral Degeneration in Children. He pointed out the relationship between diseases such as Friedreich's ataxia, cerebellar ataxia, and Little's disease.

SOCIETY OF ANÆSTHETISTS.—A clinical meeting of this society was held on Feb. 5th, Mr. C. Carter Braine, the President, being in the chair.—The President read notes of a case of so-called Waterlogging of the Lung ending fatally. He said that the condition was barely mentioned in text-books on anæsthetics and was generally due to the injudicious administration of ether when there were obvious signs that a mixture or chloroform should be substituted. The causes were (1) inhalation of fluid vomit; (2) inability to get rid of bronchial secretion; and (3) a combination of these two causes. Washing out the stomach was not a trustworthy remedy for the first cause as regurgitation still continued. "Waterlogging" of the lung occurred in feeble people of advanced age who had bronchitis and emphysema and was slow in its onset; the term should be confined to those cases in which there was inability to get rid of bronchial secretion. The case reported was that of a very fat old lady of the type just mentioned who had suffered from intestinal obstruction for three days. She was dusky in colour and had lately been drinking champagne. Owing to the danger from vomiting chloroform was administered and the operation performed while the patient lay in the lateral posture. Free vomiting and oozing of liquid occurred during the first 30 minutes but gave rise to no anxiety. The reflexes were never abolished. Then the helix of the ear became very blue, the pulse feeble, the respiration wheezy, cyanosis increased, and the patient gradually died. The chest appeared "waterlogged," as no air could be driven in or out of the lungs by artificial respiration. There was no post mortem examination but the President's opinion was that death was due to the choking of the tubes by gradual accumulation of bronchitic secretions and not to inhaled vomit, which always escaped freely.—The Junior Secretary read for Dr. T D. Luke of Edinburgh notes of a case of Great Danger during the Administration of Nitrous Oxide for the Extraction of a Single Tooth. The patient, a big, powerful man, became cyanosed, then vomited, and suddenly stopped breathing, becoming almost black. Tongue traction and artificial respiration were fortunately followed by recovery which was accompanied by great excitement. The patient, it was afterwards found, had recently had a meal, had been drinking port wine, had taken three quarters of a grain of morphine at night for ten days, and the day previously had been "sniffing" chloroform. Altogether he was an eccentric character. The reason of the vomiting was not obvious. Would the patient have taken ethyl chloride better?—Dr. W J. McCardie recorded a Death under Nitrous Oxide given for extraction of teeth in a man suffering from marked enlargement of the glands on both sides of the neck. The patient did not suffer from dyspnœa. After the administration of a small quantity of gas mixed with some air he stopped breathing and at once died without any apparent cause Post mortem both sides of the neck were full of enlarged and malignant glands, apparently secondary to malignant disease of the thyroid gland. The trachea was rather narrowed but not enough to cause an obstruction to breathing. No special cause of respiratory or heart failure was found.

KIDDERMINSTER MEDICAL SOCIETY.—A meeting of this society was held on Feb. 5th, Mr. E. S. Robinson being in the chair.—Mr J. Lionel Stretton showed the following specimens: 1. A large mass of Epithelioma growing from the Conjunctiva, firmly adherent to the globe of the eye, removed from an old man, aged 78 years. 2. A portion of the Skull removed by a Trephine from a boy, aged 14 years, containing a central hole which was part of a sinus leading down to the hypertrophied dura mater. He had suffered from middle-ear disease as a result of scarlet fever three years previously. The sinus was situated at a point one and a half inches behind a line drawn vertically through the external auditory meatus and one and a half inches above a line drawn horizontally through it. There was no history of an [illegible] for the condition. [illegible] to be that a subdu[illegible] bone, which must be an unusual occurrence. There had been no discharge since the operation and the wound was granulating up.—Mr. Stretton also read notes of cases of three females upon whom he had operated for Appendicitis within ten days. All made an uneventful recovery.—Mr. Stretton also showed a woman, aged 28 years, from whom he had removed a large Multilocular Ovarian Cyst. She was admitted to hospital with acute abdominal pain and vomiting and it was at first thought to be a case of twisted pedicle. No twist, however, was discovered. The cyst weighed 27 ounces and contained about three pints of fluid. In spite of a sharp attack of broncho-pneumonia she made a satisfactory recovery.—Mr. Stretton also showed a man, aged 83 years, upon whom he had operated for Enlarged Prostate. The gland, which was exhibited, weighed three and a half ounces and was removed by the suprapubic route.—Mr. Stretton also exhibited various Specimens.—Dr. B. Addenbrooke showed a case of Exophthalmic Goitre in a boy, aged 14 years, and an Ovarian Cyst which he had removed —Mr. W. Moore showed a specimen of a Horseshoe Kidney, the two kidneys being united and lying across the vertebral column.—Mr. Robinson showed a Fœtus with large Teratoma projecting from its mouth and being attached to the upper jaw.—Dr. O. C. P. Evans showed (1) a Brain with Abscess in the Right Temporo-sphenoidal Lobe resulting from middle-ear disease following scarlet fever; and (2) Sequestra removed from the Femur.—Dr. Evans also read notes of a case of Appendicitis in which abdominal obstruction, due to a band of lymph, came on after the operation, necessitating a further operation. The patient made a good recovery.—Dr. James Brocket showed a very good specimen of Fatty Heart removed from a woman, aged 65 years, who had committed suicide by cutting her throat.—Mr. Stretton read a paper on Professional Mistakes.—Many of the members present related their experiences.

Manchester Medical Society.—A meeting of this society was held on Feb. 3rd, Dr. Judson S. Bury, the President, being in the chair.—Mr. A. H. Burgess presented a communication on the Treatment of Rectal Prolapse and Incontinence of Fæces by the Submucous Injection of Paraffin, based on an experience of nine cases of prolapse, one case of prolapse combined with incontinence of fæces, and one case of incontinence resulting from operations for the cure of an extensive fistula in ano. He used a paraffin melting at 111° F. and a syringe the glass barrel of which was encased in rubber to retain the heat longer. No special means were taken to keep the needle hot. The technique of his operation was described in detail, the chief aim of which was to introduce the paraffin in successive tiers, each tier consisting of three large nodules placed equidistantly around the circumference of the bowel, the tiers being so arranged that a nodule of one tier was opposite to the interval between two nodules [illegible] of the tiers above and below it respectively. Usually three tiers were sufficient, but more might be introduced in a very long prolapse. A single stitch was placed to approximate the buttocks over the [illegible] to prevent the prolapse from descending before the paraffin had set, this stitch being removed in 24 hours. The results had been excellent in all the nine cases of prolapse, not a single instance of re-descent having occurred. In the case of prolapse with incontinence of seven years' duration a cure was effected by a combination of paraffin injections with a plastic operation to narrow the enlarged anal orifice. In the case of incontinence after operations for fistula the large amount of 52 cubic centimetres of paraffin was injected on two occasions submucously around the lower part of the rectum, and although the patient had previously been absolutely incontinent for three years he had not soiled his linen once during the eight weeks that had now elapsed since the operation.—Dr. Charles H. Melland gave some clinical details of a series of recurrent cases of Malaria recently met with in Manchester. After describing the principal points upon which a diagnosis of malaria should rest he dilated at greater length upon the value of blood examination in clinching the diagnosis. He then demonstrated, with Dr. Orr, a series of coloured lantern slides of microphotographs of Malarial Plasmodia taken from the cases referred to above illustrating the asexual life-history of the different species of plasmodia as studied in stained blood films —Dr. W. J. S Bythell gave a demonstration of the Sangers-Shepherd process of Colour Photography as applied to medicine.

Glasgow Obstetrical and Gynæcological Society —A meeting of this society was held on Feb 3rd, Dr. J. Nigel Stark, the President, being in the chair.—Dr. J. M. Munro Kerr showed: (1) A large Myomatous Uterus removed by supravaginal hysterectomy; and (2) an Ectopic Sac containing a Fœtus of about three months.—Dr. Samuel Sloan read a note on three cases of Cancer treated by the X Rays. The first was a case of Vaginal Cancer. Bleeding ceased and pain was diminished but the size of the growth was not influenced. The second was a case of Cancer of the Right Breast with destruction of the Breast Tissue and Involvement of the Axillary Glands. Under the influence of the x rays the ulcerated surface healed over but the malignant tissue in the breast and the axillary glands remained as before treatment. When treatment was stopped ulceration began again. The third was a case of Cancer of the Cæcum. Three applications were made and each was followed by great pain.—Dr. A Louise McIlroy read a paper on Some Pathological Conditions of the Fallopian Tubes, grouping illustrative cases into (1) hydrosalpinx, (2) hæmatosalpinx, and (3) tubal gestation As instances of hæmatosalpinx Dr. McIlroy showed two tubes from the same patient. There was no evidence of pregnancy in either of them. The uterus was myomatous. The hæmorrhagic condition was believed to be the result of pressure from the enlarged uterus. In illustration of tubal gestation the following cases were shown: (1) incomplete tubal abortion with hæmatocele; (2) incomplete tubal abortion where the non-pregnant tube of the opposite side was distended with blood; (3) a tube inclosing fœtus, where rupture had taken place into the broad ligament; and (4) a specimen of an unruptured tubal pregnancy.

Royal Medical Society of Edinburgh.—A meeting of this society was held on Jan. 29th, Dr. T. B. Hamilton being in the chair.—Dr. R J. A. Berry gave an address, illustrated by photographs, lantern slides, and diagrams, on the Anatomical Relationships of Two Double Monsters. In both cases the twins were united laterally, the union in the first case involving the abdomen and in the second both the abdomen and the thorax. The intestinal canals were found to unite in the duodenum and jejunum only and there was in each case a single liver. The heart in the second case was also a single structure but possessed four ventricles and two auricles. To one of the auricles three auricular appendages were attached, the other auricle having one. The auricles communicated by a well-marked foramen ovale and the interventricular septum on one side was absent. The primitive fault in this part of the monster was due to incomplete separation of the sinus venosus. From the various abnormalities observed Dr. Berry drew the important conclusions that the liver was not a fore gut but a mid gut development and that bilateral segmentation of a single ovum was unnecessary for the production of twins.—A Dissertation on the Relation of the Lower Animals to Disease in Man by Dr. J. A. Meikle was read in his absence by Mr. L. S Milne.—Dr. B. P. Watson read notes of a case of Ectopic Gestation which presented all the classical symptoms. On the morning of operation a decidual cast of the uterus was passed. Dr. Watson showed this cast together with the specimen removed at the operation. In this specimen the amniotic [illegible] cavity was visible in the centre of the mass of blood clot.

Otological Society of the United Kingdom.—A meeting of this society was held on Feb. 1st, Dr. Thomas Barr, the President, being in the chair.—The President delivered the introductory address in which he reviewed the work of last session. He remarked that a very large proportion of the communications had dealt with suppurative diseases of the ear and their complications and suggested that the society might devote a part of its time to a study of chronic non-suppurative diseases which did not endanger life but made it almost unbearable. It would be of great advantage to otologists to have authoritative guidance as to the comparative utility of the various methods of treatment in vogue.—Mr. C. H. Fagge exhibited specimens of Atresia Auris Congenita taken from a stillborn child showing bilateral absence of membrana tympani, ossicles, osseous meatus, and mastoid antrum.—Dr. William Milligan read a paper on the Etiology and Treatment of Suppuration of the Labyrinth which appears in full at p. 416 of our present issue. The discussion on the paper was adjourned to the next meeting.—Mr. Hunter F. Tod showed a specimen of Sarcoma of the External Meatus removed from a woman aged 67 years.—Mr. Hugh E. Jones showed a Portable Surgical Hand Motor.

Dermatological Society of Great Britain and Ireland —A meeting of this society was held on Jan. 27th, Dr. J. H. Stowers, the President, being in the chair.—The following cases were shown:—Dr. E G. Graham Little: A case of Scrofulodermia on the Buttocks of an Infant.—

Mr. T. J. P. Hartigan: A series of cases which were being treated by Radium—viz., three cases of Rodent Ulcer, four cases of Lupus, and one case of Facial Nævus.—Mr. Spencer Hurlbutt: A case of Lichen Planus.—Mr. George Pernet: A case of Lupus Erythematosus.—Dr. V. H. Rutherford: (1) A case of *Polymorphous Syphilodermata*; (2) a *case of* (?) Lichen Planus, (?) Syphilis; and (3) Perforating Ulcers of the Feet [illegible] xia with a history [illegible] (1) A case of Iodi [illegible] Preside [illegible] Universal Alopecia; and (3) a *case of Peliosis Rheumatica.*—D [illegible] of Hypertrophy of the Sebaceous Glands.

ABERDEEN UNIVERSITY MEDICAL SOCIETY.—A meeting of this society was held on Jan. 29th, Mr. James Clark being in the chair.—Mr. W. E. Reid read a short paper on Homœopathy. He instanced the use of aconite in milder febrile conditions as being the most outstanding example of drugs first used by homœopathists. Many drugs now in use were originally prescribed by them. Comparative statistics dealing with epidemics showed a lower rate of mortality for homœopathic treatment which was in widespread use in America and supported in this country by a good many of the medical profession. The paper was productive of much criticism.—Mr. R. H. Spittal followed with a paper on Occupational Diseases.

Reviews and Notices of Books.

A System of Physiologic Therapeutics. Edited by SOLOMAN SOLIS COHEN, A.M., M.D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College; Physician to Jefferson Medical College Hospital, to the Philadelphia Hospital, and to the Rush Hospital for Consumption. [illegible] Aerotherapy and [illegible] Dr. PAUL LOUIS [illegible] to Laennec and Lariboisière Hospitals, Chief of Clinic in the Faculty of Medicine of the University of Paris. Illustrated. London: Rebman, Limited. 1903. Pp. 479. Price 12*s.* 6*d.*

As many of our readers are aware this "System" is intended to present a "practical exposition of the methods, other than drug giving, useful for the prevention of disease and in the treatment of the sick." In its broad outlines the present volume follows the general plan of its predecessors but some important differences will be found in matters of detail. Considering the subjects which are now being dealt with we commend the editor and Dr. Tissier for this departure.

The history of the development of pneumotherapy and of its various methods receives a large amount of attention and supplies some instructive reading. Aerotherapy for many years suffered from the lack of persistent advocates and can hardly be said to have been appreciated at its true worth until the prominent position which has during the past few years been taken by the "open-air" treatment of tuberculosis aroused fresh interest in this branch of medical science.

The conclusions arrived at by the various observers who have investigated the physiological and pathogenic effects of condensed air and rarefied air, whether experienced by workers in caissons, by aeronauts in balloon ascents, or by mountain climbers, have not been entirely concordant. The therapeutical effects of artificially condensed and rarefied air have also given rise to markedly divergent opinions. Dr. Tissier sets forth the views of the various authorities in an able manner but the reader is not left in doubt amid a multitude of conflicting assertions and antagonistic recommendations as is so frequently the case when controversial matters are being dealt with. In many instances Dr. Tissier has succeeded in reconciling observations, apparently contradictory, by pointing out the diverse conditions under which they were made and suggesting the necessary corrections in the results.

Another particular in which the present volume differs from its companions is the attention given in Part II.—on Inhalation Methods—to certain aspects of pharmacology. This constitutes a departure from the strict title of the book but an advocacy of physiological therapeutics is not intended by the editor (Dr. Cohen) to disparage discriminating pharmacology; both are needed but the former has been too much neglected and deserves more recognition than has hitherto been given to it, hence the aim and origin of this series of treatises. The chapter on the Physiological and Pathological Effects of Compressed Air is an interesting one and the remarks on the therapeutic value of the pneumatic chamber are well worthy of notice. The use of compressed air has been found to be of considerable value in the relief of respiratory affections such as asthma and emphysema but it must be acknowledged that the treatment has not been largely adopted in this country, probably because there is only a very limited number of health resorts at which the requisite appliances are provided.

A full description is given of the various inhalation methods employed, more particularly in affections of the throat and nose.

This volume has an excellent index and the work will be found very serviceable for purposes of reference.

The Direction of Hair in Animals and Man. By WALTER KIDD, M.D., F.Z.S. London: A. and C. Black. 1904. 8vo, pp. viii-154.

THAT the direction of the hair slope in mammals varies much is a fact well known to zoologists; but we are not acquainted with any general work, such as the present, in which the facts are put together within one cover. The author has therefore in any case accomplished a piece of work which supplies a definite want in the literature of zoology. The usefulness of this general summary is furthermore enhanced by numerous clear figures which show at a glance the essential facts. The aim of Dr. Kidd is, however, more ambitious than that of merely summarising the arrangement of the various hair "currents" to be found among the mammalia, including man. He attempts, and often with considerable ingenuity, to interpret the variations in accordance with habit of life and he thus arrives, if we are to accept his readings of fact, at the important conclusion that acquired characters *are* inherited. Man offers an especially excellent example whereon to test such views. For we are better acquainted with the habits of existing man than with those of any other animal. We can thus test known concurrence of structure and habit in man with more doubtful concurrences in less known animals. This correlation may be illustrated by a few examples selected from Dr. Kidd's pages. He states, and shows in a diagram, that the hair slope in the dorsal region about the shoulder is upward in man, whereas it is downward in anthropoid apes. Now, as is justly pointed out, a very large proportion of the life of man is passed in slumber with the head more or less raised upon a pillow. This would plainly tend to produce an upward lie of the hair, since there is "a tendency of the body to slide downwards off the pillow." The author goes on to say that "in certain hairy subjects who have suffered a good deal from illness, necessitating much of the recumbent position, I have seen greatly exaggerated upward sloping of the hair on the dorsal region. I would submit that the mechanics required for the production of a very unexpected slope of hair are here ready to hand."

The lie of the hair on the head is clearly affected by the mode of parting the hair. The author has collected statistics to the extent of 100 persons and has discovered that "13 of these parted their hair on the right side, nine in the centre, and 78 on the left side." Now in the apes the hair upon the scalp has a uniform backward direction, though many of them, for instance, the bonnet monkey, have an obvious parting in the middle line. It follows therefore that if the trend of the hair were purely a matter of inheritance from apes, uninfluenced by later acquired and then inherited differentiations, the hair of the young would be more ape-like in its regularity than actual observations show it to be. While in numerous children the smooth and regular lie of the hair is to be found, others show distinct traces of formerly acquired partings; and we ourselves have seen perfectly reproduced in an infant a somewhat rare form of parting—more affected perhaps by a previous generation—namely, a parting at the back of the head. A considerable series of illustrations show the various forms of the hair tracts on the scalp in juveniles. As the author justly observes, it is likely that the primitive mode of the hair arrangement in mammals was a simple slope trending backwards from the direction in which the animal mostly moves, and he points out that this simple arrangement is to be found in a variety of mammals belonging to the more primitive orders. In the otter, for example, and in many marsupials the hair shows no complicated whorls such as are exhibited, for instance, in the dog and in the horse. Dr. Kidd's explanation would be, we suppose, that sufficient specialisation in habit and movement has not yet had time to influence the hair growth as it has in oxen, horses, and many carnivora. Yet to point out that in animals admittedly primitive the hair slopes are also primitive is somewhat of an imprudent revelation of truth. If the original character—i.e., a regularity of hair inset equal to that of scale and feather inset—has persisted so long without great change in one or more groups, why should the horse and the dog, which are modern types relatively speaking, have shown so markedly the influence of muscular actions and so forth? It would seem as if the oldest types were exactly those which should show the greatest amount of change. The only explanation from the author's, and indeed from the reviewer's, point of view seems to be the unsatisfactory one that this group and that have possibilities which a third has not. For example, the carnivora do not, and never have, developed aggressive horns upon the head, while the ungulata can and do. Hawks and owls are never bright green, while parrots and pigeons are so at times. The breeders know well enough that they cannot by any amount of artificial selection produce this modification or that in the objects of their attention. Putting aside such possible cases, it must be confessed that Dr. Kidd has made out a plausible argument in favour of the inheritance of acquired characters so far as concerns those features with which his book deals. But whether the reader is convinced by Dr. Kidd and agrees with our estimate or not, he cannot fail to be interested and instructed by a careful study of the volume before us.

LIBRARY TABLE.

How to Keep Well. By FLOYD M. CRANDALL, M.D. London: Grant Richards. 1904. Pp. 511. Price 6*s* —This work, the sub-title of which is "An Explanation of Modern Methods of Preventing Disease," is, we gather, written by an American physician for the instruction of the laity. As the author well says in his preface, "the time has come when the medical man should speak, not in his own defence, but in the defence of the people, who are easily misled to their own hurt." Altogether we have found it an admirable book. It does not teach people how to drug themselves but it sets forth the progress and functions of modern medicine in a plain manner, and Dr. Crandall writes with that mixture of shrewdness and geniality which seems to be the particular possession of our cousins on the other side of the Atlantic. One of the best chapters in the book is that on the Prevention of Breakdown and many a man if he follows the advice therein given will not only lengthen his life but will make it happier. Dr. Crandall quotes a saying of a well-known New York physician that he could do a year's work in eleven months but he could not do it in twelve, and then goes on to insist upon the need for all workers of an annual holiday. There is no doubt that he is right, for with the strain of modern life a holiday is not merely a pleasure but a necessity. Every man nowadays takes so much interest in health matters that we predict for Dr. Crandall's book a large *clientèle* of readers and if they only lay his dicta to heart they will be all the better for it, though Dr. Crandall's professional brethren will probably be the poorer.

A Manual for Students of Massage. By M. A. ELLISON. Second edition. Revised by GULIELMA MANLEY. London: Baillière, Tindall, and Cox. 1904. Pp. 126. Price 3*s.* 6*d.* net.—We reviewed the first edition of this unpretending little book in THE LANCET of Dec. 24th, 1898, and we see no reason to depart from the favourable opinion which we then expressed. The present edition has been brought up to date by the inclusion of some matter dealing with the use of massage in the treatment of recent fractures and sprains. The book lays down clearly what those who undertake massage should do and, what is equally valuable, what they should *not* do, *vide* the chapter entitled "Dont's," p. 95.

Herbert Fry's Royal Guide to the London Charities. Edited by JOHN LANE. London: Chatto and Windus. 1904. Pp. lvi.–391. Price 1*s.* 6*d.*—This very useful compilation is larger this year by some 150 pages than it was last year and, as we have mentioned before, it includes under the name of "Charities" a number of militant controversial associations which have no right to the name. These should be omitted, the more especially as we see that they are either unable or unwilling to give any "numbers of persons benefited." The book is so handy that we should like to see this blemish removed.

A Pocket-book of Clinical Methods. By CHARLES H MELLAND, M.D. Lond., M.R C.P. Lond. Bristol: John Wright and Co. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1903. Pp. 88. Price 1*s.* 6*d.* net.—This is a clearly written account of the various clinical methods for the examination of sputum, the gastric contents, fæces, urine, pus and other pathological fluids, and the blood. Little is said of the deductions to be drawn from the results of the examination since, in the words of the author's preface, "these points are fully dealt with in the text-books of medicine." The book is eminently practical and will be of great use both to practitioners and to students employed in the wards of hospitals.

The Purin Bodies of Foodstuffs and the Rôle of Uric Acid in Health and Disease. By I. WALKER HALL, M.D. Vict., Assistant Lecturer in Physiology at the Owens College, Manchester. Second edition, revised. Manchester and London: Sherratt and Hughes. 1903. Pp. 201. Price 4*s.* 6*d.*—This is a very important contribution on a very important subject and in the review of the first edition of the work, which was issued in pamphlet form, we briefly outlined the directions in which the author had conducted his interesting investigations. There is no doubt that the purins play an important rôle in the metabolic processes and therefore it is of importance that their amount should be known in the various foodstuffs. The author has designed an instrument, which he has called the "purinometer," for the estimation of purins in urine. In the present edition there is a new chapter dealing with the action of drugs upon the elimination of purin bodies, while the old title "The Significance of Food Purins in Metabolism" has been changed to "The Fate of Food Purins in Metabolism." In the appendix analytical details are given as is a table showing the constitution and calorific value of certain foodstuffs. The author has contributed some valuable work on points of the highest importance in dietetics.

A Laboratory Manual of Physiological Chemistry. By RALPH W. WEBSTER, M.D., Ph.D., Department of Physiological Chemistry, University of Chicago; and WALDEMAR KOCH, Ph.D., Department of Pharmacology, University of Chicago. Chicago: The University of Chicago Press; London: William Wesley and Sons. 1903. Pp. 107. Price 6*s*. 6*d*.—This book presents a straightforward laboratory course of physiological chemistry and so far as we have examined the experiments therein described, which refer to the chemistry of the cells, the preparation of the constituents in the tissues, and the chemistry of these tissues and of the digestive processes, they are clear and trustworthy in detail. The plan of the book is convenient and such as is likely to impart sound general knowledge of physiological processes. The work is summarised in an introductory note as follows: "The course begins with the study of the chemistry of protoplasm used in yeast as an example. The dependence of the reactions going on in yeast and other protoplasm upon the environment and the principles of chemical equilibrium are then taken up. This is followed by a study of the foods or raw products; their changes during cooking, digestion, and absorption; the chemistry of the blood and the master tissues, of the body, and finally the chemistry of the excretions." The subject is thus dealt with in a broad way having regard to its relationship not only to pathology, physics, chemistry, zoology, and botany, but to medicine and clinical chemistry. It is, perhaps, not a very important point but it is stated that milk should be neutral in reaction, whereas milk has when fresh an amphoteric reaction—the property, that is, of exhibiting apparently at the same time both a red and blue reaction with litmus paper. Generally speaking, however, milk may be said to be alkaline.

Hazell's Annual for 1904. London: Hazell, Watson, and Viney. Pp. 786. Price 3*s*. 6*d*. net.—This is the nineteenth year of issue of this most useful work which contains information upon most subjects which the would-be well-informed man wishes to know about. One remarkable feature about the book is that it is, to use the phraseology of the Liturgy, "indifferently" written—that is to say, even upon such burning questions as education and "passive resistance" it gives an impartial account of the matter under consideration. Altogether the work is a most valuable compilation.

The British Medical Association Year-Book for 1904. London: Published by the Association. Pp. 142. Price 1*s*.—This, so far as we know, is the first issue of a year-book by the British Medical Association and we think that it is a good departure. In it the reader will find everything that he wants to know about the Association, its officers, constitution, committees, and the like. A *résumé* of the last annual meeting at Swansea is given as well as information about the forthcoming meeting at Oxford.

Frondes Caducæ. By MONTAGU LOMAX. London: H. J. Glaisher. 1903 Pp. 112. Price 3*s*. 6*d*. net—This is a little book of poems which, as the author says in his modest preface, "are now published more in the hope of giving pleasure to the few who know me than to the many whose suffrages I am not competent to gain." Mr. Lomax has certainly a spark of the divine fire and his verses flow easily. The best, we think, is the song beginning "One day with many a loving vow I kissed my lady fair," which has quite a ring of Prior about it. We are glad to see that Mr. Lomax accents the name "Trafalgar" rightly, as will be seen from the sonnet on p. 111.

Victoria, Regina et Imperatrix, a Hymn Dramatic of Life and Death. By GEORGE B. BARRACLOUGH, M.A., M.R.C.S. Eng. London: Morrish and Co. 1903. Pp. 9. Price 1*s*.—We give Mr. Barraclough every credit for his loyalty but his verses are somewhat recondite, a difficulty he himself seems to have experienced. He says, for instance:—

"So faintly did he utter this
I hardly gathered its import."

We do not wonder, for what "he" said was this,

. . . .

. . . .

It is a God the twins occide,
And Dark the tomb where he abides
Within the chest his Body hides,
Till Hermes raise him for his bride."

Bettws-y Coed as a Health Resort. By a Member of the Medical Profession. Oswestry and Wrexham: Woodall, Minshall, Thomas, and Co. Pp. 41. Price 1*s*.—Bettws-y-Coed is such a charming place and is apparently still so old-fashioned that we are almost sorry that the "Member of the Medical Profession" has drawn attention to it. It seems to be an ideal place for a rest and the country round is full of objects of interest, especially for those who care for ecclesiology. How many are there, for instance, who know that Capel Curig is called after St. Cyriac who, together with his mother Julitta, was martyred in the Diocletian persecution? Bettws-y-Coed possesses a gravel soil, pure water, and pure air, together with an abundance of conifers, but we earnestly hope that it will never become fashionable and overgrown.

Lateral Curvature, Stooping, &c. By E. NOBLE SMITH, F R C.S Edin London: Smith, Elder, and Co. 1904. Pp. 133. Price 2*s*. 6*d*.—This little book gives a simple and practical account of lateral curvature of the spine which, as Mr. Noble Smith *rightly says*, may be called a *symptom* rather than a disease. The directions for treatment are sound and include the removal of the exciting causes, a discursus upon lying down, which is mainly mentioned as unsuitable, exercises, massage, and mechanical treatment. This latter chiefly resolves itself into the use of Chance's splint. The book contains an interesting chapter on the influence of diet upon physical development, while other chapters deal with the beneficial effects of development of the chest in cases of pulmonary tuberculosis. An excellent portion of the book is that dealing with clothing.

JOURNALS AND MAGAZINES.

The Monthly Review, which has now taken an assured place as one of the most important and responsible periodicals that we have, publishes in the February number some topical articles of great interest. Mr. Robert Machray discusses the crisis in the Far East with the simplicity that comes of knowledge of the subject; and his prophecy that "from a philosophical point of view the crisis is natural, inevitable, and is bound to come sooner or later, having its roots deep in history, its branches far outspread by forces always working in great, living, strenuous races," has already come true. Mr. R. A. Westenholz, president of the Agrarian League of Denmark, makes an important contribution to the fiscal question in an account of the present condition of Danish agriculture under free trade. Whether the conditions that have been so conducive to the agricultural prosperity of Denmark could have been enjoyed in this country during the past quarter of a century if our farmers had been more enterprising in the "sixties" and "seventies" and if our standards of technical education had received some little attention from politicians is another matter and one which is outside the scope of Mr. Westenholz's paper. A third article which calls for particular notice, written by Mr. Paul Waterhouse, deals with the facilities usually supplied for emptying theatres of their audiences. It is not altogether cheerful reading, for the general lesson conveyed is that the arrangements for escape from even the best London theatres in case of fire would be ineffective if the audience were panic-stricken, and it is almost impossible to conceive of any audience not being panic-stricken in the terrible circumstances of a conflagration within a crowded building. We agree with the writer that some measure of safety would lie in "an aggregate of preparation—a state of accumulated corporate pre-knowledge," but there is not much consolation in the reflection. This means that the audience would have to do fire-drill occasionally. how this is to be managed we cannot conceive. To let the audience know beforehand that they would have to undergo fire-drill is to remove the panic that alone precludes a well-built theatre from being evacuated in five minutes, while to spring a fire-drill upon the audience might be to risk killing as many people upon the false alarm as would have perished, presumably, in the case of a fire. In the site of the theatre lies the solution of the problem. We cannot return to the semicircular excavation of the hill-side wherefrom the Greek saw the drama despite the elements; but our authorities might recognise, in all future licensing of buildings, the enormous advantages of building a theatre on the side of a steep hill, and the necessity of abundant street frontage.

MEDICINE AND THE LAW.

The Jurisdiction of Magistrates in Cases of "Conscientious Objection."

AN evening newspaper which openly avows its hostility to vaccination recently published a paragraph headed "An Antivaccinator's Mecca" in which it stated that the magistrates at Heywood had in a single day granted "20 vaccination exemption certificates to applicants from all parts of the country," making a total of 53 such certificates during January, and further, that in the same place over 400 certificates of exemption from vaccination were granted during last year. Heywood, a manufacturing town and district in Lancashire, contains about 27,000 inhabitants and the birth-rate within the jurisdiction of the borough magistrates can hardly, according to previous returns, have exceeded 700 in 1903. If, therefore, the 400 children spoken of as exempted from vaccination last year were born, or were living, in Heywood we have a proportion of at least four unvaccinated children in seven in that locality on whose behalf the formality of obtaining an exemption certificate has been gone through and these figures take no account of those whose parents may have been able to ignore the law altogether with impunity. The paragraph, however, suggests that owing to the course taken by the Heywood magistrates persons not residing within their jurisdiction apply to them and receive exemption certificates for use elsewhere. We are not aware of the question whether this can legally be done having been before the High Court but Sir John Bridge in the early days of the Act had no doubt that it could not. A gentleman living at Wimbledon applied to him at Bow-street police-court on Sept. 1st, 1988, less than three weeks after the passing of the Act, and was told that his application could not be heard. The applicant relied on the fact that no mention of locality is made in the section which provides for conscientious objections. The legislature, however, no doubt intended that these should be considered and dealt with at courts within the district in which the unvaccinated child was, in fact, living at the date of the application. It certainly was not intended that special magistrates should be selected at will by parents on account of their known or supposed peculiarities. The paragraph in question may not accurately present the facts; if it does so it points to a very undesirable state of affairs. At the South-Western police-court Mr. Garrett on Feb. 8th gave a similar decision to that of Sir John Bridge.

A Point under the Public Health Act.

At Tottenham police-court on Jan. 28th Dr. J. F. Butler-Hogan, medical officer of health of Tottenham, applied for and obtained an order under Section 102 of the Public Health Act, 1875, to compel his admission to certain schools maintained at Tottenham by the Drapers' Company. The point for the magistrates' decision was whether the medical officer of health was entitled to an order for admission to any premises which he might think it expedient to visit and to which his admission was refused by the occupiers or whether before obtaining such an order he must show either that a nuisance requiring abatement existed on the premises or that he had reason to believe in its existence. The portion of the section upon which Dr. Butler-Hogan relied is as follows: "The local authority or any of their officers shall be admitted into any premises for the purpose of examining as to the existence of any nuisance thereon." If this sentence taken by itself supports the contention that the representative of the local authority may enter any premises for the purpose of ascertaining whether or not anything constituting a nuisance exists upon them, the rest of the section and those surrounding it are aimed at the abating of such nuisances as are known to exist and it cannot be said to be clear from them that magistrates may order private premises to be inspected at discretion. In the metropolis such an order cannot be made. This was decided in 1899 in the case of Vines *v.* the North London Collegiate School for Girls, referred to at Tottenham by the solicitor representing the Drapers' Company and reported in the *Justice of the Peace*, vol. lxiii., p. 244, a case involving facts similar to those which gave rise to the application at Tottenham but governed by a different Act of Parliament. The Public Health Act, London, 1891, the construction of which was there involved, contains words more clearly against the right to inspect at discretion than anything to be found in the general Act of 1875. As it is quite possible that the Drapers' Company may not be content to accept the decision of the Tottenham magistrates and as it may be able to have the matter reconsidered in the High Court further comment would be out of place. The matter is of interest, not in connexion with the particular schools in question, against which, as has been said, no cause of complaint is alleged, but because there are many institutions the sanitary arrangements of which are likely to be in a highly undesirable condition but with regard to which nothing may occur to call the attention of the local authority to any nuisance until an outbreak of illness takes place.

The Medical Man, the Coroner, and the Pathologist.

The *Star* in an article headed "The Wise Economies of the County Council," which appeared in its issue of Feb. 6th, attributed to THE LANCET an article which appeared in the *British Medical Journal*, commenting upon the employment of Dr. Freyberger to hold the necropsy upon Whitaker Wright. We do not wish to express dissent from the views of our contemporary as to the attitude of the coroner towards the medical profession, but merely to disclaim the credit of having expressed them on the occasion alluded to. *It would* not, however, be correct to say of us that "the regularity of the coroner's procedure is not called in question," nor do we agree with the *Star* that this describes the attitude of the *British Medical Journal* upon the subject. We have freely expressed the opinion that the employment of Dr. Freyberger by Mr. Troutbeck in many cases in which he has been employed has not been in accordance with the sections of the Coroners Act relating to the calling of medical witnesses at inquests. We have also suggested that if the employment of Dr. Freyberger is not in accordance with the law the fees paid to him by the County Council in respect of it are improperly paid and that the right way to raise the question is by calling the attention of the County Council's auditor to them If they have been wrongly paid it is his duty to surcharge them.

CAISSON DISEASE.—It is stated that five deaths have occurred in the execution of the foundation work for the Manhattan bridge, New York—three of them on the Brooklyn pier, which is now finished, and two on the New York pier, which is still in progress. The men are now working at a depth of 92 feet in two shifts a day of one and a half hours per shift with an interval of four and a half hours between shifts; the wages are 3½ dollars per day.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 13, 1904.

Public Affairs and Public Health.

A COMPLETE discussion of the actual or possible influences exerted upon public health by the course of public affairs would constitute a new and eminently interesting contribution to the etiology of disease. The happy condition of a nation that has no history, if such there be, must surround its constituent units, individually and collectively, with an atmosphere widely different from that to which we have become accustomed, and must render them exempt from many dangers to which we are prone. By the common consent of competent observers few things are more destructive of sound health than the class of demands upon vital force which are commonly described as "worry," and which arise, generally speaking, from uncertainty with regard to issues which are calculated to affect the prosperity of those whom they concern. The giants of the human race are able to cast off burdens of this description which fall with crushing weight upon the shoulders of weaker men. However they are engaged, whether in war, in politics, or in finance, they learn to decide quickly upon such elements of the problems presented to them as may be at the time available and, having decided, they act and wait. They dismiss the subject from their minds until the consequences of their action become apparent and until there is something more to be done. They harden their hearts against temptations to look back, or to reconsider that which is irrevocable, and devote their energies wholly to preparing for the future and to grasping it when it arrives. In this way, and probably in this way only, can the forces of the brain be entirely utilised and utilised in such a manner that no waste of power shall be permitted. The man who hunts yesterday's hare over again, or who dwells upon yesterday's letter, or who, by what our neighbours felicitously call *esprit d'escalier*, suffers his thoughts to linger upon the more effective manner in which it might have been possible to terminate last week's interview is giving his substance in exchange for that which is nought. He is squandering his nerve cells in a fashion which can yield him no return and which, not only by so much diminishes his power of using them fruitfully in other directions, but also, in all probability, converts some portion of the waste into material of a more or less toxic character. The first lesson of scientific education should be that a man's brain cells are not only money, but capital and that it is just as possible to dissipate them foolishly as to use them in the work of building up a career.

Great public events, of whatever nature, are certain to entangle in their meshes innumerable people who at first sight might be supposed to lie beyond their influence and who are absolutely without responsibility for their occurrence. Readers of "Vanity Fair" will remember old SEDLEY'S touching complaint of the consequences brought upon him by the return of NAPOLEON from Elba and by having trusted in the representations of the great Powers who had declared their intention of keeping him there. At this very moment the prosperity of England, or rather, perhaps, the prosperity of many Englishmen, may be brought into jeopardy by the circumstances which have kindled a war of which no one can foresee the termination, and which, even if we should escape from being dragged into it, will assuredly work many changes in our commercial relations, and dry up some at least of the channels through which they have been conducted. The wages of thousands of Lancashire operatives have been diminished by the proceedings of cotton gamblers in another continent and the interests of the employers of those operatives are themselves seriously endangered by the continuance of the same proceedings. The weather of the current year, so far as experience of it extends, seems to promise that the agricultural losses of the past are more likely to be exceeded than to be repaired; and, to crown all, the aggregate wealth of the nation is seriously diminished by the prices of securities. Such a combination of affairs cannot exist without bringing the potentiality of serious disaster to many, the certainty of ruin to some. It can hardly be doubted that the conditions must throw unwonted stress upon the lives of large numbers of our countrymen and countrywomen and must at least have some influence in predisposing them to suffer from disease. The hearts of many men must be "failing them for fear and for looking after those things which are coming on the earth," and by so much their resisting power must be diminished. They must walk warily if they would emerge victorious from a contest in which they cannot refuse to engage.

In such circumstances it surely behoves the members of the medical profession to justify their claim to be public advisers by giving such wholesome counsel as the occasion may require. Every man in practice comes into possession of knowledge concerning the affairs of his patients and is able, at the very least, to form shrewd guesses as to the various skeletons which their cupboards may conceal. It should be an important part of his functions to see that these skeletons are neither brought out for examination with undue frequency, nor ignored at times when a recollection of them might prove a safeguard against danger. If we think only of the future of England we may feel a conviction amounting to certainty that she will emerge from her trials, whatever they may be, stronger and more glorious than even in the past. We cannot conceal from ourselves the probability that the public events by which we are confronted will tell hardly, it may be even destructively, upon individuals, and our business is with individuals and with their preparedness for anything which the fates may have in store for them. We should instruct the harassed man as to the methods by which he may either husband his strength or waste it and should try to make known the value of prudence, of temperance, and of moderation. Among the temptations of such a time excess in the use of tobacco is not the least, nor is it the least certain to be followed at critical periods by comparative loss of the power to think with clearness and to decide with wisdom. Every practitioner must have seen examples of brain failure under conditions of anxiety and stress which have been more attributable to frequent "nips" of alcohol and to multitudinous cigarettes than to any real disproportion between the powers of the unpoisoned nerve structure and the work which it was called upon to accomplish. For every man whose commercial future is brought into danger by public events the wisest counsel is that he should keep in sound physical training. The more excellent the condition of his bodily health and the more wholesome his habits of life the more certain will he be, other things being equal, to master adverse circumstances by which a feeble man would be overcome. The pressure of anxiety does not necessarily mean disease, but it does mean an increased liability to succumb to its invasion. The part of the prudent is to be wise in time and to neglect no preparation for a contest of which it may be impossible to foresee either the duration or the severity.

The Spread of Small-pox by Tramps.

WHAT a potent factor in maintaining the prevalence of small-pox is that unemployed and largely unemployable degenerate the habitual vagrant or tramp who forms a prominent feature on the highways of our midland counties! The fact that this parasite upon the charity and good nature of the community is in his turn a vehicle for the spread of other parasites, both animal and vegetable, is common knowledge but practically no compulsory steps have been taken to curtail seriously the vagrant's movements or to promote his elementary cleanliness. Dr. P. BOOBBYER, medical officer of health for Nottingham, furnishes in a recent official report some admirable illustrations of the success which attends the efforts of the tramp to assist the conscientious objector in keeping small-pox from leaving our shores. The facts communicated in the report are remarkable. Dr. BOOBBYER tells us that at the beginning of 1903 a casual labourer, who at times figured as a professional tramp, was the means of spreading small-pox to no fewer than a dozen persons, the success of his efforts being apparrently due to the fact that he paid a visit to a public-house at a time when the trade was brisk. Shortly after this incident a tramp who had manifested a small-pox eruption for the past three days was admitted into the Nottingham workhouse and it appeared that in his recent wanderings he had passed through Loughborough, Leicester, Mansfield, and Doncaster. Again, but still in January, 1903, another tramp developed small-pox on arrival at H.M. Prison at Nottingham and two days later another of these unfortunate wayfarers presented himself at the Basford workhouse, Nottingham, with the eruption of small-pox just appearing. Yet another two days and a second brace of tramps suffering from the same disease were admitted into the same institution. Early in February a tramp suffering from small-pox was found in one of the common lodging houses *en route* through the town from north to south, and on the 15th of the same month a man who had tramped from Burton-on-Trent and who had manifested a small-pox eruption during the greater part of the journey was admitted into the Nottingham workhouse Another instance of infection by tramps occurred in February and in April a tramp from Loughborough and another from Mansfield were admitted into the Basford workhouse with a variolous eruption already well developed. During November three cases of small-pox occurred at Bulwell, a northern suburb of Nottingham, and others at Narrow Marsh, near the centre of the town, which had been infected by a tramp who passed through these two districts at the end of October (without detention) and who was ultimately discovered at Rothwell in Northamptonshire scarred by recent small-pox. One of this last series was instrumental in conveying the disease into the Nottingham workhouse where several persons were subsequently infected. Finally, by way of a crowning instance, Dr. BOOBBYER tells the story of a tramp who with the vesicular eruption of small-pox upon him paid a visit to a barber's shop and a public-house and was thus the means of infecting "at least 14 persons resident in various parts of the central and eastern divisions of Nottingham, including at least two in the Narrow Marsh district—one of the worst slums in the midland counties—from which neighbourhood a dropping fire of cases have been coming at short intervals ever since." This, then, is the unfortunate history of Nottingham.

But in illustration of the fact that the experience of this midland borough is in no sense exceptional we may refer to a report made by the medical officer of health of Newcastle upon "small-pox and vagrants in England and Wales" during the epidemic of 1891–93. In this paper Dr. HENRY E. ARMSTRONG stated that "of 63 urban districts invaded by small-pox in no less than 59 per cent. the disease was known to have been first introduced there by vagrants, and in 73 per cent. it was carried there sooner or later by this class. During the epidemic *secondary* introductions of small-pox by vagrants occurred ten times in each of 14 districts, 12 times in one district, 15 times in another, 18 times in another, and no less than 25 times in another." The report from which we have just quoted was instrumental in bringing together a conference under the auspices of the London County Council at which certain elementary recommendations were formulated and forwarded to the Local Government Board. They have not, however, yet got so far as the floor of the House of Commons. It is somewhat remarkable that the steps necessary to limit the mischief caused by these unfortunate vagrants have never been taken, not even so far as to require the vaccination and revaccination of persons in common lodging houses or casual wards who are exposed to the infection of small-pox. For ourselves we should like to see this subject taken up by some leading Member of Parliament, such as Sir MICHAEL FOSTER. We can hardly believe that if the facts which we have recorded were placed before the House with the eloquence of which the member for the University of London is capable the common-sense of the members would not carry the Revaccination Bill with an overwhelming majority. If the provisions of the much needed Bill, which we noticed in a leading article in our issue of Feb. 6th, p. 377, were properly carried out in the country generally, and applied with vigour in the vagrant wards, the charts of small-pox in England would henceforth be innocent of those black vertical lines indicating epidemic outbreaks of the disease. Will not Mr. LONG take under his powerful wing the Revaccination Bill and let his name be handed down to posterity as the Minister of Preventive Medicine who banished small-pox from the land?

Brandy *v.* British Brandy.

AT Church, near Accrington, five hotel-keepers have recently been summoned and fined 40*s.* each under the Sale of Food and Drugs Act, 1875, for selling as "brandy" to the prejudice of the purchaser an article not of the nature, substance, and quality demanded by him. Apparently the police entered each of the hotels in question and asked for a pint of brandy, when they were supplied in all cases with a liquid which is perfectly well recognised under the term "British brandy" but which, in fact, is not brandy at all. Brandy, as its name implies, is necessarily a grape spirit. The word is a natural abbreviation of "brandy-wine," a term once frequently used, which in its turn was an Anglicised form of the Dutch "*brande wijn*," or burnt wine—that is, the product of the distillation of wine. The manufacture of true brandy was fully dealt with in THE LANCET of Nov. 29th, 1902, p. 1503, and attention has been called in these pages on other occasions to the nature of the spirit sold in many public-houses and refreshment bars when brandy is asked for. The magistrates at Accrington are to be congratulated on having refused to believe that a man asking for brandy intends to receive an ardent spirit distilled from grain or from materials other than the juice of the grape when the recognised term British brandy exists should the purchaser choose to make use of it. The mere fact that the term British brandy has been invented and applied to the home product shows that at some time or other in the development of the English language it was felt that the word brandy by itself had a limited meaning, implying peculiar qualities. Apparently the solicitor for the defence in the recent cases at Accrington referred to the recognition of British brandy in Acts of Parliament of the seventeenth century. It is perfectly true that the possible manufacture of a spirit imitating brandy was early recognised by the Excise but this was in peculiar circumstances which have long since passed away and the spirit when first known seems to have been exclusively a subject of import.

Some of the old statutes upon the subject are of interest. The STUARTS, constantly in need of money, found strong liquors a convenient source of revenue and in two Acts of 1660 (12 Car. II., cc. 23 and 24) spirits are subjected to taxation in the following terms: "For every gallon of strong water or aqua vitæ made and sold to be paid by the maker thereof, one penny." "For every gallon of spirits made of any kind of wine or cyder imported, two pence." "For every gallon of strong water perfectly made, imported from beyond the seas, four pence." Ten years later a third Act (22 Car. II., c. 4) was found necessary in order to clear up an ambiguity. The preamble of this Act of 1670 is as follows:—

> "Whereas by two Acts made in the 12th year of His Majesty's reign and confirmed by this present Parliament there was laid upon every gallon of spirits, made of any kind of wine or cyder imported, the rate and duty of fourpence—namely, by each of the said Acts twopence—and upon every gallon of strong water perfectly made, imported from beyond the seas, the rate and duty of eightpence; and whereas some doubts have been made and raised concerning a certain liquor imported from beyond the seas, called brandy, whether the same should pay the rate and duty laid by the said Acts upon spirits made of any kind of wine or cyder imported or the rate and duty thereby laid upon strong water perfectly made imported from beyond the seas."

It is then declared "that the said liquor called brandy was at the time of making and confirming of the said Acts and is a strong water perfectly made and being imported from beyond the seas was and is chargeable in and by the said Acts with the rate and duty of eight pence per gallon." The deductions to be drawn from the passages which we have cited would seem to be that brandy was known in England not only in 1670 but even earlier, and that when the Act of 1660 was passed the "strong water or aqua vitæ" made in the country was not considered to be a form of brandy or a substitute for it, because if brandy had been recognised as similar to the already existing aqua vitæ it would have been taxed without question as a strong water imported. The Act of 1670, however, by its recital, shows that brandy was then a comparatively recent and not well-known beverage, that its preparation from the juice of the grape was recognised, and that it was regarded as a purely foreign spirit, taxable as such Twenty years later, however, there was a change, due to conditions arising out of war with France, and an Act (2 W. & M., c. 19) commences thus:—

> "Whereas by an Act made in Parliament held in the first year of their Majesties' reign, intituled 'An Act for prohibiting all trade and commerce with France,' all brandies, aqua vitæ, and spirits are prohibited to be imported into this kingdom, and whereas good and wholesome brandies, aqua vitæ, and spirits may be drawn and made from malted corn: For the encouragement therefore of the making of brandies, strong waters, and spirits from malted corn and for the greater consumption of corn and the advantage of tillage in this kingdom be it enacted ......"

At present happily we are far from being at war with France and there is no public demand for a so-called brandy made from potatoes, beetroot molasses, and other sources of alcohol which the ingenuity of chemists has discovered. We associate brandy, whether it comes from France, or Australia, or California, or elsewhere, with the distillation of fermented grape juice and nothing else. It was this distillation from wine which gave to brandy its high reputation centuries before the STUARTS reigned and before the imported beverage, no doubt highly popular with good livers under KING CHARLES II., became the gauger's prey.

The distillation of spirit from wine, under whatever name the product first figured, seems to have been the achievement of continental chemists in the thirteenth century and RAYMOND LULLY of Majorca, disciple of the actual inventor, ARNAULD DE VILLENEUVE, believing it to be a discovery of supreme importance to mankind, wrote of it thus in enthusiastic terms: "Limpid and well-flavoured red or white wine is to be digested 20 days in a close vessel by the heat of fermenting horsedung and then to be distilled in a sandbath with a very gentle fire. The true water of life will come over in precious drops, which being rectified by three or four successive distillations will afford the wonderful quintessence of wine." Processes may have changed in detail but when we ask for brandy, the term of Low German origin most generally employed in this country, we use a word implying (to those who seek its derivation) the "quintessence of wine," and we are glad to see that under so modern an enactment as the Sale of Food and Drugs Act we are entitled to get it.

In view of the importance of brandy from a medicinal point of view and the evidence of clinical experience it is satisfactory at length to find signs of some control being established over the sale of worthless substitutes. Good brandy is *par excellence* the medicinally valuable spirit and its timely administration has saved many lives. We are gratified to find that there is promise of the investigations of THE LANCET Analytical Commission upon this important subject bearing good fruit.

The Biological and Comparative Aspects of Cancer.

A CONNECTED narrative of the results of recent investigations into cancer by different groups of workers will lead to a better conception of the bearings of such work upon our present knowledge. The lines of inquiry which have led apparently to issues of importance have been essentially biological in character. It is no new thing to regard cancer from the biological standpoint, as all readers of THE LANCET know. We do not, however, here intend to refer to any prophetic expressions of early pathologists but only to consider essentially modern research. In an address on the Relation of Biology to Medicine delivered by Dr. Dr. J. ROSE BRADFORD and published in our columns on June 21st, 1902, p. 1747, it was distinctly pointed out that "whatever the nature of cancer may be a great amount of light will be thrown on that question by the researches of the pure biologist rather than by those of the human pathologist," and he indicated that this line of inquiry must of necessity throw light alike on the appearance which had been regarded as evidence of the presence of causative parasites and on the minute histology proper of the cell, which, in its relationship to cancer, had hardly been touched. It was not, however, until the Cancer Research Fund entered on its investigations that the biological and comparative aspects of the problem of cancer were approached in a serious fashion. And already this line of investigation has been productive of new facts, while, by placing upon a comparative basis all that has hitherto been recognised as essentially characteristic of cancer in man, it has given a new significance to long-recognised conditions. The extent to which cancer permeates the different divisions of the animal kingdom has not yet been fully ascertained, but the knowledge of the extent of its ramifications has been sufficient to narrow the field of inquiry to the few conditions which are common to the animal forms in which cancer occurs. Thus by an apparent extension of the field of inquiry in the first instance an actual narrowing of the investigation has been effected, and the facts ascertained by the comparative study of the zoological distribution of cancer will have to be reckoned with in future work on the malignant new growths from which human beings, in common with the lower animals, suffer.

The papers which have recently appeared have, we think, received somewhat precipitate publication, and the purely cytological observations placed on record have therefore not been brought into proper correlation; indeed, it is not improbable that much investigation will be necessary before this is attained. It often happens, when scientific investigation and thought are focussed on a problem at a time when it is ripe for study, that many independent workers approach the same goal by different paths. This has been the case with cancer, for while we have specially in our mind, as we write, three communications which have just been made public, it is well known that other observers than the authors of these papers have been drawn towards a similar solution of the problem of the nature of cancer. In the first of the three papers to which we are alluding, Professor J. B. FARMER, Mr. J. E. S. MOORE, and Mr. C. E. WALKER were concerned with the study of the cytological characteristics of malignant new growths in man. The occurrence in cancer of those types of cell division which had hitherto been regarded as peculiar to the reproductive tissues was placed on record and interpreted by the writers to signify that malignant new growths were virtually reproductive tissue. This conclusion was strengthened by an analogy drawn from plant life. The prothallus of the fern consists of cells which have undergone the peculiar reducing division in question, and it was stated that this reproductive tissue behaved towards the parent fern plant in the same way that a cancer behaves towards the human patient. It was further argued that the tissues of the asexual generation of the fern plant could be experimentally converted into reproductive tissue by external agencies and conditions. This fact was held to be analogous to the greater prevalence of cancer in certain districts or even houses. The publication, with the authority of the executive committee of the Cancer Research Fund, of the second paper was necessitated by the appearance of the first This paper, which was communicated to the Royal Society by Dr. E. F. BASHFORD, Director of the Cancer Research Laboratory, and Dr. J. A. MURRAY, has been already referred to by us in a leading article, and is published in full on p. 413 of this issue of THE LANCET. It seems to have already caused Professor FARMER, in an article which he has contributed to *Nature*, to modify the views originally held. Dr. BASHFORD and Dr. MURRAY set out the facts showing the extent to which cancer is found throughout the animal kingdom and the deductions based on the uniform character of malignant new growths notwithstanding their wide distribution. From these observations the conclusion is drawn by them that cancer must not be regarded from the standpoint of human pathology, but its cause and nature must be sought for in the potentialities which reside in the cells constituting the living body in divergent forms of animal life. In accordance with this view external conditions can only play a very subsidiary rôle, if any, in causing cancer. The conclusions are extended by giving comparative significance to the observations by Professor FARMER, Mr. MOORE, and Mr. WALKER on the nature of some of the cell divisions which occur in the malignant new growths of man. The occurrence of these peculiar mitoses is, however, regarded merely as a phase in the life-history of malignant new growths, which are not built up solely of cells comparable to the tissue of the fern prothallus or to certain cells in normal reproductive tissue. Dr. BASHFORD and Dr. MURRAY abstain from ascribing to the cells simulating reproductive elements either the absolute diagnostic value or the responsibility for malignancy which has been claimed for them and their descendants. It will be seen that they do not follow Professor FARMER and his colleagues, even while from a different standpoint they record confirmatory work.

Referring further to the paper which we publish this week, the potentialities residing in the cancer cells can be seen to be exemplified by observations on the transmissibility of cancer from one animal to another. It is demonstrated that in successful transmission the tumours which arise are the genealogical descendants of the cells actually introduced. The artificial transplantation of a malignant tumour is not regarded as throwing any light upon the origin of cancer, but as demonstrating that the proliferative activity of its cells can persist for a long time. This great power of proliferative activity, it is indicated, may depend upon the peculiar forms of cell division which some of the cells undergo. In other words, the cells which have undergone the peculiar reducing division may have prepared themselves for conjugation.[1] Conjugation is an act of fertilisation and when properly consummated gives rise to fresh generations throughout the entire animal and vegetable kingdoms. It is therefore not impossible that future work will show that many of those characteristics which are summed up in the word malignancy—the independence, the power of proliferation, the formation of metastases, and successful transplantation of cancer—are intimately related to the occurrence of cell conjugation. When it is stated that a malignant new growth belongs to a new cycle, comparable in its entirety to the organism which it is invading, it is not thereby implied that a malignant new growth is comparable to an embryo but rather that the cancerous tissue possesses the characteristics of a protozoan colony. Such, a little roughly speaking, are the lessons to be drawn so far from the consideration of the biological aspects of cancer. Enough has been established to make it of prime importance that systematic work on the same lines should go forward.

Annotations.

"Ne quid nimis."

MR. WALTER LONG AND THE LONDON COUNTY COUNCIL.

EFFORTS to save and to prolong life, to prevent disease, and to promote happiness are not, as a rule, attended by that glamour which waits upon those whose work is more particularly associated with the destruction of life and property and with the existence of disease and misery. Without entering into a discussion as to the ethics of this difference it affords us much pleasure to be able to record that the efforts of those who spend their lives in the war against disease have been recently acknowledged in a gracious fashion by the commander-in chief of the public health service of this country. It is now a considerable time since the public has been startled by announcements in the lay press that cases of exotic disease have passed our first line of defence and have gained a footing in the metropolis But it will not be without interest to the medical profession and to the public to learn that as recently as Christmas Day the officers of the Medical Department of the Local Government Board and of the London County Council were busily engaged in investigating a group of suspicious cases of illness which was by some regarded as being of the nature of plague. It will also be a source of satisfaction to the public to learn that so admirably were our defensive measures found to be organised that although in this instance the alarm was a false one the President of the Local Government Board directed that the following letter of appreciation should be sent to Mr. Shirley F. Murphy, the distinguished medical officer of the London County Council:—

Local Government Board, Whitehall, S.W.,
Jan. 1st, 1904.

[illegible]
connex [illegible]
ing of [illegible]
to be v [illegible]
Dr. S [illegible]

We congratulate Mr. Shirley Murphy upon this incident and we, moreover, express our appreciation of this graceful act on the part of the President of the Local Government Board. In order that there may be thorough efficiency in the public health service it is necessary that all branches of it shall work in harmony, and a word of recognition from time to time from the head of the service is one of the very best means of promoting such harmony and efficiency.

THE TRAINING OF MIDWIFERY NURSES AT THE ROTUNDA HOSPITAL, DUBLIN, AND THE REGULATIONS OF THE CENTRAL MIDWIVES BOARD.

WE publish elsewhere a copy of the correspondence which has passed between the Master of the Rotunda Hospital, Mr. E. Hastings Tweedy, and the secretary of the Central Midwives Board. It would appear that under the present regulations of the Board, by which a woman "must have attended and watched the progress of not less than 20 labours and personally delivered the patient, and, further, must have nursed 20 lying-in women during the ten days following labour," the nurses trained at the Rotunda Hospital are precluded from qualifying for admission as candidates to the examinations of the Board. This is due to the fact that in this hospital the patients as a rule leave on the eighth day following their confinement and, further, that it is impossible for each of the nurses, although they spend six months in the hospital, personally to conduct 20 cases of labour. As Mr. Hastings Tweedy aptly points out, six months' residence in a lying-in hospital is regarded by many of the examining bodies as affording the ideal training for a medical student, and when this period of time is so spent the personal conduction of any specified number of labours is not insisted upon. Certainly the facts brought forward with regard to the teaching of the midwifery nurses in the Rotunda Hospital would tend to show that the training which they receive is of the highest character and we have no doubt but that it is so. The Rotunda Hospital has long been considered one of the best training schools for students in midwifery and in these circumstances the training which its nurses receive is certain to be most efficient. This, however, is not a consideration which can be taken into account. The present curriculum for the midwifery nurses does not comply with the regulations of the Board as approved by the Privy Council for a period of three years from August 12th, 1903, and in these circumstances the Central Midwives Board had no alternative but to reply to Mr. Tweedy that it was impossible for it to make any alteration in the regulations. It is most unfortunate that the matter was not brought to its notice before the rules were approved as it is quite obvious that the training of these nurses is such as well to qualify them for the State examination. It will, however, still be some little time before the first of these examinations is held and in the meantime we hope that some way out of the difficulty may be found. It would obviously be regrettable if any permanent disqualification of the Dublin nurses were to ensue.

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[1] A paper entitled "Conjugation of Resting Nuclei in an Epithelioma of the Mouse" was communicated to the *Royal Society* on Feb. 4th by Dr. Bashford and Dr. Murray.

GLADIATORIAL SHOWS.

WE are not among those who can see nothing that is good in public exhibitions of athletic skill in which danger is not entirely absent or in which the element of personal antagonism also plays a part. It is easy to deride such a sight as that of a recent great wrestling match and to declare that with all our vaunted advances we preserve the debased tastes of Rome in its degenerate days. Moralists in this strain are one-sided persons and they are also likely to miss important points. To begin with, there is all the difference in the world between a combat such as that to which we have referred and the gladiatorial shows of ancient Rome. In these there was not merely the chance of danger but the certainty of it and the probability of death itself was the piquant sauce which chiefly affected the jaded palate of the Roman spectator. Moreover, the gladiators were not, as a rule, free agents in the matter. They could not choose with whom or with what they would fight or whether they would fight at all. To witness such a sight as that of a man battling for his very life with an infuriated wild beast may be exciting but it can have no elevating influence of any kind. A very different effect is produced when two highly trained athletes choose to enter the ring for a fair trial of strength and skill. There is something stirring in the mere aspect of a fine specimen of physical development and condition. That same quality of admiration by which the typical Englishman is moved at the view of a splendid racehorse is not a thing to be deplored or despised and it is the same emotion in a higher degree which is aroused by the spectacle of human physical attainment at its highest point. In the latter case, moreover, the sight appeals more directly as an example and may lead in the case of many a beholder to some exercise of those admirable qualities of restraint, of self-denial, and of good temper without which a successful athlete is scarcely to be developed. A cavil might be raised that what we have said applies equally to the abolished prize-fight. That is true only so far as the combatants are concerned, it is not true with regard to the nature of their contest. Nobody objects to the skill, the strength, and the courage of the prize-fighter; it is the brutality which necessarily accompanies a competitive exhibition of these qualities in boxing that justifies the prohibition of the prize-fight. Wrestling entails no such brutality and though to our minds a far less interesting sport to witness than good boxing is yet a worthy incentive to physical training on the part of those who seek proficiency in the art. We have suggested that athletic exhibitions by trained experts are to be approved of because of the fine physical example, an emulation of which they may stir within the breasts of young men who witness their performance. It is spectators of this kind with whom alone we sympathise. The young man's inclination for athletic exercise and all the advantages that proper physical exercise entails is stimulated by watching those of greater prowess than his own and such a young man is the proper element in an audience such as that at Olympia. We confess to no sympathy at all with those who watch a contest for the mere excitement of it. The fat man who has never attempted athletics, who is chiefly attracted to boxing matches by the big cigar behind which he watches them and the big bet by which he may gain from them—such men as he have no more fitting place in the audience than has a woman or a child. The last two are out of place, because one would not if she could and the other could not if he would emulate the athlete's qualities.

THE HOSPITAL ISOLATION OF SCARLET FEVER.

WE have received a copy of a report presented to the health committee of the borough of Portsmouth by Dr. A. Mearns Fraser, medical officer of health of the borough, on the subject of hospital isolation of scarlet fever. Dr Fraser commences by stating that certain criticisms had appeared in the local press as regards the admission of patients into the Milton Hospital and that the board of guardians had written to the Local Government Board complaining of neglect on the part of the sanitary authority He wished to show that much misunderstanding existed on the subject. His remarks are of considerable interest and we are glad to note that the report was unanimously adopted by the Portsmouth sanitary authority together with a vote of thanks to Dr. Fraser for presenting it. On several occasions of late years it had proved necessary to keep patients waiting a few days before admission to the hospital. The patients were suffering from scarlet fever, diphtheria, or typhoid fever. This fact was deemed sufficient to found a charge of neglect against the sanitary authority by those who, without understanding fully all the circumstances, were apparently of opinion that it was the duty of the sanitary authority to have at all times in readiness an isolation hospital large enough to admit all the cases of infectious disease that might occur in the town. Dr. Fraser points out that on every occasion when patients had to wait for admission the cause has been the large number of scarlet fever patients and the large proportion of beds in the hospital that it was found necessary to devote to that disease. He therefore quite logically concluded that the determining factor in estimating the size of the hospital must be the number of scarlet fever patients to be admitted. He further tells the health committee that if it is proposed to maintain a hospital large enough to admit all cases of scarlet fever a hospital twice the size of the existing one would be required. As this would entail great additional cost he asked the question: "Is the benefit to the borough that will result from the admission of every case of scarlet fever that desires hospital treatment worth an additional £3000 to £4000 per annum?" In order to obtain assistance in arriving at the solution of this problem he gives certain statistics which are well worthy of attention. He first asks, "Is scarlet fever a disease of such great importance—i.e., is it a cause of so great a mortality or illness—as to warrant a large proportion of the rates being spent upon it?" He arrives at his answer by analysing the death returns of the borough for the past ten years. He gives a table comparing the mortality from scarlet fever with that from other diseases and shows that so far from scarlet fever being one of the most fatal it is actually one of the least dangerous diseases, the death-rate being decidedly lower than that from whooping-cough, diphtheria, typhoid fever, or measles. Next he considers the question, "Is scarlet fever a disease of such a character that the chances of the patient's recovery are greatly enhanced by hospital treatment?" Again the answer is in the negative. During the past ten years 5859 cases of scarlet fever were notified in Portsmouth. Of these, 3259 were treated in the hospital and 2600 at their own homes. Of the hospital cases 97·46 per cent. recovered whilst of the others 96·58 per cent. recovered. In relation to these two questions it must be remembered that the mortality from scarlet fever varies greatly in different epidemics but by taking the returns for ten years Dr. Fraser has to a great extent avoided a possible error. The death rate from scarlet fever also appears to be much lower in Portsmouth than it is in London. He next asks the all-important question, "Does isolation in hospital prevent the spread of scarlet fever?" He admits that this is a very difficult point to settle. He gives as his own personal opinion that the value of hospitals for infectious disease in the prevention of scarlet fever has been greatly over-estimated and he advances arguments in favour of this view. He states his case clearly and lucidly and the points which he raises are worthy of careful consideration; he particularly insists that his remarks must be taken as applying only to scarlet fever. Before expressing any definite opinion on the matter we think it would be of value if the medical officers of health of other boroughs would bring forward their statistics as corroborating or otherwise Dr. Fraser's conclusions. The question of providing accommodation for cases of infectious diseases is of the utmost importance to the community in general. At the same time the borough councils are naturally desirous of lowering expense so far as is consistent with the most modern views of medical science.

"A SCHEME FOR THE COMPARISON OF CLIMATES."

UNDER this title Mr. W. F. Tyler has published in pamphlet form[1] a paper which is reprinted from the February number of the *Journal of Balneology and Climatology*. Mr. Tyler is not a medical man but has had excellent opportunities of studying the subject during a long residence in Shanghai and as a Fellow of the Royal Meteorological Society he is likely to be acquainted with current ideas on this confessedly vague and uncertain topic. He assumes in the first place that the factors in the formation of climate are chiefly temperature, soil, prevailing winds, aspect, rainfall, humidity, altitude, and sunshine. He further assumes that the word climate is generally used to indicate, in respect to a particular locality, the effect of local conditions generally on persons of varying temperaments. Obviously, therefore, the estimation of climate does not admit of anything approaching the precision with which the meteorological and topographical conditions just mentioned can be expressed. The foundation of Mr. Tyler's proposed scheme is the idea of equal differences of sensations of various kinds and he thinks that the idea of climate is mainly the joint effect produced by temperature and humidity on the sensations of the inhabitants of the particular locality. In 1902 an attempt was made to give concrete expression to these sensations, or differences of sensations, by observations made on themselves at Shanghai by 12 individuals of normal condition and regular habits on each day of the month of August in that year. The word "hyther" was coined to indicate the sensation which is caused by a warm climate and is supposed to be due to the combined effect of heat and humidity. The observers, each for himself, estimated daily at noon the degree of "hyther" on a scale of 0 to 10. On this scale 10 represented the very worst day that the observers remembered to have experienced in Shanghai—hot, damp, and enervating; while 0 represented an ideal summer's day—warm, of course, but bright, brisk, and bracing, when a person suitably attired felt no discomfort from temperature and humidity. These records when plotted as diagrams on squared paper could not be expected to give approximately coincident curves, but, nevertheless, there was an amount of agreement between several of them which led Mr. Tyler to the conclusion that the principle was sound. A number of such graphic curves are shown in the pamphlet and their relations to the instrumentally recorded meteorological phenomena are discussed. In records of sensations it is evident that a great deal will depend on the previous training and the general psychology of the observer.

FALLACIES ABOUT FISH FOOD.

IT is doubtful whether any given food in common use contains constituents which have a selective action, so to speak, or the property of ministering to one part of the body more than another. As a rule, when a food is assumed to have specific reparative properties—as, for example, a so-called brain or nerve food—the fact really is that such food is easily and quickly assimilated to the body's general advantage; in a word, in such a case repair quickly overtakes waste and a real purposeful nutrition and restoration are accomplished. The administration of such elements as phosphorus or iron in medicine is, of course, a different matter, but these elements are evenly distributed in the materials of a daily diet. It is often stated that fish is a food which ministers particularly to the needs of the brain because it contains phosphorus. As a matter of fact fish does not contain more phosphorus than do ordinary meat foods and it certainly does not contain it in the free state. The notion that fish contains phosphorus had no doubt its origin in the glowing or phosphorescence of fish in the dark. This phosphorescence is due not to phosphorus at all but to micro organisms. The belief therefore that fish is a brain food is just about as reasonable as the idea that because a soup is thick and gelatinous "it will stick to the ribs," or as sensible as the celebrated advice to Verdant Green to lay in a stock of Reading biscuits to assist his reading. Fish, of course, is excellent food, partly because of the nourishing nature of its constituents and partly because of its digestibility. But it is in no sense a specific for brain or nerve. It is stated by some that a fish diet has an aphrodisiac effect; if this be so it is probably due to its favourable action upon the processes of nutrition and not to phosphorus. In connexion with this reputed property of fish food Dr. I. Barney Yeo quotes a remarkable passage in Montesquieu's "Esprit des Lois" which is as follows: "The founders of the religious orders who desired to subject their unhappy victims to the impracticable law of chastity wholly missed their end in prescribing for them the habitual use of fish."

THE SANITARY INSTITUTE.

THE following officers will preside over meetings of the next congress of the Sanitary Institute to be held in Glasgow from July 25th to 30th. President of the Congress, The Right Hon. Lord Blythswood, LL.D., D.L., J.P. Section I., Sanitary Science and Preventive Medicine: President, Professor J. Glaister, M.D., D.P.H., F.C.S. F.R.S. Edin. Section II., Engineering and Architecture President, Professor H. Robinson, M. Inst. C.E. Section III., Physics, Chemistry, and Biology: President, Professor Clowes, D.Sc., F.I.C., F.C.S. At the conferences, of which there will be eight, the following will preside:—Municipal Representatives: Councillor W. F. Anderson. Industrial Hygiene: Councillor J. Steele. Medical Officers of Health: Sir Charles A. Cameron, C.B., M.D. Engineers and Surveyors to County and other Sanitary Authorities: William Weaver, M. Inst. C.E. Veterinary Inspectors: Professor James McCall, F.R.C.V.S. Sanitary Inspectors:

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[1] John Bale, Sons, and Danielsson, Limited, Great Titchfield-street, Oxford-street, London, W., pp. 31.

Mr. T. F. Strutt. Women on Hygiene: Her Grace the Duchess of Montrose. Hygiene of School Life: Professor J. Edgar, M.A. The public lecture to the Congress will be delivered by Sir Richard Douglas Powell, Bart., K.C.V.O., M.D., who has chosen as his subject the Prevention of Consumption.

THE HEALTH OF THE PRIME MINISTER.

MR. BALFOUR has been suffering from a somewhat severe attack of influenza accompanied by bronchial catarrh. Mr. Venning, finding on Sunday, Feb. 7th, that the bronchial symptoms were not clearing up so fast as he could wish, suggested a consultation with Sir Douglas Powell who has met him each morning since. The catarrh has now cleared away and Mr. Balfour was able to leave his bed for some hours on Tuesday, Feb. 9th There is every hope that the Premier will be able to go away from London for a change of air at the end of the present week.

LOCAL ANÆSTHESIA PRODUCED BY THE INJECTION OF WATER.

IN recent years operations have been performed under anæsthesia produced by injecting weak solutions of cocaine into the skin and subcutaneous tissue (infiltration anæsthesia). Schleich, who developed this method, asserted that the injection of water produced temporary anæsthesia but was painful. In the *New York Medical Journal* of Jan. 23rd Dr. Samuel Gant states that he has found the injection of water a most satisfactory anæsthetic in operations on the rectum, a region notoriously sensitive. It occurred to him to try this method on noticing that solutions of cocaine were practically inert when distension failed in consequence of the escape of the fluid through an ulcer or sinus. He began experiments in September, 1901, and recently has so improved the technique that he uses the method to the exclusion of general and medicinal local anæsthesia in a large majority of his operations on the rectum, such as those for the radical cure of fissure, hæmorrhoids, fistula, and prolapsus ani, excision of perineal cysts, sacral dermoids, and lipomata of the buttocks, and removal of foreign bodies beneath the skin and mucosa. The method is very simple. Sterile water and a sterilised hypodermic syringe with a long fine sharp needle are alone required. The temperature of the water is unimportant but warm water is preferable, as it causes the least discomfort. Saline solution does not appear to have any advantages. A fold of skin at one end of the line of incision is caught between the thumb and forefinger and compressed for a few seconds, which diminishes and often prevents the momentary pain caused by the first injection. The needle is quickly introduced between the layers of the skin and a few drops of water are slowly injected. A small localised distension, not unlike a blister, should be produced with immediate anæsthesia of the skin at this point. The needle is then inserted further and further along the line of the incision to be made, and the water is gradually injected, taking care not to go entirely through the skin. When the syringe is emptied it is refilled and the needle is re-introduced within the anæsthetised area. The injections are repeated until the whole line of the incision is distended. The needle is then plunged through this distended line and subcutaneous injections are rapidly made until a firm whitish ridge about as wide and thick as the index finger is produced. The deep injections may cause temporary discomfort which is due to the rapid distension of the subcutaneous tissues. If the procedure has been properly carried out the skin and subcutaneous tissue can be now incised without pain in almost every case. To remove the clot in cases of thrombosed external hæmorrhoids the injection need be made only between the layers of overlying skin. In excising external hæmorrhoids both the skin and the tumour should be distended tightly. Internal hæmorrhoids can be anæsthetised within 30 seconds by injecting into the centre sufficient water to turn them white. They can then be painlessly removed by excision, ligature, or clamp and cautery. In operations for fissure and fistula, which require division of the sphincter, the skin and subcutaneous tissue are distended up to the anal margin and finally injections are made into the mucosa, submucosa, external, and, if necessary, internal sphincter, until sufficient pressure is exerted on the nerve endings to abolish sensibility. The injection should be made slowly; rapid distension of this sensitive region may produce considerable discomfort. Ischio-rectal abscess if small may be incised after injecting the overlying skin, but Dr. Gant does not advocate the method for deep abscesses in which extensive cutting may be necessary or for other deep operations. The method possesses the great advantages of simplicity and freedom from risk of toxic effects which may occur with even weak solutions of anæsthetic drugs.

THE CENTRAL MIDWIVES BOARD AND WORKHOUSE NURSING.

THE Local Government Board appears to have taken up a position decidedly open to criticism as regards the qualification of midwives in workhouses. Section E of the rules of the Central Midwives Board which were approved by the Privy Council in August last and a copy of which appears in our issue of August 22nd, 1903, p. 555, expounds an elaborate scheme for "regulating, supervising, and restricting within due limits the practice of midwives." With the details of this scheme in so far as it insists upon the necessity for care and cleanliness on the part of the midwife we have no fault to find but its beneficial effects are nullified to a great extent by the extraordinary provision which concludes the Section. In Article 21 it is laid down that "nothing in this Section (E) shall apply to certified midwives exercising their calling in hospitals, workhouses, or Poor-law infirmaries under the supervision of a duly appointed medical officer." If this paragraph means anything at all it means that a workhouse midwife may practically be as indifferent to hygienic principles as she pleases, for as anybody with experience of workhouses can testify the amount of restraint which the "duly appointed" but usually non-resident medical officer can exercise upon her is very small. If, further, the midwife has received her certificate under Section D 4 of the rules as "having been in *bonâ-fide* practice as a midwife for 12 months previous to July 31st, 1902," she will be able to add to such indifference some of those quaint observances which have in past years done so much to maintain the rate of infant mortality. "Do you think that to wipe a new-born baby's eyes with the corner of a coarse dirty sheet is the proper way for a midwife to work?" Thus asks a correspondent in a nursing journal in reference to a practice met with in a workhouse. We, at any rate, do not think so; on the contrary, it seems to us that if there is any place where sanitary precautions are urgently called for it is in the labour ward of a workhouse. Hither drift the victims of venereal disease and here, as nowhere else, are the sins of the fathers visited on the children between whom and maybe blindness or death stands the care of the attendant nurse. In the matter of pauperism we are no sentimentalists but the children of the poor are a national asset and even the Local Government Board might be expected to be interested in seeing that such children do not, through neglect or incompetence, become a charge upon, instead of a support to, the State. We refer thus particularly to the Local Government Board because it appears from letters which have passed between the Workhouse Infirmary Nursing Association and the Central

Midwives Board that the rule to which we take exception was inserted at the express instance of the Local Government Board. *As a consequence of this interference it was decided* at a meeting of the Central Midwives Board held on Dec. 17th to postpone for the present all applications from teachers in Poor-law institutions who sought recognition under Section C of the rules. Thus a new obstacle is raised to the improvement of the status of Poor-law nurses and fresh discouragement is given to those who have been so long and so earnestly struggling for reform in workhouse administration.

THE SWEETNESS OF WINE.

IT is not always correct to attribute the sweetness of a wine to sugar, it may be due to glycerine or to the formation as age is acquired of sweetly-tasting ethers. The presence of glycerine in wines is frequently overlooked and yet this sweet body is always present but in varying amount according to the activity of the yeast concerned in the production of the wine. Sometimes the proportion of glycerine is as much as one-fourteenth of the volume of the alcohol. We have examined old wines which possessed a peculiar sweet flavour yet which on analysis showed a proportion of sugar quite inconsistent with the degree of sweet taste. Such a wine would be rejected by many because the sweetness would be regarded as an indication of an undesirable proportion of sugar. The sweetness which sometimes develops in old wines may be due to the disappearance of the acids, their sour taste masking the natural sweetness of the wine, while as the acid flavour diminishes by the separation of the acids in the form of "crust" the palate more readily recognises the sweetness of the glycerine. Possibly also as age is acquired the glycerine combines with the acids, forming new compounds which are sweet to the taste. The ethers of wine dissolved in alcohol are perceptibly sweet to the taste. In the same way old matured spirits possess quite a sweet flavour which, according to analysis, is due neither to glycerine nor to sugar but to subtle ether compounds. A molecular rearrangement takes place by which certain constituents which in their original state were nauseous when the spirit was raw and young become palatable. Sweetness is a physical property which belongs to other substances besides sugar, just as many things share a similar odour. At one time, of course, the word sugar was inseparable from sweetness and there are persons even now who when they find that a substance is sweet have only the one idea that it is due to sugar. Sweetness is probably only a matter of chemical structure and given the atoms in a certain position in the architecture of the molecule sweetness becomes a property of the substance. This property is not only represented in sugar, glycerine, saccharine, and certain compound ethers, but in quite a large number of organic compounds synthetically built up by the chemist.

YELLOW FEVER.

IN THE LANCET of August 8th, 1903, p. 389, we published a review on Dr. Scheube's third edition of "Die Krankheiten der Warmen Lander," in which the following passage occurred: "We are glad to find that Dr. Carlos Finlay is mentioned as being the first to draw attention to the mosquito theory of yellow fever in 1881. This observer caused the mosquito to sting a yellow-fever patient and then to inoculate an individual previously free from the disease, with results showing infection in 22 out of 24 patients experimented on, the remaining two being lost sight of." We have since received a communication from Dr. Finlay in which he states that this proportion of successful inoculations has not been reached. He *forwards a pamphlet by Dr. T. V. Coronado, entitled* "Dr. Carlos J. Finlay and his Theory," in which it is shown that out of 104 non immunes whom Dr. Finlay and Dr. Delgado inoculated in the course of 20 years only 17 showed any *perceptible pathogenic reaction within the 25 days following* their inoculation. Dr. Finlay considers that "the only practical inference which can be drawn from these inoculations lies in the fact that such a large proportion of the inoculated subjects never suffered thereafter from any form of yellow fever during the subsequent years of their residence in Havana and that only five of the 104 died afterwards from yellow fever."

THE RESPONSIBILITY OF SUICIDES.

BENTHAM, writing in the earlier half of the nineteenth century complained that juries were constantly guilty of perjury when they declared a suicide to have been *non compos* at the time of his decease The recent verdict upon Whitaker Wright would have seemed to the great jurist to mark a return to ancient candour, however much the announcement that a man had a motive for suicide and died in his senses may startle people to-day. The verdict of the jury and the coroner's remarks at the inquest on the body of Whitaker Wright should, indeed, serve as a reminder that the law does not necessarily regard suicide as the result of insanity, and that even where it seems to admit insanity it isolates it in a manner quite contrary to scientific ideas of causation. In cases, for instance, where suicide has closely followed the making of a will, the law has repeatedly refused to invalidate the testament because the testator took his own life shortly after writing it The notion that a man is out of his senses when he commits suicide really dates from the day when the Church insisted that suicides, as persons guilty of self-murder, should be buried with the utmost ignominy. Lay jurymen in those days, to save their fellow creatures' bodies from disgrace, preferred to suppose that a suicide was insane at the time of death and therefore irresponsible. The plea of insanity in early times was frankly put forward as a legal fiction, actuated by kindness, and as such was probably freely accepted by individual priests. It is difficult to say exactly when what now seems to be a firmly rooted belief began to prevail that a suicide is out of his senses at the time when he puts an end to himself. In the eighteenth century a connexion between abnormal mental conditions and suicide appears gradually to have arisen, and in 1788 "self destruction" and "phrenzy" occur in the same book-title as though the one connoted the other. In 1804 Dr. William Rowley in his "Madness and Suicide," traced *felo de se* to lunacy and the latter often to merely physical irritations.

THE SYMPTOMS OF TUMOUR OF THE PITUITARY BODY.

THE subject of tumours of the pituitary body has lately received much attention in neurological medicine and it is now known not only that mental torpor and somnolence result from lesions of that organ but that characteristic nutritive changes in the osseous system allied to acromegaly and gigantism may be the outcome of disease of the pituitary body in youth or early adult life. In the *Revue Neurologique* of Dec. 30th, 1903, Dr. R Cestan and Dr. Halberstadt publish an account of a case of pituitary tumour which throws light on some obscure points in the pathology of this affection. The patient was a man, aged 60 years, who had suffered for some time from symptoms of epileptic vertigo, progessive enfeeblement of memory and of intelligence, headache, and marked somnolence interrupted by occasional attacks of agitation. He was regarded as a case of premature senile dementia and was placed in an asylum. He remained in a state of apathy and somnolence and eventually died after a series of attacks of *dyspnœa*.

There were no acromegalic or osteo-hypertrophic changes but there was marked adiposity. The necropsy showed the presence of a tumour of the pituitary body "of the size of a small nut," vascular, cystic in character, and practically limited to the sella Turcica. It showed a small prolongation passing upwards into the third ventricle. It was a cystic adenoma and in its histological character presented features identical with those occurring in a case of gigantism to which reference has been made in THE LANCET.[1] Attention is drawn by Dr. Oestan and Dr. Halberstadt to two points of interest in the present case—viz, first, the absence of skeletal changes and, secondly, the presence of mental changes, such as apathy, enfeeblement of memory and of intelligence, and somnolence. Such mental changes have been noted in cases of pituitary tumour by Woolcombe,[2] Fröhlich, and Schuster (1902). The last-mentioned writer states in a monograph on the subject of cerebral tumours accompanied by psychical disturbance that out of a total of 775 such cases 61 were due to tumour of the pituitary body. Somnolence as a marked feature has been noted by Soca (1898), Schuster, and others. To reconcile the view that osteogenetic changes (acromegaly and gigantism) may occur in some cases of pituitary tumour while absent in others Dr. Oestan and Dr. Halberstadt suggest that when pituitary tumours or lesions appear in infancy they affect the nutrition of the osseous tissues and produced gigantism, that when they occur in early adult life the result is acromegaly, and, finally, that when the affection supervenes in middle or old age, after the osseous and other tissues of the body have attained the maximum of growth, the result is a preponderance of the mental symptoms of apathy and somnolence combined with obesity, as in the case to which reference is made above.

POOR-LAW MEDICAL OFFICERS AND SUPERANNUATION.

A MATTER affecting the interests of medical men concerned in the administration of the lunacy law has just been dealt with by the Local Government Board and although we regret the decision come to we note incidentally that it bears out entirely the opinion expressed recently in these columns as to the position of workhouse medical officers in regard to fees for certifying pauper lunatics. On the superannuation of Mr. W. Buchanan, late medical officer to the Medway union workhouse, the guardians of that union resolved to grant him an allowance based upon the fees which he had received for the examination of lunatics during the past five years. The district auditor disallowed the payments and surcharged the guardians who authorised them with the amount. An appeal to the Local Government Board resulted in a confirmation of the auditor's decision, the following reasons being given for the attitude adopted. "It forms no part of the duty of a medical officer of a workhouse to make the examinations to which the auditor refers and it is open to the justices, whatever their practice may be, to call in any medical practitioner for the purpose. Consequently the medical officer of a workhouse seems to be in the same position as any other medical man and the fees paid to him under the Lunacy Act, 1890, by order of the justices are not paid to him in his capacity as medical officer of the workhouse. Hence the Board are of opinion that the fees in question cannot be regarded as emoluments of Dr. Buchanan's office and should not have been taken into consideration in calculating the amount of his superannuation allowance." In another part of the letter the same principle is enunciated in these words: "Although the guardians have passed a resolution that Dr. Buchanan should examine all lunatics, the power to call in a medical man rested with the justices and the resolution of the guardians was of no legal effect." It will clearly be advisable in future for workhouse medical officers on accepting appointments to have their position in regard to emoluments properly defined. In some cases the fees for certifying lunatics constitute quite a large proportion of the salary, so that the amount at stake may be considerable.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE following lectures for the present year will be delivered at the Royal College of Physicians of London, Pall Mall East, on the dates named below at 5 P.M. The Milroy lectures will be delivered by Dr. W. Williams on February 25th and March 1st and 3rd, the subject being Deaths in Childbed, a Preventable Mortality The Goulstonian lectures will be delivered by Dr. R. Hutchison on March 8th, 10th, and 15th, the subject being Some Disorders of the Blood and Blood-forming Organs in Early Life. The Lumleian lectures will be delivered by Dr. F. Taylor on March 17th, 22nd, and 24th, the subject being Some Disorders of the Spleen.

A CASE OF CHRONIC PANCREATITIS.

MOST recent writers on diseases of the pancreas have entered a plea for the more careful observation of the clinical phenomena of such cases and more regular and systematic examination of the pancreas at necropsies in order to furnish workable data for the filling up of the numerous gaps in our knowledge of the normal and pathological conditions of this important organ. Dr. Ferdinand Ehler of Brünn has carefully recorded a case of chronic indurative pancreatitis in the *Wiener Klinische Wochenschrift*, No. 51, 1903, which presents several features of interest from the clinical and pathological standpoint. The patient was a woman, aged 56 years, who with the exception of a few slight gastric attacks had enjoyed good health until five months before going to hospital, when she suffered from severe lumbar pain which, however, soon ceased so that she was able to return to her work. Four months later she had a recurrence of these pains, more severe in character, and radiating to the abdomen, rapidly followed by an intense jaundice. There was no history of syphilis or alcoholism. On admission to hospital she was described as a cachectic, emaciated woman of apathetic expression and olive-green complexion. The pulse was irregular, weak, and its rate was 60 per minute The abdomen was slightly distended but not rigid or tender and there was no ascites. A tumour of the size of a goose's egg was felt beneath the right costal margin, presenting the characters of a distended gall-bladder. The liver was moderately enlarged, its edge being felt below the costal margin. The spleen was normal in size. The bowels were opened once or twice daily, the motions being of thin consistence and free from bile pigment. The urine was dark, bile-stained, and free from albumin and sugar even after the administration of milk sugar. The temperature was subnormal, ranging between 36° and 36·5° C. The alternative diagnoses of gall-stones or of carcinoma involving the bile-ducts were made and laparotomy was performed, the distended gall-bladder being found and opened, but no gall-stones were discovered. On deep palpation towards the left side a hard tumour could be felt which was regarded as carcinoma of the pancreas. The patient died four days later from pneumonia and cardiac failure. At the necropsy no carcinoma was found but there was a condition of chronic indurative pancreatitis; there was a retention cyst of the size of the fist in the tail of the organ filled with turbid fluid of chocolate colour, the rest of the parenchyma being markedly indurated and permeated by fibrous bands. The common bile-duct was compressed and obstructed below and dilated above the obstruction. The liver was enlarged but showed no definite pathological change. The stomach was slightly dilated but its mucous membrane presented no macroscopic alterations. There were some fibrous myocarditis and a recent croupous pneumonia. Microscopically the pancreas showed marked overgrowth of fibrous tissue, apparently starting around the vessels and small ducts and thence invading the parenchyma of the organ. The interest in the case, considered pathologically, is that it was apparently primary and not the result of syphilis, alcoholism, or gall-stone obstruction, as these cases often are, and Dr. Ehler was inclined to regard this case as originating from a vascular change in the gland of the nature of arterio-sclerosis and referred in support of this to the fibrous condition of the myocardium (although no atheromatous changes were found in the aorta) and to the condition of the vessels of the pancreas, which were distinctly thickened. The interest from the clinical standpoint is that this case supports Courvoisier's dictum that jaundice in association with distended gall-bladder is usually due to obstruction of the common duct from some other cause than gall-stones.

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[1] THE LANCET, March 14th, 1903, p. 747.
[2] Brit. Med. Jour., June 23rd, 1894, p. 1351.

THE RESUSCITATION OF DR. A. DARIER.

THERE was once an American editor who received a cal from an indignant gentleman whose death he had chronicled in his paper. The indignant gentleman, producing himself as proof of his words, demanded that a statement should be made in the paper that the editor was at fault. To this the editor replied that in his paper no mistakes were ever made, adding that, if they were, they were never acknowledged. After some argument, during which the editorially deceased person was able to show that he had a real grievance, the situation was met by the editor who, repeating the impossibility of making a public declaration of error, added that he would publish his visitor's name in the next list of births. It has been brought to our attention that in a summary of the ophthalmological work of the year 1903 we referred to Dr. A. Darier, joint-editor of *La Clinique Ophthalmologique*, as deceased. This, we are very glad to say, was a mistake, and we admit it with none of the reluctance to say *peccavi* that was shown by our American colleague in the story. We resuscitate Dr. Darier in a conspicuous part of THE LANCET and not in the birth column. We regret not to have made this *amende* to him sooner, but no exact reference was given to the place in our columns where the slip had occurred, and until now we were unable to find that we had cut off the well known French ophthalmologist in his prime. We trust that he has not been seriously inconvenienced.

THE INTERNATIONAL CONGRESS FOR SCHOOL HYGIENE.

THE first international congress for school hygiene will be held at Nuremberg from April 4th to 9th and in connexion with the congress there will be an exhibition of objects referring to school hygiene. Much interest has been taken in the announcement of this exhibition and the committee therefore intends to open it some days before the commencement of the congress and to keep it open for some days after the congress has closed. All objects referring to school hygiene may be exhibited, such as plans and models of school houses, treatises on the principles of school-house building, treatises on the education of children both at school and at home, school furniture, books, drawing instruments, and apparatus for the medical examination of children and for their physical education, such as gymnastic appliances and the like. The exhibition should, we think, prove of great interest and as an example of what can be done with old-time material we suggest that "our Colleges of Westminster, Winchester, and Eton" be asked to send models of some of their older schoolrooms. Many of these are such as would cause a zealous School Board member to faint from horror and yet the institutions possessing them turn out boys who become men of great value to the State.

TUBERCULOSIS IN DAIRY COWS.

WE have received a copy of a pamphlet with the above title written by Dr. J. Wright Mason, medical officer of health of Hull, and Mr. James McPhail, M.R.C.V.S., chief meat inspector. The writers point out that municipal and local authorities have obtained stringent powers to deal with tuberculosis amongst dairy cows. They have therefore published this pamphlet to give information couched in simple terms to persons in charge of dairy cows and to those who are directly interested in such legislation. They have succeeded well in this laudable object and have described in language devoid as far as possible of technical terms the symptoms which may be observed in cows suffering either from acute or chronic tuberculosis. The dangers that are attendant on drinking milk from a tuberculous cow when the udder is affected are strongly insisted on. The symptoms of this affection are indicated and although the dairyman cannot be expected to make a diagnosis of tuberculosis, yet when he finds the parts in the condition described it is undoubtedly his duty to draw the attention of his employer or the veterinary surgeon to the diseased animal.

RUPTURE OF THE TENDON OF THE EXTENSOR LONGUS POLLICIS.

IN the *Boston Medical and Surgical Journal* of Dec. 10th, 1903, Dr. C. L. Scudder and Dr. W. E. Paul have described a very rare injury—rupture of the tendon of the extensor longus pollicis. A woman, aged 58 years, fell and struck the back of her left hand on the edge of a stone step. There was tenderness near the proximal end of the first metacarpal bone and in dressing herself the patient felt pain at that place. Three weeks later, when the hand felt practically well, on attempting to take hold of a chair she found that the left thumb could not be used and remained flexed in the palm. Examination on the next day showed that the proximal phalanx of the thumb could not be extended, so that in grasping movements the thumb was closed upon by the flexed fingers. Feeble extension of the distal phalanx was readily performed. All movements of the metacarpal bone were executed but the range of extension and abduction was diminished. The only indication of the site of the rupture was the patient's assertion that there was some tenderness on using the hand near the proximal end of the dorsum of the metacarpal bone. Rupture of the tendon of the extensor brevis pollicis near its insertion was thought probable. Six weeks later an operation was performed. The tendon of the extensor longus pollicis was found to be ruptured near the proximal end of the metacarpal bone. The sheath was intact. Careful dissection along the wrist was necessary in order to find the retracted muscular belly, which was six or seven centimetres from the distal end of the torn tendon. Approximation of the ends of the ruptured tendon was impracticable. Tendon transplantation was therefore performed. The tendon of the extensor carpi radialis longior was partially cut on its radial aspect and split along its length for about three centimetres. The distal fragment of the tendon of the extensor pollicis was cut transversely to secure a smooth surface. The tendons thus prepared were united by three fine silk sutures. Eight months later grasping movements could be performed with opposition of the thumb. The range of extension of the terminal phalanx was about one-third of normal and of the proximal phalanx about two-thirds but the patient was still improving. Dr. Scudder and Dr. Paul explain the injury as follows. The fall partially severed the tendon of the extensor longus pollicis. Three weeks later rupture was completed by muscular effort. The loss of movement does not agree with the usual description of the action of the extensors of the thumb. The long extensor (extensor secundi internodii pollicis) was evidently the extensor of the first phalanx. Extension of the second phalanx appears to have been performed by the short extensor (extensor primi internodii pollicis) and the abductor pollicis. A possible explanation is that the insertions of the extensor tendons were abnormal. We should like to know the evidence on which the operator identified the tendon as that of the extensor longus pollicis. May not the tendons of both extensors of the thumb have been injured? The operation performed in this case seems to us open to the objection that the function of the long extensor was not restored.

UNIVERSITY OF OXFORD: THE PHILIP WALKER STUDENTSHIP IN PATHOLOGY.

A STUDENTSHIP in pathology has just been founded in the University of Oxford by Mr. P. F. Walker for the furtherance of original research in pathology. The studentship is to be of the annual value of £200 and may be increased, if at any time the income of the endowment fund exceeds £200, to any sum not exceeding £300. Prizes or grants may also be made from the fund in similar circumstances to persons engaged in pathological research. The studentship is not confined to members of the University and is open without limitation of age or sex. It is to be awarded by the managers of the fund upon the report of the reader in pathology on the respective qualifications of the candidates and is tenable for three years from election, with a possible extension on the recommendation of the reader for a further period of two years. During his tenure of the studentship the student is prohibited from following any business or profession or engaging in any educational or other work which in the opinion of the managers of the fund would interfere with his original inquiries. The place and nature of the studies of the student are to be subject to the approval of the reader in pathology, provided that the student shall be bound to pursue his studies within the University during at least three terms of his tenure of the studentship, unless this requirement be dispensed with for special reasons. The full details of the Decree of Convocation and the regulations governing the studentship are published in the *Oxford University Gazette* of Feb. 2nd (University Press, 116, High-street, Oxford. Price 3*d.*).

THE medical officer of health of the Cape Colony states that for the week ending Jan. 16th two cases of plague were discovered in the Colony—namely, a coloured male found dead on Jan. 11th and a native male who died on Jan. 14th, both at Port Elizabeth. Dead rats were found at Port Elizabeth, East London, and Knysna, but of 304 rats examined in the Cape Town and Harbour Board area none was affected with plague. As regards the Mauritius a telegram from the acting governor received at the Colonial Office on Feb. 5th states that for the week ending Feb. 4th there were 17 cases of plague and 14 deaths from the disease.

THE anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms of the Hôtel Métropole on Tuesday, March 8th, at 7.30 P.M. Communications should be made to the honorary secretaries, Dr. H. A. Caley and Mr. H. J. Waring, at the rooms of the society, 11, Chandos-street, Cavendish-square, W.

THEIR Majesties the King and Queen, accompanied by Princess Victoria, have announced their gracious intention to visit the University of Cambridge on Tuesday, March 1st, to open the new schools for medicine, law, and botany and the Sedgwick Museum where the King will unveil a statue of Professor Sedgwick.

Sir John Batty Tuke has obtained the eighteenth place in the ballot for new Bills which has recently been held. He has therefore put down the Revaccination Bill to which we referred in THE LANCET of Feb. 6th.

Dr. Henry Corby, professor of midwifery, Queen's College, Cork, has been appointed High Sheriff of the city of Cork by his Excellency the Lord Lieutenant of Ireland.

ELEVENTH ANNUAL REPORT (FOR 1902) OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON.

II.[1]

IN that section of his report which treats of the causes of mortality Mr. Shirley Murphy gives an interesting table which contrasts London mortality in 1902 with the average in the preceding decade under certain of the more important headings in the official list of causes of death. The table indicates that disregarding the mortality due to homicide and suicide there are only three diseases—namely, small-pox, cancer, and premature birth—that in the year 1902 were more fatal than usual. Taking all causes together there was a diminution of no less than 6733 deaths in the administrative county of London in the year mentioned, as compared with the average numbers in the previous ten years.

Before proceeding to deal with the incidence of the principal epidemic diseases Mr. Shirley Murphy gives a table which shows the mortality in each of the metropolitan boroughs from the more prevalent diseases which, though not classed as epidemic, nevertheless destroy a large number of lives every year. The numbers upon which the rates in this table are based have been fully corrected for mortality in public institutions, such as workhouses hospitals, and lunatic asylums, whilst in the case of phthisis and of cancer they have been further corrected for age and sex differences of population. The rates given may therefore be regarded as thoroughly trustworthy and may be safely used for comparing the mortality of the several boroughs from each of the included diseases or groups of disease.

In the administrative county as a whole cancer, including therein carcinoma, sarcoma, and other forms of malignant disease, was fatal in 1902 to 93 in each 100,000 of the population. The City of London showed the highest rate—viz., 128 per 100,000—next came Shoreditch with 115, and after these there were 14 other metropolitan boroughs in which the rate exceeded the average. The boroughs of Kensington and Stoke-Newington experienced the lowest rate—viz., 76 per 100,000—and Stepney the next lowest—viz., 79. Phthisis shows a decided tendency to invade with the greatest severity those districts which are sanitarily the most unfortunate, and in this regard its death-rate roughly follows the lead of the death-rate from all causes. Thus, the table indicates that in 1902 the mortality from phthisis, which was equal to a mean rate of 160 per 100,000 in the metropolis generally, was highest (265) in Holborn and next highest (262) in Southwark. On reference to the last column in the table it will be seen that both these boroughs were amongst the areas with very high general rates of mortality. In addition to the above there were nine other boroughs wherein the phthisis-rate exceeded the county average. On the other hand, the metropolitan borough of Hampstead, after making allowance for the deaths in its consumption hospital, experienced the *lowest* mortality from phthisis, which did not exceed 84 per 100,000 living, or less than one-third of the Holborn rate. It is interesting to notice that Hampstead experienced likewise a lower rate of mortality from all causes than any other borough in the county. Pneumonia is also shown by this table to vary greatly in fatality and to invade most severely the least healthy districts. Thus the borough of Hampstead suffered the lowest mortality from this disease—viz., a rate of 75 per 100,000—whilst at the other end of the list came Southwark and Bermondsey, in both of which boroughs the rate was more than thrice as high as it was in Hampstead. The column headed "Other Respiratory Diseases" is necessarily an indefinite one, including, as it almost certainly must, so many conditions of a tuberculous character. The highest mortality from diseases in this group—viz., 315 per 100,000—was returned from Finsbury and the lowest—106—from Hampstead.

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[1] No. I. was published in THE LANCET of Feb. 6th, 1904, p. 385.

Taking together the principal epidemic diseases—namely, small-pox, measles, scarlet fever, diphtheria, whooping-cough, enteric fever, and diarrhœa—we find that in 1902 they were less fatal than the decennial average by 0·44 per 1000 of the population. The death-rate in London, which was 2·23 per 1000, was higher than that of any other great English town except Liverpool, Birmingham, Bristol, Hull, Salford, and West Ham. As compared with the mortality in the principal foreign and continental cities the mortality from the first six of the epidemic diseases above mentioned was higher in London than in any other city in the list except St. Petersburg.

The event of chief sanitary importance during the year in London was the culmination and decline of the small-pox epidemic, which had increased in the later months of 1901 and continued to increase during the first three months of 1902, *attaining a maximum in March, after which there* was a decline until the beginning of September, subsequently to which the number of cases notified in any week did not exceed eight. The notification of small pox was first made compulsory in the metropolis in the year 1890, but at no period since that date has the incidence of the disease approached that of the year now under notice.

Conformably with previous experience the London epidemic of 1900-02 originated in an imported case. Mr. Shirley Murphy tells us that in the course of this period small-pox was frequently
from Paris, in v
the following
1901, two women in St. Pancras were attacked; their illness had been preceded a fortnight earlier by that of a sister who was a sorter of dirty linen from West End hotels and lodging-houses. This girl's illness had been regarded as chicken-pox. Upon this followed another case in the same house and four cases in the house next door. The illness of these four persons followed that of a girl who died and whose illness had also been regarded as chicken-pox. The laundry girl's attack was apparently the first of the series. From this centre the disease spread throughout the immediate neighbourhood. The next area of attack was in Holborn, where the disease became prevalent in the month of October, especially among the dwellers in common lodging-houses.

About this time a woman who frequented places of this sort in Holborn and Westminster was removed to the Endell-street Infirmary suffering from small-pox. She, however, escaped from the wards and wandered about the district for four days visiting nearly every public house within her reach. We are not surprised to learn that from every public-house into which she is known to have entered one or more patients were removed suffering from small-pox. The disease continued to spread among this class of the population, the common lodging-houses of Holborn, St. Pancras, Westminster, Stepney, and Southwark being especially affected in the last quarter of the year 1901. By this time, Mr. Shirley Murphy tells us, cases of small pox had occurred in every district of London and in St. Pancras (where the disease first assumed serious proportions), in Westminster, and in Holborn the number of cases had either reached or nearly approached the maximum attained during the epidemic. The incidence of the disease in each of the metropolitan boroughs during the whole period covered by the epidemic is well shown by a diagram on p. 29, which is based on the number of small-pox attacks notified in each consecutive week, and in the letterpress Mr. Shirley Murphy has given a detailed and highly instructive account of the spread of the disease from first to last.

It is satisfactory to note that practically all the cases of small-pox that were notified to the sanitary authorities were promptly removed to hospital by the officers of the Metropolitan Asylums Board. In a few instances the nature of the malady was not recognised until the sufferer was found to be dying from a malignant form of the disease and in certain other cases the nature of the disease was only affirmed after recovery. Mr. Shirley Murphy speaks in appreciative terms of the services rendered by the Metropolitan Asylums Board in dealing with epidemic small-pox in London "In no case," he says, "was failure reported to remove to hospital patients suffering from the disease for whose removal application was made." As regards administrative measures for limiting the spread of small-pox we learn that quite early in the epidemic cases of small-pox were mistaken for chicken-pox, because when the graver disease first appeared in London many practitioners of medicine were unfamiliar with its appearance. Consequently the notification of chicken-pox became compulsory in St. Pancras and certain other districts in the autumn of 1901 and in the beginning of 1902 the County Council, with the consent of the Local Government Board, made an order extending this provision to the whole of London. It is a significant fact that within less than three months of the Council's order coming into effect the epidemic began to decline. Nevertheless, the notification of chicken-pox continued to be compulsory in London until January, 1903, by which time the epidemic may be said to have subsided completely. Moreover, the Council in the early part of 1902 appointed
;e of small-pox to
desired a further
In the year 1902
iled themselves of
sing from the con-
y by small-pox, Mr.
Shirley Murphy proceeds to compare the death rate from that disease in London with the rates in the chief towns of England and of the continent. From tables which he has prepared we find that in the period 1892–1901 the London death-rate was exceeded by the death-rates of Liverpool, Birmingham, Bristol, Bradford, Hull, and West Ham, while in 1902 it was considerably higher than the rates of any of these towns except the town last mentioned. As regards the continental towns we learn that whereas the London death-rate in the decennial period just mentioned exceeded that of all the large continental towns except Paris, Brussels, St. Petersburg, Vienna, and New York, in 1902 the London rate was considerably in excess of that of any of these towns.

(To be continued.)

THE CENTRAL MIDWIVES BOARD AND THE TRAINING OF MIDWIVES.

THE following correspondence between the Master of the Rotunda Hospital, Dublin, and the Secretary of the Central Midwives Board has been sent to us for publication.

[Copy.]

of three lying in women daily, with
the puerperium; they take records of
the supervision of the master of the
rs; they receive constant instruction
systematically trained in asepsis and

would be calculated to excite riotous disapproval in the bosoms of long-suffering citizens. It is not, however, very likely that any buildings erected would be reserved in the manner mentioned. The need for workhouses grows with the supply of them and the accommodation for the poor is always insufficient to satisfy the demands of that class of the community. There would be a constant tendency to yield to popular clamour by utilising the facilities available for meeting the distress which is always with us and the net result would be an increase of pauperism quite independent of any war. In a matter of this kind it would be foolish to meet trouble half-way, and however valuable precautionary measures of the nature here referred to might be they would be quite disproportionate to the cost incurred in carrying them out.

THE NEW ARMY COUNCIL.

The following are the names of the members of the new Army Council which is constituted on the model of the Admiralty Board: Mr. Arnold-Forster, M.P., Lieutenant-General Sir N. G. Lyttelton, Major-General Douglas, Major General Plumer, and Major-General Sir J. W. Murray, the Earl of Donoughmore, and Mr. Bromley-Davenport, M.P. Colonel Sir Edward Ward is the secretary. It will be seen that new, as well as relatively young, men have been appointed to carry out the great work of reorganisation before them. We do not notice that one of the ablest and most energetic officers, General Sir William Nicholson, the present Director-General of Mobilisation and Intelligence, has been made a member, nor has the head of the Army Medical Service any place in the council. No one has yet been nominated to the post of Inspector-General of the Forces. It has been suggested that Lord Roberts should fill the post but it is not at all certain that the present Commander-in Chief would be willing to do so even were it not opposed to the view which has been made a great point of—viz, that new measures require new men.

THE DIRECTOR-GENERAL AND THE WORK OF THE OFFICERS OF THE ROYAL ARMY MEDICAL CORPS.

In his address to the Lieutenants on probation at the opening of the eighty-eighth session of the Royal Army Medical College Sir William Taylor, K.C.B., remarked: "It is said that the practical experience of the army doctor is confined to treating the diseases of early manhood and that this limitation of practice leads to stagnation of effort and to blunting of mental acuteness and judgment. Believe me, there is nothing further from the truth. No army medical officer need let his knowledge rust; his opportunities for keeping himself abreast of the knowledge of the times are as good and, I think, even better, than those of the doctor in civil practice. There is abundance and variety of clinical work to be found in our army hospitals. The field of the army surgeon is world-wide and in the domain of tropical medicine he will find a field for observation and research that affords opportunities for practice and progress that no other section of our profession possesses."

Correspondence.

"Audi alteram partem."

THE CAUSES OF HIGH INFANTILE MORTALITY.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan. 30th, p. 334, there is a letter from Mr. J. Theodore Dodd in which he suggests that in those town unions which give very little out-relief the infantile mortality is higher than in those which give a fair amount of out-relief. As one who has given very great attention to this question I can assure him that a high or low rate of out-relief has no more to do with a high or low rate of infantile mortality than Tenterden steeple has to do with Goodwin Sands. He quotes Liverpool and Manchester and compares them with four other large towns; they are not comparable as regards the administration of the Poor-law for this reason: Liverpool and Manchester Poor-law areas number 2470 and 1646 acres; the cities 8133 and 7960 acres. The former are densely populated districts with any number of hospitals and dispensaries, but that does not suffice to keep down infantile mortality, though the last report of the medical officer of health of Manchester shows an improvement as the mortality in 1902 was only 151. If Mr. Dodd will look down his list he will see that his first dozen unions in London are all densely populated, the last half-dozen London unions much less so, and this is also the case with Sheffield (10,000 acres) and Leeds (13,000 acres). Now as Mr. Dodd has referred to Manchester it may be useful to see what the figures are for the three divisions into which Manchester is divided (Table I.).

TABLE I.

—	Persons to an acre.	Proportion of deaths under one year.
Manchester township ...	81	168
North Manchester	23	139
South Manchester	63	150

If Mr. Dodd will turn to the Registrar-General's return he will find that the lowest infantile mortality is found in Rutland, Dorset, Wilts, and Oxford (79 to 100), all agricultural counties. At the other end of the scale we have Warwick, Nottingham, Stafford, Yorks (East Riding), and Lancashire.

TABLE II.

—	*Infantile mortality per 1000.*	*Illiterate women per 1000 marriages.*	Percentage of out relief
Rutland	79	23	62.6
Dorset	91	14	73.1
Wilts	94	12	65.0
Oxford	100	14	65.5
Hereford	106	34	67.2
Hertford	110	22	65.9
Westmorland	110	22	51.8
Bucks	112	11	74.1
Somerset	112	23	70.4
Shropshire	113	28	42.6
Berks	115	17	41.3
Sussex	117	10	54.0
Bedford...	117	24	73.0
Cambridge	118	28	67.9
Surrey	120	10	41.0
Gloucester	120	29	62.1
Northampton	122	23	73.3
Suffolk	122	20	63.2
Cornwall	126	42	77.3
Hampshire	127	11	56.5
Huntingdon	127	6	57.2
Kent	130	17	45.1
Devon	133	15	73.8
Lincoln...	138	21	79.6
North Wales	138	52	62.2
Worcester	141	37	51.5
Middlesex	142	12	43.9
Norfolk...	142	24	67.7
Cumberland	144	29	62.5
Cheshire	147	30	56.0
Monmouth	150	64	70.1
Derby	152	21	70.0
Yorks (North Riding)	154	36	64.3
South Wales	154	50	76.0
Essex	155	23	50.8
Leicester	156	18	66.1
London	160	32	20.1
Northumberland ..	165	34	56.3
Yorks (West Riding)	166	39	54.5
Durham	167	40	58.6
Warwick	175	36	40.3
Nottingham	176	33	66.7
Stafford	178	44	57.3
Yorks (East Riding)...	179	24	64.2
Lancashire	180	41	37.2

all manufacturing counties with large numbers of women employed in the cotton, metal, and woollen works This fact plays an important part in causing the large infantile mortality, because even if the mother does try to nurse her child while going to work at the factory the intervals between the time of feeding the infant are too long, but in a very large number of cases the baby is put out to nurse with all the horrors associated with this practice I think that if Mr Dodd will look down Table II he will see that it is not strict out-relief that is the cause but something which affects larger masses of the people than those who receive relief from the rates

I am, Sirs, yours faithfully,
Didsbury, Feb 8th JNO MILSON RHODES, M D Brux.

MALIGNANT GROWTHS AND NORMAL REPRODUCTIVE TISSUES

To the Editors of THE LANCET.

SIRS,—I read with great interest the leading article in THE LANCET of Jan 30th, p 311, which directed attention to the communication of Professor J B Farmer, Mr J E S Moore, and Mr C E Walker to the Royal Society, the abstract of which in THE LANCET of Dec. 26th, 1903, I had unfortunately not seen I am especially pleased that work is being done in this direction, as, although I have never prosecuted any research myself, I have thought for some years that the line of inquiry now being undertaken by Professor Farmer and his colleagues, and also by Dr E F Bashford and Dr J A Murray, would be likely to yield good fruit

In 1898 when president of the East Yorks and North Lincoln branch of the British Medical Association, I chose the subject of malignancy for my introductory address In this paper, which was published in the *Quarterly Medical Journal* for July, 1898, I reviewed all the hypotheses which had been advanced in order to explain the causation of cancer I er
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con
way into the underlying mesoblast, the cells undergoing rapid division with an abundant blood supply) and the growth of a malignant tumour And the analogy is made closer by the fact that glycogen, which is present in large quantities in the fœtal cells had also been found by Langhans of Berne and by Creighton in this country to be a constituent of cancer cells I referred to Hansemann's work on karyokinesis in malignancy In his monograph he says that in normal tissues, although the number of chromosomes may vary largely in different kinds of cells, the numbers are always even numbers, but that in malignant growths the shape of the karyokinetic figures may differ largely from the normal and that the number of chromosomes may be odd How these asymmetrical forms are produced he did not know but he maintained that they were peculiar to cancer I then continued "So far as our present knowledge extends there are points of resemblance, both morphological and physiological, in the growth of a malignant tumour and the development of an organ in the fœtus The presence of asymmetrical mitoses in cancer, whether peculiar to it or not, is certainly remarkable and it yet remains to be seen how these forms are produced It seems to me most likely that we shall find their prototype in the normal structures As I have said all normal cells when dividing possess an even number of chromosomes and when the chromatin filaments split there must always be an even number in the two daughter cells Is any other mode of division of the filaments known? Is there any physiological exception to the ordinary method by cleavage of the chromatin threads? There is one such exception and I cannot help being struck with the fact and with its possible bearing on what I have said regarding the analogy between the growth of a tumour and that of the fœtus The exception is in the mode of formation of the generative cells, the spermatozoa and the ova In the division of the spermatogenic cells of the testicle to form the spermatoblasts or young spermatozoa the final separation of the chromosomes into the daughter nuclei takes place without the occurrence of a corresponding longitudinal cleavage, the result of this is that the spermatoblasts contain only half the usual number of chromosomes, consequently the male pro nucleus also is formed by half the usual number The same may be said of the female pro nucleus which has parted with one half of its chromosomes in extruding the second directive corpuscle This work on the generative cells has hitherto been confined to the lower forms of life and no observations have been made, as far as I can learn, on mammals—that is, regarding the number of chromosomes—but it is obvious that should the spermatogenic cells contain 2, 6 10, 14, &c, chromosomes, the spermatoblast will contain 1, 3 5 or 7, or odd numbers of chromosomes Most of the cells worked at contain 8, 12 16, or 24, so that there would be 4 6, 8 or 12, or even numbers in the spermatoblast But Carnoy has described a nematode with six chromosomes in the generative cells which would give an odd number after division It is hence quite possible that the generative cells of mammals may contain an odd number of chromatin filaments and as these cells under certain circumstances possess the greatest possible power of division and reproduction it may be that the analogy between tumour growth and its physiological prototype may be pushed still further The idea is, of course, quite speculative and of no real value unless supported by observations on the number of chromosomes in mammalia, which have not yet been made so far as I am aware, still, there is no evidence against it and I think it may be put forward as a provisional hypothesis which will stand or fall according to observations recorded in the future" In conclusion I said "For my own part I am inclined to the belief that the cause of malignancy will only be explained when we know more concerning the cause of the development of fœtal organs"

I am Sirs, yours faithfully,
EDWARD HARRISON, M D Cantab, F R C S Eng
Hull, Feb 3rd 1904

To the Editors of THE LANCET

SIRS—I hope you will pardon me if I return to the interesting and stimulating discoveries of Professor J B Farmer, Mr J E S Moore, and Mr C E Walker, and Dr E F Bashford and Dr J A Murray The former have demonstrated that nuclear changes occur in cancerous tissues by which cells of malignant growths may be justly considered homologous to active sexual elements ("gametoid") Giant cells are suggested to be "fusion figures" which recall normal fertilisation (*sic*) in cancer I write to ask if botanists or zoologists are of the opinion that post heterotypic cells (homotypic) are at all 'inclined' to develop without fertilisation—i e, by parthenogenesis from (?) chemical stimulus Does parthenogenesis occur in the embryo sac of flowering plants or in the prothallium of the higher cryptogams under any and what state? On what known conditions does parthenogenesis in the eggs of the honey bee, in ascaris, in artemisia, &c, depend? This sexual character of the cells of cancer explains partly its parasitic and invading nature; the wonderful power of mimicry of the tissues from which they originate however might suggest easily that the metastases commence as cells self fertilised and maturating A knowledge of the (? chemical) causes underlying both these changes might afford a clue to prevention

I am, Sirs, yours faithfully,
Plymouth Feb 9th 1904 F BUSHNELL, M D Lond

PS—I should add that Dr Bashford and Dr Murray in no way interpret the significance of the mitoses in cancers as evidence of new growths being reproductive tissues

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THE PROPOSAL TO PROHIBIT MEDICAL PRACTITIONERS FROM DISPENSING

To the Editors of THE LANCET

SIRS—As it would appear from the letters of "Paganus," "Surgery" and "M R C S, L S A," in THE LANCET of Feb 6th that serious misapprehension exists as to the origin and present position of certain proposals to add new clauses, affecting dispensing by medical men, to the draft Medical Acts Amendment Bill which is now under consideration by the divisions of the British Medical Association I trust that you will be kind enough to insert in your next issue the following explanation which I am authorised to give

The Medical Acts Amendment Bill, prepared by the Medico Political Committee of the Association, was remitted in August last to the divisions of the Association for preliminary consideration and the full text was published in the supplement to the *British Medical Journal* of August 18th last. It contains no reference to the subject dealt with by your correspondents. As a result of the preliminary consideration by divisions the Bill will shortly be re-drafted and will again be submitted to the divisions in order that its provisions may be voted on by the annual representative meeting of the Association, commencing at Oxford on July 26th.

In the process of consideration of the matter by the Central London division (not the Metropolitan Counties Branch as apparently supposed by your correspondent, Dr. J. Oliver, and stated in your leading article on Jan. 23rd), an individual member of that division has given notice that he will move in favour of adding to the Bill clauses to prohibit dispensing by medical men except in certain circumstances specifically stated. His motion will be considered by the division on Feb. 17th.

It will thus be seen that not only do the clauses in question not form part of the Medical Acts Amendment Bill as originally drafted by the Medico-Political Committee and not only have they not received any kind of sanction from the Association; they have not even been so much as considered up to the present by any division of the Association. I am, Sirs, yours faithfully,

J. SMITH WHITAKER,
Feb. 8th, 1904. Medical Secretary.

To the Editors of THE LANCET.

SIRS,—I have read with much interest your leading article and Dr. J. Oliver's letter on a proposal in the Draft Bill of the British Medical Association to prohibit medical men from dispensing medicines, and I quite endorse the views so well expressed in THE LANCET of the 23rd ult. While a progressive in every sense of the word in medicine as well as in politics I yet believe that we owe much regard and reverence to the past. This subject of dispensing our own drugs has awakened in my breast many old memories, and without discussing the question further on the lines of Dr. Oliver, whose reasoning is sound and irrefragable, I should like, with your leave, to say a few words in this connexion from a retrospective and sentimental point of view.

Some 45 years ago I made the acquaintance in a quiet Scottish village of a man of the highest culture and most courteous manners, with a somewhat wide experience, I have ever known. To myself, a raw beginner, he was most kind. Although my setting up in practice in his neighbourhood might possibly have affected his pocket, he nevertheless was uniformly ready to lend me wise and disinterested advice and assistance. He was indeed in my youth my "guide, philosopher, and friend," and looking back over my past life he was as much my teacher, in the best sense of the word, as were the host of mathematics and anatomy, the other two great factors which have profoundly affected my whole career, such as it has been. 40 years ago, when I was in the habit of visiting my friend, if I did not find him in the shop (he was not ashamed of the title) we were sure to gravitate to that centre. At that period he did not have there his well-plenished wine-cellar, though later on, with its gradual disuse as a drug store, it came to be used for that convivial purpose. How many good stories did its walls call up in the days when his worthy father, a distinguished surgeon of his day (now nearly a century ago) kept a small army of apprentices. But I wish at this time to recall the shop, not for its esoteric relations but for its exoteric influences. There had his father laboured and there had my friend grown up from boyhood to manhood among his fellow citizens. The shop door was always open and the practitioner's advice, mostly without fee or reward, always ready for the benefit of his neighbours, for the poor as well as for the rich—advice not only professional but as often as not on matters of business and conduct. And so the motto "*Nihil humanum a me alienum puto*" should before all be our motto, a motto as old as the days of Hippocrates. And if so, is there not a considerable risk of our losing hold of the regard and, it may be, the affections of our patients by standing aloof too much from their daily lives and neglecting the exercise of our immediate sympathies for their behoof? As has been so well said by John Brown (it does one good to write that fine, wholesome, common name): "It is not a case we are treating; it is a living, palpitating, alas, too often suffering fellow creature."

And is there not the danger of becoming ultra-scientific over much of our wise friend Gardener's "naturalist" in medicine and too little of the good old-fashioned Samaritan with his supplies of oil and wine ready in his wallet to administer to the weary wayfarer in life's thorny path of sickness and disease. Charity at second hand is a poor substitute for real brotherly kindness. "Mittened cats do not catch mice." In other words, the true healer must not only be skilled in what to do but be thoroughly acquainted with how to do it. And this implies a readiness of hand and a constant seeing and handling of the weapons or the adjuvants with which he is to fight the elements of disorder, derangement, and it may be death. In this age of specialism, with all its blatant victories—victories which I do not for one moment despise—no thinking person can deny that the every-day skill and attention of the humblest practitioner, our Gideon Grays and MacLures, may, like the quality of mercy and the gentle rain distilled from heaven, do a thousand times more for sweetening the lives of humanity at large than all the triumphs of the greatest and mightiest and most successful of our surgeons and physicians.

I am, Sirs, yours faithfully,
Feb. 2nd, 1904. W. B.

To the Editors of THE LANCET.

SIRS,—I bought a practice in a poor neighbourhood the *private* receipts from which are about £150 per annum; in addition to this I have in *contract* or friendly society work four clubs; they are my mainstay, they pay £300 per annum and give little trouble; some members pay 4s. and others 5s. per annum. This makes my practice worth £450 per annum. It took me four years to work this up; competition is keen. Now if I were not allowed to dispense I should be *hopelessly ruined*, for very few of my private patients could afford to pay medical man and druggist; and as regards the contract work I discussed the above question with the secretaries of the clubs and offered attendance at a reduced rate conditionally that they would obtain medicines from and pay the druggist. The answer I got was that they preferred to get medicines and attendance from me as hitherto and, failing this—and here's the rub!—they would unite with three large clubs belonging to my neighbours and form a "friendly societies' medical institute," put all their families in, and get a surgeon to give his whole time to the work. This means that the population of the place would be well depleted by the institute and four of us would be swamped. This is only one instance in which a general practitioner like myself—*plus* three brother practitioners—would be hardly hit or else ruined. I hope and pray that the advocates of this cruel and absurd idea will be frustrated in their attempt to legalise a scheme which would mean the *absolute ruin* of hundreds of hard-working, conscientious men who attend the poorer section of the community—I mean those able and willing to pay a *small* fee and who would otherwise go to the hospital or provident dispensary. To the rank and file of the general practitioners I say, "Wake up!" and strenuously oppose the Bill for the "prohibition of dispensing by doctors."

I am, Sirs, yours faithfully,
Feb. 6th, 1904. L.R.C.P., &c.

To the Editors of THE LANCET.

SIRS,—Your announcement of a meeting of a branch of the British Medical Association about to be held to consider certain new clauses which it has been suggested shall form part of the Medical Act Amendment Bill, and more particularly the clause respecting the dispensing, has led me to write you to call attention to another matter which I think bears as hardly on the medical profession as it does on the public. I write as a chemist and would be glad to see the proposed new clauses *re* dispensing adopted. It is, however, a matter that must, I think, be left to the medical profession. Our society has done its duty and to-day there are capable qualified men in every legitimate chemist's shop in Great Britain waiting hopefully for the time when medical men shall delegate their "dispensing." This by the way. What I took up my pen to write about is the question of *prescribing*.

I want to point out that the prescribing chemist, speaking broadly, is non-existent; the old school is perhaps represented here and there but for practical purposes there are no prescribing chemists. But to-day illegitimate prescribing is more practised, more far-reaching, more detrimental, alike to the public and to the medical man, than ever it has been at any period The prescribing chemist has given place to the daily newspaper and magazine and the public swallow the quack nostrums there prescribed and so blatantly advertised and pay out their half crowns without hesitation, in the majority of cases losing their money and vitiating their health in a stupendous, wholesale style never previously dreamed of Never have the ailing public been *so exploited Great Britain has become the happy* hunting ground of the American professor of humbug and a rich harvest is being gathered by means of positive statements that applied to any other commercial transaction would assure prompt arrest and punishment Why is it the law permits the statement that "Dr Blank's Blue Pills' will cure locomotor ataxy, paralysis, and the like, and yet when the poor sufferer has spent his money and proved the fraud of the label the law offers no facilities for prompt punishment of the fraudulent vendor?

It is rumoured that owing to a recent legal ruling the *authorities charged with the collection of revenue from* these quack nostrums will shortly introduce an amending Act into Parliament widening the scope of its Acts If this is done the medical profession should see to it that in future the Government should free itself from its association with quackery either by insisting on the actual formula being published on the outside of every package (as on the continent) or in some other distinct manner withdraw the sanction which its medicine stamp now extends In view of the recent disclosures by a medical man (as reported in THE LANCET) of the ingredients of these nostrums the public will not need *anything further to show them the "folly of their* faith' than a knowledge that the actual ingredients of their favourite nostrum can be purchased for a few coppers Apart from any other considerations it is pitiful to see the way the very poor are defrauded of their money and often when they need it most The Government should do something to protect the ignorant or, at all events, in common decency they should dissociate themselves from a "connivance with quackery and the medical profession should not hesitate to speak firmly on the subject

I am Sirs yours faithfully,

Feb 8th 1904 *A CHEMIST AND DRUGGIST*

THE ANGLO AMERICAN MEDICAL ASSOCIATION OF BERLIN

To the Editors of THE LANCET

SIRS —The Anglo American Medical Association of Berlin will be glad if you would inform the profession of its organisation and purposes Realising the difficulties which beset the path of the stranger, the association places its

end to study in
id the meetings
concerning the
any member of

the profession who will communicate upon his arrival in Berlin with Dr J H Honan president Lutzow Str 78, or with the undersigned committee

We are Sirs, yours faithfully,
ALBERT J MAYER M D , Secretary
DAVID SHANNON M B Glasg
WILLIAM W GRAVES M D

Albrecht Str 22 Berlin Feb 3rd 1904

SPORADIC SMALL-POX

To the Editors of THE LANCET

SIRS,—Wherever a sporadic case of small pox occurs and there is no history of infection the question must naturally puzzle one as to the origin of the disease Quite recently a case of small pox occurred in my district and, like many other cases so far as could be ascertained by questioning the patient, there was absolutely no history to answer for the infection The house in which the case happened was dark and exceedingly dirty, and the rooms had a large number of papers upon the walls which were infested with bugs During the outbreak of small pox at the end of the year 1901 and the beginning of the year 1902 the stripping and cleansing of rooms previously to lime whiting revealed large numbers of papers upon the walls of houses which were terribly infested with bugs The amount of pent up filth to my mind was so alarming that in reporting to my public health committee respecting the working of the sections of the Public Health (London) Act 1891, which govern the cleansing and disinfection of houses, *inter alia* I stated —

> Some of the rooms which were stripped after the cases of small pox had 18 15 12 and 10 papers on their walls The amount of pent up filth must be enormous and it is not reasonable to expect tenants to
>
> together the plaster If such a state
> on the houses of the working classes in Lon on w i i i t n e become so saturated with filth and disease that a condition of affairs in the metropolis will be arrived at like that in the year 1665 when plague broke out

Recent researches in respect of mosquitoes being the carriers of malaria and of fleas being the means of conveying plague from infected rats suggest an idea as to whether there is any condition of a bug externally or internally which causes small pox I must apologise for writing on what may be considered so puerile a matter, for the question may be derisively asked what about lice and black beetles, but the walls of the houses which were cleansed, disinfected and lime whited had so much pent up filth upon them by the plastering of paper upon paper that possibly the surroundings of the bugs had affected their condition or excreta and any ideas which may suggest to bacteriologists new fields to work on in order to discover the origin of so loathsome a disease as small pox which must originate from some cause I am sure, cannot be amiss

I am Sirs yours faithfully,
FREDK WM ALEXANDER
Medical Officer of Health Metropolitan Borough of Poplar

Bow road E Feb 2nd 1904

THE TREATMENT OF SCOLIOSIS

To the Editors of THE LANCET

SIRS —In the report you give in THE LANCET of Jan 30th, p 302 of my paper on the above subject read before the Aberdeen University Medical Society there are several passages which give an entirely erroneous impression of what I said

1 ' In *osseous scoliosis there was bone disease* and the condition was to that extent incurable ' What I said was that ' there was bony *deformity* and the condition was to that extent incurable

2 of the

cases

Thi —viz , postural and osseous combined about one half have an *ordinary* (not reversed) letter C curvature of the whole dorsal and lumbar vertebræ (not only the dorsal region) '

3 The muscular sense was markedly *absent* in the *wasted muscles*

Surely the patient s muscular sense is *perverted* not *absent*, for the vicious posture appears to her quite natural while the improved position in which she is put by the surgeon appears to her, through her perverted muscular sense to be totally incorrect If the muscular sense were absent it would be a waste of time to treat the patient at all I should be obliged if you would insert this in your next issue, as such errors are very misleading and tend to discredit the very valuable method of treatment which I was advocating

I am Sirs yours faithfully,
P BERNARD ROTH

Marischal College Aberdeen Feb 2nd 1904

⁂ We have referred the above letter to our correspondent in Aberdeen who replies that his report "gives a very reasonable gist of the lecture' and was not intended to be *verbatim* To the first and third emendations he demurs, the second one he admits to have point and accepts the correction with regrets for the slip In these regrets we join —ED L

CHLORETONE IN SEA-SICKNESS

To the Editors of THE LANCET

SIRS —In a recent issue of THE LANCET experiences were invited with regard to the treatment of sea sickness by chloretone I notice several medical men have given the experiences of their patients but I shall venture to place before you my own personal experience of the action of this drug I am always a bad sailor and when it recently became necessary for me to visit the continent I determined to give chloretone a fair test. Not having taken a voyage for five or six years, I practically left myself untreated on the voyage over which lasted some four hours, to test my seafaring qualities. It was fairly rough but I tried to brave it out, remaining on deck. I was, however, soon completely overcome and before reaching the continental port was very much in the condition of the man who at first was afraid he was going to die, but a little later was afraid he was *not* going to die. On this occasion when nausea came on I took a dose of chloretone which had no beneficial action, but the test not being a fair one I pass it by. On the return voyage, however, I determined to give the drug every chance. Having one and a half hours' railway journey before joining my boat, I took ten grains of chloretone on beginning this portion of the journey, repeating the dose just before going on board. I remained quietly reclining on deck and took a third dose about an hour after sailing, thus having 30 grains in from two to three hours. The result was absolutely unsatisfactory and during the second half of the crossing, which this time likewise was fairly rough, I was as ill as I ever was before. Furthermore, the nausea lasted rather longer than usual after landing, but this I put down to mere coincidence. Chloretone in my case proved absolutely useless. A lady doctor of homœopathic tendencies gave me some high-grade petroleum tablets to try. I undertook to do so only in case the chloretone failed and when it was evident that it had I took the petroleum tablets but without avail. I know chloretone is successful with some individuals, but it failed in my case after a most fair trial.

I am, Sirs, yours faithfully,
South Kensington, Feb. 5th, 1904. L. ERASMUS ELLIS.

To the Editors of THE LANCET.

SIRS,—Under the above Mr. Cameron Kidd, in THE LANCET of Jan. 30th, p. 334, reports an interesting case of "train sickness" in a little girl successfully treated with chloretone. In THE LANCET of June 8th, 1895, p. 1434, I drew attention to such cases, recommending sulphonal in varying doses. Common as it is in children, as I pointed out, and trivial as it may seem amongst adults, "railway megrim varies from undue fatigue and inability to sleep the same night to intense headache, sickness, and prostration," and there are many "in whom a railway journey of two hours produces as much dread and misery as a sea passage." At the time of my communication I recollect receiving more than one grateful letter from readers of THE LANCET and since I have often used myself and recommended sulphonal or trional with success. Still, in some cases I have failed and I am especially obliged to Mr. Kidd for his recommendation of chloretone.—I am, Sirs, yours faithfully,
Feb. 9th, 1904. JOHN A. SHAW-MACKENZIE, M.D. Lond.

THE REVACCINATION BILL, 1904.

To the Editors of THE LANCET.

SIRS,—I do not see in the draft of this Bill printed in THE LANCET of Feb. 6th any procedure described to secure the revaccination of children in lunatic asylums.

I am, Sirs, yours faithfully,
W. H. BOWES.
Plymouth Borough Asylum, Ivybridge, Devon, Feb. 9th, 1904.

THE INQUEST ON WHITAKER WRIGHT.

To the Editors of THE LANCET.

SIRS,—Mr. D. Biddle in his well-argued letter in THE LANCET of Feb. 6th, p. 394, on the inquest of Whitaker Wright says, "The bluish tint of the body and the fluidity of the blood are neither separately nor together distinctive of poisoning by prussic acid." As to the fluidity of the blood I cannot speak positively, but I think that if the body is seen soon after death the blue colour may be looked upon as pathognomonic of poisoning by hydrocyanic acid.

Some years ago I was first impressed with this fact by a melancholy case of poisoning by prussic acid which came under my observation. The subject was a handsome, fair-skinned, young man who, in a fit of temporary insanity, drank an ounce of hydrocyanic acid. I saw him a few minutes after he had swallowed the fatal draught lying dead on his bed and the empty bottle, which had evidently contained the acid, was on a chair by the bedside. As regards the appearance of the body, the first thing that attracted my attention was the brilliant violet colour which the skin presented. Several hours afterwards when I again saw the body the violet colour had considerably faded. The intensity of the colour in this case may have been owing to the large quantity of poison taken. Dr. Taylor, in his book on Poisons, mentions a violet colour as one of the appearances met with after death from poisoning by hydrocyanic acid.

I am, Sirs, yours faithfully,
WILLIAM O'NEILL, M.D. Aberd., M.R.C.P. Lond., &c.
Lincoln, Feb. 6th, 1904.

THE DESTRUCTION OF TUBERCULOUS SPUTA.

To the Editors of THE LANCET.

SIRS,—I notice in a paper by Dr. C. T. Williams that he advises as a convenient method of destroying the expectoration of tuberculous patients mixing it with sawdust and burning it. For some years I have advocated the following plan which appears to me a more complete system. A small *cardboard box is half filled with sawdust which is damped* with paraffin. Into this the patient expectorates and at the end of the day it is easily burnt. Even in the summer when there may be no fire, a match will be sufficient to cause its total destruction. Most householders have a superfluity of such boxes and are pleased to find a use for them. If a cup is used or a bottle to carry about it is quite easy to have a lining of greased paper which can be lifted out with its contents each night and burnt.

I am, Sirs, yours faithfully,
J. LIONEL STRETTON,
Senior Surgeon, Kidderminster Infirmary and Children's Hospital.
Feb. 2nd, 1904.

MEDICAL ACTS AMENDMENT BILL.

To the Editors of THE LANCET.

SIRS,—I am glad to learn from THE LANCET of Jan. 30th, p. 339, that Clause 34 of the Medical Acts Amendment Bill has met with adverse criticism at the meeting of the Cardiff division of the British Medical Association. My surprise is that any division has tolerated it. In my opinion it is quite unnecessary to protect the profession from unqualified practitioners and would certainly be very detrimental to the interests of the general practitioner. Few of us in such conditions would care to employ an assistant and an additional hardship would be thrown on those who are obliged to. In addition to the increased facilities given to an unscrupulous assistant to pretend to partnership there is the obvious harm likely to arise to a practice from the open advertisement in connexion with it of men who, later on, may become notorious black sheep. Considering the complaints so often made in the medical press of the class of practitioner too frequently foisted on us as assistants, and that two months is far too short a time for the principal to find out the character of his assistant, the exemption suggested is practically of little use.

For my own part, if this clause is retained I would rather see the whole Bill—which in many points is an excellent one—lost, so detrimental do I consider the conditions it lays down to the best interests of the general practitioner.

I am, Sirs, yours faithfully,
MAJOR GREENWOOD, M.D. Brux., LL.B.,
Barrister-at-law.
Hackney-road, N.E., Feb. 4th, 1904.

THE TEACHING OF BIOLOGY.

To the Editors of THE LANCET.

SIRS,—In July last a committee appointed by the Royal Colleges of Physicians of London and of Surgeons of England to consider what alterations, if any, were desirable in regard to the conduct of the First Examination of the Conjoint Board issued a report containing certain suggestions which deal, *inter alia*, with the teaching of biology. The report has been adopted by the Colleges and in pursuance of its recommendations an attempt is now being made by the committee to elicit the opinions of teachers in the metropolitan and provincial schools on the following points:—

1. What alterations, if any, are desirable in the synopsis for elementary biology?

2. Is it desirable that there should be a paper in biology in addition to the *vivâ-voce* examination?

3. If so, how many questions should be set in the paper and how many hours allotted to it?

4. Should the candidates be required to answer all the questions or should they be allowed a choice?

Of these questions Nos. 2, 3, and 4 deal with matters of detail which may well be left to the decision of the representatives of the various schools, but the first raises larger issues and makes the present an opportune moment for the consideration of the place of biological training in medical education. In all seriousness it may be asked whether a course of lectures and demonstrations on anything like the present lines has a value in the least commensurate with the time it must occupy even if, as suggested by the committee, some portion of the course is gone through elsewhere than at a medical school and before the preliminary examination in general education is passed.

Until about ten years ago elementary biology as understood by the Colleges was chiefly a matter of parasitic worms, but still the teaching had the merit of being founded on the principle that even the studies of the first year should have some practical bearing on medicine. The old arrangement, however, made necessary two distinct courses, one for candidates at the "College" examinations and the other for those belonging to the University of London and as this involved a considerable waste of energy the present syllabus, which is a feeble imitation of that for the preliminary scientific examination of the University, was adopted. It cannot be said to have been a success. It aimed at supplying at once an introduction to the serious study of biology and an exposition of the biological problems which are met with in medical practice and in both respects it has signally failed. Having satisfied the examiners that he can identify a cross section of hydra or the ovary of lumbricus the student hastens to forget all about those creatures and nothing in his subsequent medical career is likely to remind him of their existence. He has, perhaps, a vague notion that something lies behind them but there is no time to teach him what that something is; he must get on to the next "type." No wonder then that he remains as ignorant as the average layman of the part which natural selection, changes in the environment, hereditary tendency, and other biological factors have played in producing those complex human mechanisms with which he will shortly begin to occupy himself. And yet it is of the first importance that he should be familiar with topics such as these. More and more clearly is it being recognised by the world at large that any satisfactory scheme of practical morality must have a biological basis which professional theologians make no pretence of supplying, and the medical man is expected to make good the deficiencies of creeds and homilies. For the student of medicine the science of life should embrace much more than a little animal morphology tempered with a trace of the botany of the cryptogams and should deal as fully as may be with those principles which explain, however imperfectly, man's place in the scheme of things.

In the University of London, which, as already indicated, has influenced the requirements of the Conjoint Board, the courses of study for medical and scientific students overlap and from motives of economy the preliminary scientific studies of the former are arranged on lines which are only appropriate to the latter. It may be safely assumed that the practising physician has neither inclination nor opportunity to become a specialist in botany and zoology and it serves no useful purpose to base his limited study of biology upon work which is only of value if duly followed up. His peculiar need is to understand why man is what he is, and his interest is in the results rather than the methods of biological research. Palæontology, ethnology, psychology, and sociology are of no less importance to him than botany and zoology and all these branches should be laid under contribution.

To insist that a medical man cannot obtain a useful knowledge of biological matters without dissecting "types" is akin to reviving the obsolete method of studying the classics which requires the reader to hunt up all the words in a dictionary instead of profiting by the labour which has provided translations. Man is the only "type" which the physician can find time for. Let him therefore learn something of the springs of human conduct, of the religious sentiment, of the organisation of society, and of the other phases of man's kaleidoscopic personality. Of more strictly technical subjects he may ponder on the origin of living substance, the phenomena of growth and decay, the nature of that *vis medicatrix* without the aid of which all his arts are as nothing, and the host of similar problems which his daily round presents. If questions like these are too abstruse for his student days let him take biology at a later stage and spend his first year in the acquisition of facts relating to human anatomy or the materia medica. At any rate, let him not cherish the delusion that to pass the present examination will constitute him a biologist. The play of *Hamlet* without the Prince of Denmark is not more absurd than a synopsis in biology which makes no reference to the principle of evolution.

I am, Sirs, yours faithfully,

A FORMER TEACHER.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Vaccination in the Madras Presidency.—A Curious Petition against a Septic Tank.—The Plague.—Statistics concerning Bombay and Calcutta.

AN order has recently been passed by the Government of Madras formulating an elaborate scheme for the improvement of the working of the vaccination department. Hitherto the staff of vaccinators has been numerically inadequate and vaccination has made but slight progress. It may be said also that the class of men employed is open to improvement The staff is now to be graded and the pay is to be raised. The use of preserved lymph enables the vaccinator to cover more area than used to be the case when he had to secure lymph from the arms of previously vaccinated persons. The supervising agency will also be increased. Vaccination is not compulsory except in the towns, but it will be declared so in certain districts. The King Institute of Preventive Medicine at Guindy will supply the requisite lymph. From the last report about 66 per cent. of the children in the municipalities were vaccinated, with a reported ratio of success of 89·4, but throughout the whole presidency, with a total population of over 37,000,000, it appears that only 356,000 children under one year of age were operated upon, the births being recorded at 935,749. The death-rate of infants under one year is certainly not less than 200 per 1000 and with the imperfect registration of births is probably much more. The census of 1901 showed an infantile population (under one year) of 1,119,450.

A curious memorial has been presented to the Lieutenant-Governor of Bengal by some of the Hindu inhabitants of Rishnu, near Calcutta, complaining against the establishment of a septic tank intended for the use of mill hands. The sacred Ganges (Hooghly river branch) is to be polluted, the neighbouring shops are to be contaminated, and the religious feelings of the temple worshippers are to be outraged. The memorialists seem [illegible] latrine with any p[illegible] to ignore the common [illegible] as a latrine and of utilising any convenient spot by the roadside for the same purpose. That a public latrine used by thousands of mill hands close to the public road may be a nuisance if not properly constructed and managed is tolerably certain but that objection should be taken to the septic tank is merely an example of that passive resistance so characteristic of the Indian people. From time to time I have drawn attention to the installation of the septic tank system for the disposal of sewage at several mills anc [illegible] have only proved their use [illegible] of view of sanitation [illegible] investigation by experts will report before the prayers of an ignorant crowd are listened to.

The plague in Kashmir is fortunately subsiding. It is stated that the spread of the disease after the second case reported was due to the relatives and friends of the deceased who had attended the patient digging up his body at night because it had been buried without performing the usual religious ceremony. Some of the mourners soon after were infected and spread the disease.

Some interesting statistics concerning Bombay city were given by Dr. J. A. Turner at a recent public meeting. About 6000 persons are employed in cleaning the city. About 1000 tons of garbage have to be removed daily as well as about 500 tons of night-soil. The mean mortality from phthisis during the past 10 years is: Mahomedans, 11 per 1000 of the population; Hindus, 5 8 per 1000; Parsees, 1·4 per 1000; and Europeans, 0 3 per 1000. The total mortality from phthisis is 6 6 per 1000, as against 1·6 in London and 2·3 in Manchester. The mean annual infantile mortality is equal to 700 per 1000 of the births and the number of children under four years of age dying yearly is 12,000. In Calcutta also the death-rate from phthisis is very high, and the ratio of infants (under one year) dying is 491 per 1000 births. The Mahomedans lose 843·6 per 1000 births, while amongst the Hindus the rate is 401·3.

Jan. 22nd.

THE ORGANISATION OF THE PROFESSION.

(FROM OUR SPECIAL COMMISSIONER.)

THE BATTLE OF THE CLUBS AT SOUTHAMPTON.

FOR some time past the work of organising the profession at Southampton has made steady progress. It was the decision given by the General Medical Council in regard to the difficulty that arose at Great Yarmouth which brought matters to a climax at Southampton. Several practitioners in the latter town felt that they also were acting as medical officers of insurance companies employing canvassers and might be exposed to similar reprobation. One or two among them approached the secretary of the local branch of the British Medical Association and urged that some explanation should be forthcoming so as to enable them to know in what position they stood. The National Medical Aid Company, Limited, and the London and Manchester Insurance Company had branches in Southampton which employed medical men and there were some laymen who had clubs of their own. For instance, the agent of an insurance company which had no medical aid organisation found that this was a disadvantage. He therefore called on four or five medical men and organised a club of his own. His customers who insured their lives or their furniture were thus also able to insure against sickness. This agent took a penny per week from them all, whether men, women, or children, which he handed over to the medical practitioner after deducting from 15 to 20 per cent. for the trouble of collecting. Though the profession thus found itself in a somewhat parlous state the local branch of the British Medical Association did not take any action. It was in the habit of meeting only once in the year but its secretary personally took great interest in the attempts about to be made.

There is an old-established social and scientific society called the Southampton Medical Society and this body meets every month during the winter season. Though the subject was somewhat outside the usual scope of its discussions the question of club practice was put down on the agenda for one of the meetings. The medical men who then attended and discussed this matter felt that the only manner to deal effectively with it was to call a general meeting of all the practitioners of the neighbourhood. This was done. The first invitation was issued on Jan. 28th, 1902, for a meeting held on Feb. 6th. Other meetings followed in rapid succession and by Feb. 20th a scheme of organisation had been drawn up. This meeting of Feb. 20th was an important gathering. There were 28 practitioners present and this must be considered very good, as it was estimated that there were not more than 60 practitioners in the town and the neighbourhood. It was then decided to form a medical union "provided a practical unanimity was secured." On March 7th another meeting was held and an appeal was drawn up to the other practitioners urging them to fall into line. The first secretary, Mr. W. Hall, then resigned and was succeeded by Dr. W. Prior Purvis. By March 22nd sufficient progress in the work of organisation had been made to decide that to cover working expenses each member should pay 5*s*. a year. The greater part of the discussion held at the meetings related to the rules and the declaration of principles which every member would be called upon to sign. A large number of meetings were held so as to keep all the members well informed as to what was being done. Thus, in addition to many minor meetings there was a general meeting on April 15th and another on June 19th following As a rule these meetings were held after working hours—that is, at about 9 P.M. At the last-mentioned meeting a permanent executive committee of 11 was appointed in the stead of the temporary committee and on July 30th the following officers were elected:—Mr. J. F. Bullar as permanent chairman, Dr. H. W. Shettle as honorary treasurer, and Dr. A. A. Mackeith as honorary secretary.

The organisation was now therefore definitely constituted and it entitled itself "The Southampton Provident Medical Association." It had also by this time agreed upon its object and policy. There were a large number of church and chapel clubs at Southampton together with public house slate or sharing-out clubs. The members of these clubs who paid 1*d*. per week extra could have medical attendance. The question arose whether this could not be checked by raising the subscription from 1*d*. to 1½*d*. It was agreed that all the medical men should write identically the same letter to these clubs and also to the National Medical Aid Company, Limited, and to annual benefit clubs. Notices to this effect were to be given on Sept 28th, so as come into effect at the beginning of 1903. But it was decided that no action should be taken in regard to the registered friendly societies such as the Oddfellows, the Foresters, and the like, and some trade unions, notably the boiler makers. Though abuse undoubtedly exists in regard to these organisations, nevertheless there are not the same scandalous circumstances connected therewith as exist in regard, for instance, to some of the public-house clubs or the clubs connected with the churches and the chapels.

A general meeting was convoked for Sept. 2nd for the purpose of signing the bond and agreeing as to the text of the letter to be written to the clubs. 20 medical men attended. The bond was dated August 5th and after this meeting 49 medical men had signed it out of the 57 then in practice at Southampton. The following is the text of the bond in question:—

> Rules of the association, Article 23: " [illegible] the association shall sign a properly d[illegible] 1. That he will not take any contract pa[illegible] paid to the association except member[illegible] are recognised by the committee of t[illegible] friendly societies shall be kept by the [illegible] this list shall be submitted for approval to the next general meeting 2. That he will not advertise for patients directly or indirectly or treat patients sent to him by persons or companies who advertise for patients. 3. That he will not for a period of two years after the formation of the association accept any club which at that time was attended by another medical officer, except with the written consent of the original medical officer or of the committee of the association. 4. That he will not employ a collector or collect subscriptions from contract patients at their homes. 5 That he will obey the rules of the association and do nothing contrary to its welfare"

Members who, after signing the above, did not conform to these rules could be excluded from the association if at a general meeting convoked to discuss their case there was a two-thirds vote against them. Then Rule 25 stated that—

> No medical officer of the association shall meet professionally any medical man resident within the borough of Southampton, or carrying on contract medical practice therein, who is not a medical officer of the association or who has not signed a statement acceptable to the committee thereof, except in cases of immediate urgency and all such shall be reported to the committee within a week.

While determined to abolish or to reform the worst features of club practice the medical men of Southampton decided that they must also adopt a constructive policy. Therefore, instead of calling their organisation a medical union they have taken the title of Provident Medical Association and determined that they would themselves provide medical attendance and medicines for those persons not able to pay the ordinary medical fees. Every practitioner was to be induced to join the union either as an active member if he intended to treat poor patients on the contract system or as an honorary member if he did not, but in either case the entire profession must be brought into the movement. All were interested in the question, even those who had no club patients. Having thus decided that they would themselves provide what medical aid was necessary, the question of the collection of the subscriptions was one of the first difficult problems that had to be taken in hand. It was a very puzzling practical matter and the want of experience was keenly felt. If a collector was paid by results abuse was very likely to arise, for he would be tempted to enrol persons who could afford to pay medical fees. On the other hand, if he was not paid by results then he was tempted to be neglectful. It was decided that the latter was the less of the two evils and therefore the association resolved to pay its collectors a fixed salary and not to give them any commission for obtaining new subscribers. Indeed, they were instructed not to enter a new subscriber on their books unless the candidate had been examined by the medical attendant whom he had selected. Nor were the collectors to be allowed to collect for any insurance company. They might sell mangles and collect weekly payments for the same but must not deal in anything with which the question of insurance against sickness could in any way be associated. The collectors must find sureties; one of them has paid £25 into the bank. Three collectors have been appointed, one being paid £2 a week and the other two £1 each. They are men accustomed to the business and had already large collecting books—indeed, one of them had been working among the people whose clubs were abolished by the action of the medical men and who consequently came over to the association founded by the medical union. The rule was made that the collectors must pay the money they received into the bank every week so that if the payment was not made or if the sum differed in any marked degree from what was usually received inquiries could be instituted.

The next point was to divide the town into districts, so that each practitioner might choose the district where he could most conveniently attend to patients. The medical officers would continue to provide the drugs as in the past, but they would receive 1½*d* instead of 1*d*. per week. When the circular announcing this determination was launched on Sept. 28th, 1902, only five practitioners had not signed the agreement and joined the medical association. Two out of these five have subsequently joined, but one of them, though a young man, has practically retired. A third refused to sign because he had no club work whatsoever. Of the two remaining one is very old and did not feel capable of taking any action one way or the other and the fifth, though he refused to join the association, wrote saying that he would not undersell his fellow practitioners and promised not to take any new club except at the increased rate of payment.

The first start was therefore made under the best auspices, but weak points became manifest when once the organisation got under way. Early in the history of the movement one of the members resigned. He pleaded that he had a wife and family to maintain, that his patients could not pay more than 1*d*. per week, and that he could not afford to lose them. He did not seem to understand that he would get more by the proposed change. He was afraid of the risk and therefore resigned. Two other unfortunate circumstances occurred that were not directly connected with the medical organisation but affected it considerably. There was a benefit club called the Dock Friendly Society. This was a registered friendly society and the movement was not intended to affect such bodies. But the medical officer attached to this club was not satisfied. He found that no new members joined, that the average age of the members was 44 years, and consequently there was a great amount of sickness in proportion to the very small pay. At a penny a week it is only possible to attend to the members of a society on condition that there should be a normal proportion of young and healthy members as well as the old and the infirm. [illegible] gave rise to th[illegible]d be attacked. [illegible] firm of practitioners who refused to attend a lodge of female Oddfellows. These [illegible] to do with the organisation [illegible]t established but the friendly [illegible]nd imagined that they were seriously menaced. They said that the medical men had begun with the weak societies but would soon be attacking the stronger ones. The medical officers attached to the male lodges of the friendly societies held a meeting and declared that they had no intention of raising their charges. Nevertheless, and so as to be independent of the medical men's organisation, the female lodge of Oddfellows and the Dock Society advertised for a medical officer and so did the National Medical Aid Company, Limited. This company had started business in Southampton some 15 years previously. It employed five medical practitioners. Whenever there was any difficulty with one of them the company at once imported a new practitioner into the town. They probably paid in all about £250 a year to be shared by their five medical officers at the time the Southampton Provident Medical Association was started. When these five medical officers resigned the subscribers were told to join the association formed by the united profession. In any case this was the only means by which they could retain their usual medical attendants. The collectors of the National Medical Aid Company, on the other hand, went their usual rounds announcing that new medical officers had been appointed and did not say anything about the formation of the association by the former medical officers. The company had imported three medical men and strove to make them do the work of the five who had resigned. This, however, did not succeed. The patients preferred their old attendants even though this meant an increase of 50 per cent.—that is to say, 1½*d* instead of 1*d*. per week. The three imported medical men received so little support that the National Medical Aid Company gave up the struggle altogether and has now ceased to exist in Southampton. Thus at least in this point of the field the victory was complete.

The Dock Friendly Society had also imported a medical practitioner; and as it had not enough work for him it took the initiative in founding what is called the *Southampton Benefit Societies Medical Federation*. Some of the annual benefit societies joined and the federation claims to have over 2000 subscribers. This membership at the old rate of 1*d*. a week did not provide much of an income for the medical men who had been imported into the town. But the insurance companies encouraged them to form private clubs with the members for whom these companies used to provide medical aid. The London and Manchester, however, which had been collecting 1½*d*. a week and paying its medical officers only from 3*s*. to 4*s* a year, handed over all its subscribers and the 1½*d* to the Southampton Provident Medical Association but they had only 144 members. Still it was a help.

The greatest cause of success, however, was the attachment of the people to their medical attendants. When they found that these medical officers meant to manage their own business themselves they could not but acknowledge that this was fair. It is no advantage to the patient that some individual or some club should step in between him and his medical attendant and "sweat" a profit out of the latter. It was also felt that the charge of 1*d*. a week was instituted more than half a century ago and that wages have increased considerably in the interval, so that it is now time to augment such payments. Nevertheless, it was no small undertaking. By giving up the old contract work at 1*d*. per week it was calculated that some 10,500 persons would be affected. More than a year has elapsed since the struggle began and it is now estimated that the Southampton practitioners have lost about 3500 subscribers who are paying a penny a week to the imported practitioners. On the other hand, the members of the Southampton Provident Medical Association have about 7000 subscribers [illegible] This includes 4000 [illegible]nisations and mean[illegible]nbers of the medical [illegible] two-thirds the amount of work which they did formerly and they receive if anything rather more pay. The cost of collection, the clerk, the printing, in fact all the working expenses, amount to about 21 per cent. of the receipts. Therefore the medical officers receive in cash and net 4*s*. 10½*d*. per member, whereas formerly they never had more than 4*s*. 4*d*., and from this latter sum the cost of collecting was very often deducted. At the same time there is much less abuse and canvassing, undercutting, and unfair competition have been altogether abolished. The tone of the profession has been thus raised, yet no financial loss has been experienced. All the members have remained faithful to the Association and the newcomers to the town, six in all, have joined the union of the Southampton practitioners. The general feeling therefore is one of great satisfaction. The worst elements of contract work have been abolished. The great majority of subscribers are paying 6*s*. 6*d*. per annum and thus provide an object lesson that shows this is not more than they can afford. These excellent results would not [illegible] so easily but for the fact that the work [illegible] much easier by the energy and [illegible] Mr. J. F. Bullar, who has acted throughout in a most disinterested manner, having no club practice or personal interest to serve. The secretary, Dr. A. A. Mackeith, is likewise unremitting in his attention to the wearisome details of organisation and has always displayed great tact and activity. The policy pursued has been absolutely opportunist, attacking only where there was a real chance of success, and the results so far are very good. Perhaps this will [illegible] ocieties to reform themselv[illegible] Short of this *measure* it [illegible] Medical men cannot be [illegible] to attend well-to-do tradesmen for a penny per week because they happen to be members of such societies as the Oddfellows or the Foresters. This matter has not yet been raised in Southampton. Very cordial relations prevail between the friendly societies and their medical officers but the grievance is there, the abuse does exist, and it is for the friendly societies to maintain the peace by abolishing the abuse. But I must add that these last remarks convey only my personal opinion. In no way am I reflecting what was said to me by any responsible member of the Southampton Provident Medical Association. These observations about the abuse prevailing among the old-established friendly societies are neither official nor officious. They can therefore be taken in good part. They cannot be interpreted as a threat. They represent but an outside opinion and for that reason are perhaps worth considering, if only because they are impartial and disinterested.

THE "MEDICO CONDOTTO" OF ITALY.

(FROM OUR ROME CORRESPONDENT.)

THE term "medico condotto" is applied in Italy to the medical man employed to attend upon the sick poor of a commune and is derived from the "condotta" or area over which his work is "conducted." The appointment is in the hands of the communal council which selects for the service one or more of the medical practitioners already resident in the commune, or if none such is available the law obliges the commune to appoint at least one medical man to the post with or without a competitive examination. When a commune is unable by itself thus to provide gratuitous medical attendance for its poor it may combine with one or more of the neighbouring communes for that purpose. The respective communes entering into such a union or *consorzio*, as it is called, elect representatives in proportion to their population and taxation to form a *consiglio consorziale* the duty of which is to administer the sanitary affairs of the union.

An uninterrupted occupancy for a period of three years of the office of *medico condotto* is necessary under the present law to enable the holder to acquire fixity of tenure, and after the lapse of that time the communal council has no power to dismiss him except for reasons approved by the prefect acting on the advice of the provincial council. Against such dismissal the *medico condotto* has a right of appeal to the Minister of the Interior. The first three years of service are thus regarded as a period of probation during which the communal council may exercise its right of dismissal without necessarily assigning any reason. Before the expiry of the three years the council must hold a special meeting and decide by vote whether the services of the *medico condotto* are to be retained or not. Should the decision be favourable his position becomes *ope legis* established. The salary given by a commune to the *medico condotto* varies from about 1500 lire (£60) to about 2500 lire (£100) per annum. Although the remuneration is so poor there is no lack of candidates for vacancies. Country practitioners in Italy being numerous and badly paid these posts are eagerly sought after, the more so for the reasons that those holding them are free to engage in private practice and that after a certain period of service they become entitled on retirement to an indemnity or to a pension. The pension is granted to those who have been in effective service for 25 or more years and likewise to those who through wounds or illness contracted in the discharge of their official duties have been incapacitated for further service at any time after their three years of probation. The indemnity is accorded to those who after ten or before 24 years' effective service are unable to discharge their duties on account of illness contracted from causes other than those above mentioned or who have passed into other departments of the Government service. The pension or indemnity is supplied by a fund formed by various contributories, including the communes, benevolent institutions, and the *medici condotti* themselves, as well as by donations and bequests. To secure the minimum amount of pension the *medico condotto* must contribute 60 lire (£2 8*s.*) per annum during the whole period of his service together with a further contribution during each of the first ten years of 72 lire (£2 17*s*). This amount is obligatory upon every *medico condotto*, but he may contribute 100, 140, or 180 lire per annum and thus secure a higher pension. Thus, after, say, 25 years of service one who has paid the minimum premium to the pension fund is entitled to an amount varying, according to his age, from 506 lire (at 47 years) to 2500 lire (at 77 years) per annum. By contributing the higher annual payments he becomes entitled to a pension one-third or two-thirds greater or twice as great respectively, but in no case may the amount of it exceed 5000 lire (£200) per annum.

A Bill, already approved by the Chamber of Deputies, is now awaiting the assent of the Senate, which modifies in several particulars the law as it stands at present. Of the proposed modifications the most important are the following: (1) The appointment of the *medico condotto* must be made by a commission nominated by the provincial sanitary council after competitive examination and not as at present by the communal council; (2) the time necessary to acquire fixity of tenure is reduced from three to two years; and (3) the dismissal of the *medico condotto* must be agreed upon three months before the lapse of the probationary period. These changes are strongly opposed by the medical profession in Italy who want the power of appointment to be retained by the communal council and contend that fixity of tenure should be assured from the day of appointment and that the period of probation should be entirely abolished. In the case of unions it is pointed out that on the plea of reorganising the sanitary service the *consiglio consorziale* has the power to rid itself of its medical officer at a moment's notice without any pretext whatever by simply dissolving the union. In such circumstances the *medico condotto* would lose his position even after having served the time necessary for gaining his fixity of tenure, and this without receiving any compensation. As to the question of dismissal, it is urged that this should be determined only upon grounds of a serious nature which the *medico condotto* should be given the opportunity of disputing and that a right to appeal to the provincial council should be allowed to him. A demand is further made that annual leave of absence for a reasonable time should be granted to him. It is understood that the new Ministry which has come into office since the Bill passed the Lower Chamber regards the proposed modifications with favour and it is hoped that these and other suggestions for improving the measure which have been recommended by the council of the *Ordini dei Medici* will be adopted by the legislature. The result of the change would be a considerable amelioration in the position of the over-worked and under-paid *medico condotto* whose lot at present is not a happy one.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

University Matters.

THE annual meeting of the court of governors was held on Jan. 28th, the Chancellor, the Right Hon. Joseph Chamberlain, presiding. The pro-Vice-Chancellor, in moving the adoption of the report and balance-sheet, alluded to the fact that further annual income would shortly be required, as large sums would have now to be paid out of capital for the construction of the new buildings in process of erection. Sir Oliver Lodge, the Principal of the University, in seconding the motion, stated that a small deputation was shortly to meet the Chancellor of the Exchequer with a view of endeavouring to induce him to increase the grants at present given to University Colleges. He also alluded to the urgent need of residential hostels in connexion with the University. The Chancellor laid stress upon the fact that Government assistance ought not to dispense private individuals and local authorities from their duty of providing funds for university purposes. He drew attention to the fact that whilst Staffordshire and Worcestershire gave annual subventions to the University Warwickshire, in which the greater part of the city is situated, had as yet subscribed nothing. He also alluded to the larger boroughs and municipalities in the neighbourhood and hoped that they too would recognise the propriety of making annual grants towards the funds of the institution. Contrary to general expectation no person raised the question of the vivisection licences which the University has recently obtained. It is to be supposed that the anti-vivisectionist party is convinced of the uselessness of maintaining the local conflict any longer. On Feb. 4th Sir Oliver Lodge delivered the first of his four lectures on physics and therapeutics to an audience of medical men representative of the whole of the Midlands and numbering more than 300 The lecture, which was illustrated by lantern slides and by numerous experiments, dealt, after some introductory remarks, chiefly with the subject of the cathode rays and with radium and other substances of the kind. A new substance named polonium was exhibited the emanations from which can be deflected by the breath, so as to discharge the electroscope. On Feb 5th a special address was delivered to the Anatomical and Anthropological Society by Professor A. M. Paterson of the University of Liverpool who took for his subject the Morphology of the Sternum. The audience, over which the President of the society (Professor B. C. A. Windle) presided, was much interested in the address and in the numerous specimens with which it was illustrated, and a vote of thanks was passed to the lecturer on its termination.

Guest Hospital, Dudley.

A meeting of ministers of religion has recently been held at the Guest Hospital and in combination with the board of management of that institution with the object of inquiring how it is that the sums subscribed on Hospital Sunday have so much fallen off and that in a number of churches and chapels no collections are made for this purpose. The Rev. Mr. Warren, a Congregationalist minister who recently came to Dudley, seems to have stirred up discontent with the arrangements made in past years for the religious visitation of the patients, though these arrangements appear to have worked smoothly enough for a number of years. At the meeting in question this gentleman stated that the arrangements alluded to were the cause of the falling off in the subscriptions and that he and others would not help the hospital until Nonconformist ministers were admitted to the hospital on terms of perfect equality with others. As a matter of fact there is at present an Anglican chaplain, though his services are, so far as the hospital is concerned, honorary. There has been such a chaplain for over 30 years and his visiting days have been Tuesdays and Fridays. Some years ago the Free Church Council asked to be allowed to appoint a minister to visit the hospital. This request was complied with and Mondays and Thursdays were allotted to him as visiting days. Wednesdays and Saturdays being the general visiting days it was obvious that there was not much choice left in this matter. Of course, it goes without saying that any patient is allowed at any time to see the clergyman of his choice should he specially request to do so and circumstances permit. Mr. Warren, however, complained that the days allotted for visiting to the Nonconformist minister were those devoted to the cleaning of the wards, which were often in a state of confusion. He also stated that he had been denied admission by the acting chaplain, a statement which has been contradicted. Finally, he contended that Nonconformist ministers should have the right of holding a service once a week as the chaplain at present does. Since the meeting alluded to the matter has been further discussed by the weekly board, a proposition having been ma[illegible] should be appointed in [illegible] proposition, after being f[illegible] large majority.

Bathing Statistics in Birmingham.

1903 was not a year in which bathing was greatly encouraged by climatic conditions, but in spite of that fact a very large number of persons availed themselves of the corporation baths during the last nine months According to a return prepared by the superintendent 330 790 bathers attended the baths exclusive of the Green-lane Bath and the two open-air swimming-baths, being an increase on the corresponding period of the previous year of 22 410. The receipts have correspondingly increased by £84. The return for the whole of the corporation baths shows an increase of 109 585 and of £803 in the receipts. The Green-lane baths, which have largely added to the figures, were, however, not opened until November, 1902. During the past year 67,048 boys from the elementary schools were admitted to the corporation baths as compared with 33 017 during 1902 and 826 boys succeeded in passing the swimming test as against 590 in the previous year.

Feb 7th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

University of Manchester.

A MEETING of the court of governors of the University of Manchester was held on Feb 4th in the council chamber of the Owens College. The Vice Chancellor (Dr. Alfred Hopkinson) presided. He said that the special object of the meeting was to obtain the assent of the College Court and the University Court [illegible] the cc[illegible] Univer[illegible] body [illegible] constitution had been modified. The officials of the University would remain in office. Lord Spencer is willing to remain Chancellor of the University. The Duke of Devonshire, the President of the Owens College, would become President of the Victoria University of Manchester and, in the absence of the Chancellor, would preside at meetings and confer degrees. He hoped that the Duke of Devonshire would accept the office. The arms of the College, it was suggested, should be the arms of the University, "and in all respects there would be a complete merging of the College in the Victoria University." A motion approving of the Bill was passed. The Vice-Chancellor then left the chair which was taken by Mr. Alderman Thompson, chairman of the governors of the Owens College. A motion similar to that just adopted by the University Court was passed by the governors of the College. Mr. Alderman Thompson then left the chair which was again occupied by the Vice-Chancellor and the proceedings of the University Court were resumed. When these somewhat Gilbert-and-Sullivan-like performances had been satisfactorily accomplished the Faculty of Medicine came on to the stage and Professor Stirling proposed a motion upon the constitution of the Faculty of Medicine whereby it was agreed that in addition to the professors of the subjects taught in the medical school and the assistant lecturers —Mr. J. Grier, Dr I. Walker Hall, Mr. J. E. Platt, Mr. E. J. Sidebotham, and Dr. R. T. Williamson—the Faculty shall consist of the following: (1) Professor H B. Dixon, Professor S. J. Hickson, Professor W. H Perkin, Professor A. Schuster, and Professor F. E. Weiss; (2) Dr. H. Ashby, Mr. G. W. Mould, Mr. J. Collier, Mr. W. Thorburn, Dr. C. E. Glascott, Dr. Lloyd Roberts, Dr. J. Niven, Dr. H. A. G. Brooke, Dr. A. Hodgkinson, Dr. W. Milligan, Dr. E. S Reynolds, Dr A. K Gordon, Dr. T. Harris, Dr. Graham Steell, Dr. J. S. Bury, Mr W. P. Montgomery, Dr J. Scott, and two members to be nominated by the dental committee; and (3) Dr. F. C Moore, Dr. A. W. W. Lea, and Dr. W. E. Fothergill. Dr. Clegg seconded the motion and it was passed. On the motion of Professor Hickson, seconded by Mr. Alfred Haworth, it was resolved that the period of office [illegible] the Vice Chancellor then [illegible] public meetings of the [illegible] a formal sentence in [illegible] business was over. The words suggested by the new professor of Latin were: 'Salva sit Universitas nostra Mancuniensis: hoc precantes consurgamus.'"

The Royal Infirmary.

The report of the Manchester Royal Infirmary just issued shows that the change from the old to the new has really begun. It may be remembered that the corporation agreed to pay £400 000 for the present site in Piccadilly. The first instalment of £100,000 has now been received. The formal conveyance of the Stanley-grove site from the Owens College to the infirmary is almost completed. The board has enlarged the new site by the purchase of three houses in Nelson-street which gives a frontage in a good street at right angles to Oxford-road It has also arranged for the relinquishment by the Manchester Southern Hospital of a further piece of ground on the payment by the board of £18,500 and it has agreed to pay £6000 to the Owens College in compensation for the expense involved in the removal of its bacteriological laboratory from Stanley grove and towards the acquisition of a suitable adjacent site. 56 architects wished to compete for the building of the new infirmary and of these 12 were selected by Mr. J. J. Burnet, the assessor recommended by the president of the Royal Institute of British Architects. Their designs are now receiving careful consideration. As soon as the plans are decided on the board will consider if any, and if so what, provision for accident and urgent cases and out-patients shall be made in the centre of the city. In the new infirmary there are to be 500 beds with provision for 600 and in connexion with it there is to be a permanent memorial of the late Queen. For this purpose the sum of £13,178 9*s* 7*d* has been received from the committee of the Queen Victoria Commemoration Fund. During the past year there has been great pressure on the accommodation, 5199 patients being treated in the infirmary, 38,964 as out-patients, 1548 as home patients, and 1707 at the Barnes Convalescent Home. The income of the infirmary for the past year was £24,755 and that of the Barnes Hospital was £2797, while the expenditure of the former was £19,782 and of the latter £6617.

Small-pox at Stretford.

Stretford, the close neighbour of Manchester, has had an outbreak of small-pox which threatened at one time to assume serious proportions. At the last meeting of the district council Dr. W. J. Heslop, the medical officer of health, was able to say that it had ceased and that no case had been notified since Jan. 2nd. It is pleasant to know that the exertions made to limit the outbreak have been appreciated, for as one of the members said at the meeting, "the sanitary committee, Dr. Heslop, and those who worked so well with them were deserving of the thanks of the district for their exertions which had proved so successful."

Mussel Poisoning.

A case of death after eating boiled mussels came before the Bolton coroner last week. A man sat down with his family to tea, at which they had boiled mussels. He almost immediately had symptoms of poisoning and died in 15 minutes. No details are given but the medical man is reported to have said that it was not a case of ptomaine poisoning, that the mussel was not bad, that mussels might appear perfectly fresh and yet be poisonous, and that the poison was naturally developed in the body of the mussel itself. This is, of course, something distinct from their unwholesomeness when impregnated with copper. The explanation of one mussel among the millions eaten producing such startling and deadly effects has not yet been given.

Hulme Day Nursery.

One of the factors in the production of the heavy infantile death-rate of our towns is the necessity which compels so many women to leave their young babies in the charge of old women past work, while they themselves go out to earn their daily bread. Sometimes these caretakers are worthy of the trust but they are often careless and generally ignorant. Eleven years ago the Hulme Day Nursery was founded, largely through the efforts of the late Dr. Haden Guest, to lessen the evil as much as possible, and the annual meeting was held on Feb. 1st, the Lady Mayoress presiding. For 3*d.* per day a child is taken into the nursery, fed, washed, and cared for between the hours of six in the morning and six in the evening. Only those are admitted whose mothers have to go out to work and the children of widows have the precedence. Last year there were 2358 attendances, rather fewer than in the previous year, but this was due to lack of work and not to loss of popularity of the nursery The total receipts were £189 and a credit balance of £16 was left. In seconding a vote of thanks to the officers the Rev. J. Lightfoot, rector of St. Michael's, Hulme, said, with too much truth, that the district was fast becoming the most squalid, most thickly populated, and most neglected part of Manchester. In this large district, containing about 100,000 people, there is not "a single open space where the children can play. We are badly lighted, badly drained." There are very few large employers who can do much for the people and Hulme does not seem to have become fashionable among the philanthropic workers who have flocked into Ancoats and Angel Meadow, which are not "more in need of help, more poverty-stricken in every sense of the word, than certain parts of Hulme." It may surely be hoped that his appeal will be followed by good results. It is a district which would be greatly benefited by the establishment of more cottage baths and wash-houses and more day nurseries.

Feb. 9th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Insanitary Elementary Schools.

THE managers of voluntary schools appear to have been dealt with very tenderly by the Board of Education, which does not seem to have been very insistent upon the managers making structural alterations which would have improved the sanitary condition of certain schools. The result is that in many places when county councils have required an inspection of these non-provided schools as they are now called a very unsatisfactory state of affairs has been revealed. In Pembrokeshire among 68 schools reported upon it was found that four actually required to be rebuilt before they could be considered fit for use, eight required to have more than £200 spent upon them, 24 more than £100, and upon the remainder it was necessary to spend sums varying from £5 to £50. The chairman of the county education committee stated that a few schools were in a condition too revolting to have details disclosed—they were simply shocking. In some parts of North Wales the same unsatisfactory conditions are to be found and on Feb. 3rd the Flintshire county council passed a resolution calling the attention of the Board of Education to the state of many of the elementary school buildings in the county, especially with regard to the structure and sanitary arrangements. One member of the council attributed the frequent epidemics in the county to the insanitary condition of some of the schools. He stated that during five years six schools had been closed for 64 weeks owing to outbreaks of scarlet fever, measles, or diphtheria.

Victoria Hospital, Frome.

The handsome buildings of the Victoria Hospital at Frome were erected in 1901 to commemorate the Diamond Jubilee of Queen Victoria. The usefulness of the institution is now well established and the managing committee has reason to be thankful for the support given to it by the townspeople and others. There are 16 beds in the hospital and more than 100 patients were treated in the wards during 1903. The expenditure for the year was £766 and the income was £879.

West Wales Sanatorium.

When the scheme for the erection of a sanatorium for consumptive patients was first brought forward it was confidently expected that the county councils of Carmarthenshire, Cardiganshire, and Pembrokeshire would each contribute towards the erection of the building, following the example of other counties, notably that of Westmorland. This anticipation has not been realised in the case of the Pembrokeshire council, for on Feb. 2nd it was decided upon the recommendation of the finance committee, not to make any grant in aid of the proposed institution.

Death in a Bath.

The necessity for having a bell in a bathroom has been once more illustrated at Swansea, where a woman, 50 years of age, was recently found dead in a bath. At the inquest which was subsequently held Mr. J. Lloyd Jones expressed the opinion that the deceased woman had vomited into the bath, had become faint, and falling on her face was asphyxiated. If this was actually the case (and there is no reason to think otherwise) she would probably have been able to ring a bell for assistance had one been provided. An admirable form of bathroom bell has been installed at the Newport and Monmouthshire Hospital where the bell rings in a nurse's or attendant's room and continues ringing until a cord is pulled outside the bathroom door so that the possibility of the signal being neglected is very remote

Newport and Monmouthshire Hospital.

The directors of the Newport and Monmouthshire Hospital, in which there is now accommodation for 100 patients, have of late years been able to keep their expenditure well within their income, but in their report for 1903 they have to record a loss upon the year's working of nearly £300 due apparently to a falling off in the income derived from general subscribers. It is satisfactory to find, on the other hand, that the working classes display an increasing interest in the hospital, for the subscriptions to the workmen's fund, which in 1901 amounted to £1200, have increased to £1450 last year. The men employed by one firm contributed as much as £209. The rules of the institution have been so altered that the subscribers to the fund are entitled to one representative upon the board of directors for each £200 contributed. The hospital is so well arranged and the new buildings are so well equipped with modern appliances that there should be no difficulty in obtaining additional support from the inhabitants of the town which is rapidly *increasing both in size and in prosperity.*

Discovery of Neolithic Human Remains.

Mr. St. George Gray, the curator of the Taunton Museum, has just examined, at the request of the Somerset Archæological Society, a human skeleton which has been discovered in Gough's Caves at Cheddar. Mr. Gray believes the remains to be those of a cave-dweller who lived between the Palæolithic and the Neolithic ages. The skeleton, which was found between two layers of stalagmite, belonged to a man who was 5 feet 3 inches in height. Flint implements of the type used by cave men were near the skeleton.

Infectious Diseases and Dockyard Employés.

Rear-Admiral W. H. Henderson, superintendent of Devonport Dockyard, on Feb. 2nd issued an order that when workmen have infectious diseases in their families they are not to go to the dockyard to draw their pay but are to arrange with fellow workmen to get it for them. Previously when there has been infectious disease in the house of an employé he has not been allowed to work in the dockyard but he has not been stopped from drawing his wages personally.

Feb. 8th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Shell-fish on the Coast of Ireland.

AN interesting and important report has recently been presented by the Local Government Board to the Lord Lieutenant of Ireland dealing with the conditions under which edible shell-fish are cultivated. The result of inquiry shows that "shell-fish are at present laid in places on the Irish coast which are grossly polluted and that there is a comparatively large number of layings the purity of which is open to doubt." Referring to Dublin Bay it is said that the total output of oysters from it and the Malahide inlet is about 25,000,000 while as many as 100,000 are sent from the beds each week. Dr. T. J. Browne states his opinion "that all the shell-fish in Dublin Bay are more or less subject to contamination," while Mr. D. Edgar Flinn considers that it is a question of importance whether shell-fish may not have played a part as one of the causes of enteric fever in Dublin At various times during the past few months personally collected samples of cockles and mussels from Dublin Bay have been pronounced to be sewage polluted by Professor E. J. McWeeney and he expresses the opinion that the gathering of shell-fish (cockles) within the estuary situated at Clontarf should be discontinued until the sewerage of this populous district has been dealt with. The Local Government Board recommends that the whole question of the cultivation and sale of shell-fish should be made a matter of special legislation

The Ulster Medical Society.

At the fourth general meeting (session 1903–04) held in the Medical Institute, Belfast, on Feb. 4th a motion was unanimously passed, proposed by Dr. Thomas Houston and seconded by Dr. H. O'Neill, supporting the resolutions sent to His Majesty's Government by the council of Queen's College, Belfast, with reference to the better equipment of that college. Dr. J. C. Martin (Portrush) showed a pathological specimen of Atheromatous and Aneurysmal Condition of the Abdominal Aorta and Iliac Arteries taken from an elderly male patient and gave details of the case. Mr. A. B. Mitchell opened a discussion on the Surgical Treatment of Malignant Tumours of the Breast, illustrated by a number of cases and a lantern demonstration of numerous photographs and microscopic preparations. Details of 30 cases were given, with remarks on diagnosis, prognosis, methods of operation, &c., and the question of subsequent recurrence. In the discussion which followed Professor T. Sinclair, Dr. Charles Kevin, Professor J. W. Byers, Dr. Martin, Mr. Robert Campbell, Dr. James Lynass, Sir William Whitla, and Professor J. A. Lindsay took part. Mr. Mitchell also showed a man on whom he had performed Subperiosteal Resection of the Clavicle with every movement of the shoulder girdle preserved.

Influenza in Belfast.

At present there is a widespread epidemic of influenza in Belfast, the main symptoms being sudden onset, high fever, general aching, and a laryngeal cough. The depression afterwards is not so marked as in previous attacks.

Fever-stricken Arranmore.

The island of Arranmore, which lies a few miles off the Donegal coast, with its inhabitants of about 2000 (mostly fishermen and small farmers), has achieved an unenviable notoriety for its severe epidemics of typhus fever during the past few years It was from fever contracted in this island, when conveying fever-stricken patients to the mainland, that Mr. William Smyth lost his life. Dr. B. MacCarthy, medical inspector of the Local Government Board, brought before the notice of the Glenties rural district council on Feb 6th the condition of many of the houses on the island which revealed a terrible state of affairs. The Congested Districts Board, which owns the island, has made most generous offers to the inhabitants to improve their miserable dwellings and, acting wisely, on the suggestion of the medical inspector, the Glenties rural district council has decided to serve notices on those who have insanitary houses to put them in order and to urge those people with insanitary houses to avail themselves of the offer of the Congested Districts Board.

The Belfast District Lunatic Asylum.

From the report of the inspector of lunatics (Sir G. O'Farrell), presented to the committee on Feb. 8th, it [illegible] but that the [illegible] no provision [illegible] and special cases. It is hoped that the committee will proceed with the erection of such buildings as will provide sufficient and suitable accommodation for all the patients under its charge. At present there are 507 male and 565 female inmates—total, 1072; on the asylum register at Belfast, 720; at Purdysburn, 290; and at Ballymena annexe, 62

Royal Victoria Hospital, Belfast.

The Right Hon. Thomas Sinclair, D.L., of Hopefield, Belfast, and his family have given £1000 to endow two beds in the "Sinclair" ward of the Royal Victoria Hospital, Belfast, to be called "Sarah Archer Sinclair" and "Elizabeth Ivan Sinclair."

Queen's College, Belfast, and the Royal Victoria Hospital, Belfast.

The Lord Mayor of Belfast (Sir Otto Jaffe) has intimated his intention of presenting a 60 milligramme tube of radium to the Queen's College, Belfast, with the stipulation that it should be available in the Royal Victoria Hospital for use there and should be brought to the College for demonstration as required. The cost is £63 and probably at the time of delivery it will be worth £100.

Feb. 9th

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Elastic Springs as Labour saving Agents.

SINCE the time that human muscular work has been studied by the same methods and in accordance with the same laws as in the case of mechanical motors more attention has been given to the question of output and to the maximum utilisation of work with the minimum expense. M. Marey showed 20 years ago at the Academy of Sciences that in the work of traction there was a considerable saving of labour when inelastic cords or connexions were replaced by springs Experimenting with a man fastened to a small cart and drawing the same load at the same speed for the same distance he compared the effect of traction by means of a rope with traction by means of an elastic apparatus and obtained accurate measurements with a dynamometer. He found that in the latter case there was a saving of 20 or 25 per cent. During the present week two captains in the artillery, MM. Machart and Ferrus, have made known the results of experiments which they have for 18 months been conducting on the drawing of artillery by horses They found that when the same horses drew the same carriages over the same distance and in the same time an additional load of one fourth or one-fifth could be carried when springs were employed. Following up this idea M. Breuillard has shown before the Therapeutical Society a small appliance which he has called a "calcanette." It is slipped into the boot or shoe under the heel and is merely a spring on which the heel rests when the foot is placed on the ground and which tends to lift the heel when the foot is raised. This little appliance in no way inconveniences the wearer who very soon becomes accustomed to it. It is a great assistance in the act of walking, reduces fatigue, and permits the same amount of work to be done with much less effort. It will render much service to Alpine climbers and especially to soldiers. It is about to be tried in the army.

New Rules for the Competition for the Position of Hospital Physician.

The system on which these competitions are conducted has long been considered by everybody to be unsatisfactory; it has several times been remodelled and has just undergone a new transformation. It is to be hoped that this will be final and it must be admitted that the new regulation is drawn up in such a way as to insure all possible impartiality in the work of the jury. Hitherto it has always been the case that a member of the jury might in complete security procure the nomination of one of his pupils by having a mutual understanding with other jurors who were doing the same thing but this will now be impossible. The competition will for the future be in two parts and there will be two examinations, each with a different jury, no member of the first jury taking part in the second. The first examination confers on those who pass it the right of "admissibility" for five years and only such candidates are eligible for the second examination. For the first examination two written papers and a report of a patient's case are required. Of the written papers one is on a subject of pathological anatomy, pathological physiology, or bacteriology; the other is on a question of symptomatology, diagnosis, or therapeutics. The jury is divided into two portions by the drawing of lots and each of these portions decides separately with respect to one of the written papers. The report on the patient's case is considered by the whole jury. The second examination is also decided by the new jury as a whole. It consists in making a clinical report on a patient's case. The candidate is allowed 15 minutes for examining the case and an equal time for giving his opinion on it to the jury orally after five minutes' consideration. The number of candidates declared admissible at the close of the first competition is to be such that the candidates for the nomination competition shall not exceed twenty.

The Treatment of Tuberculous Arthritis.

Professor Lannelongue devised, some years ago, an original method of treatment for tuberculous affections of the joints which he called *méthode sclérogène.* The object of the treatment was to transform the tuberculous tissues into fibrous tissue by the injection into them of a few drops of a 10 per cent. solution of chloride of zinc. Professor Lannelongue obtained numerous successful results by this method and it has now been improved upon by one of his pupils, M. Villemin, who, previously to the injection of the zinc chloride into the tissues around the joint, injects into the joint cavity, three days before using the chloride, some iodoform. By this means the tuberculous articulation is treated both inwardly and outwardly. M. Villemin has met with great success and at the meeting of the Academy of Medicine held on Feb. 2nd he read a paper on his cases. Professor Lannelongue, who was present, agreed with M. Villemin and in reply to those who objected that the method was one requiring extreme delicacy he replied as follows. It is true that to inject the chloride of zinc only into the tuberculous tissues and not into the joint cavity, where it would set up acute inflammation, requires a certain dexterity, but this is very easily acquired. The great point is not to hurry the procedure and not to expect the joint to recover its functions too soon. Three or four months must elapse before the tissues can be considered normal and five months must be allowed to pass before the patient is allowed to use his joint. If any stage of the treatment is hurried, or if forced movements are employed with a view to avoid the formation of adhesions, an acute inflammation may be set up which will undo all the good already acquired. M. Villemin has treated nine patients by this method with perfect success.

Feb. 9th.

Obituary.

GEORGE THIN, M.D. St. And., L.R.C.S. Edin.

Dr. George Thin, whose death took place at Nice at the end of last year after an illness of more than a year's duration, was educated at Edinburgh, taking the L.R.C.S. in 1858, and two years later the M.D. of the University of St. Andrews. After obtaining his qualifications he practised in Scotland, but in a very short time he proceeded abroad to Shanghai, where he was engaged in practice for some eight years. During this period he gained an extensive experience in all forms of tropical disease, an experience which with ripened judgment in after years brought him considerable fame in this branch of medicine.

In 1873 Dr. Thin returned to England and decided to settle in London where he practised for the remainder of his life. In the early part of his career at home he devoted considerable time to the study of dermatology, proceeding to Vienna and other places in order to acquire knowledge of this subject. The experience gained from practice in this field led him to contribute many papers to the medical journals and in addition he published a monograph on "Cancerous Affections of the Skin" and a book on "Ringworm." But Dr. Thin's chief interest lay in the direction of tropical disease and he worked with enthusiasm in this field of medicine at a time when no attention was paid to the subject by the public or the medical profession. His acquaintance with tropical disease gained in China and confirmed by much after-study both abroad and at home rendered his name well known to those who had been resident in hot climates. The disease to which he paid most attention was sprue and he published a valuable book on this subject entitled "Psilosis or Sprue" which won him wide recognition. To Dr. Thin it was largely due that the exclusive milk diet treatment of this disease has obtained such wide and deserved acceptance. A large part of his professional life was occupied in advising banks, corporations, and steamship companies doing business in the East and in this capacity a great many candidates for posts abroad passed through his hands and his skill in this special branch of medicine was remarkable.

From his earliest professional life Dr. Thin was a diligent student of the microscope and even when health began to decline and age to creep on he still took a deep interest in the subject. In all his work there was the impress of patience and thoroughness. His intellect was strong and incisive. If his manner appeared to some distant and reserved it was simply because he was a sceptic in the best sense of the word and was naturally incapable of taking anything on trust that admitted of proof. But below this cautious manner there was a thoroughly high-minded personality, perfectly honest and just. He was a man with few close friends but when he did give his confidence it was lasting For more than a year his health had failed and he was compelled to give up all professional work in the hope that rest might enable him to live. But in December he became steadily worse and he died at Nice on Dec. 27th of last year.

DAVID THOMSON PLAYFAIR, M.D., L.R.C.P. & S. Edin.

By the death of Dr. David Thomson Playfair, which occurred suddenly at Bournemouth on Feb. 1st, the medical profession in Bromley, Kent, loses one of its best-known members. Dr. Playfair was the elder son of the late Rev. David Playfair of Abercorn, N.B., where his early years were spent. He was educated chiefly at the old collegiate school, Edinburgh, and at Blair Lodge. His medical education he received at the University of Edinburgh under Tait, Crum Brown, Turner, Spence, Lister, and other distinguished men.

On leaving Edinburgh he spent some time in Paris and also at Leipsic and Tübingen. After qualifying he resided as assistant physician at Sunnyside Asylum, Montrose, and afterwards at the Royal Albert Asylum, Lancaster, and he at one time thought of taking up the study of mental disease in a special way, but a favourable opportunity of entering a practice at Bromley presented itself and he settled down there, where he spent the remainder of his life. Dr. Playfair was for some 24 years in Bromley, being at first in partnership with Messrs. Hughes and Willey, and for the last 17 years with Dr. John Scott who was his partner until his death. In local politics he took no part but in matters connected with his profession he always took a very keen interest, as well as in those associated with science or with music. He was on the staff of the Bromley Cottage Hospital almost since his first going to Bromley and on the committee of that institution for many years. He was for a long time a member of the Bromley Naturalists Society and he was one of the founders, and for some years president, of the Bromley Musical Society. He always kept up his early love of botany and possessed a very large and complete herbarium. He was a good photographer and a clever mechanic, as well as an enthusiastic sportsman, having considerable skill both with rod and gun. As a physician his well-trained powers of observation stood him in good stead and gave him a keen insight both into disease and into human nature and he was very successful both in diagnosis and in treatment.

As a surgeon he was a rapid and skilful operator, his having long been addicted to many mechanical pursuits giving him much facility in the manipulative side of the surgical art. Dr. Playfair was twice married, his first wife dying on March 31st, 1894, and on April 30th, 1902, he was married to Miss Annie Seaton Winton, only daughter of Mr. Edwin W. Winton of Etherton-hill, Speldhurst, near Tunbridge Wells. Dr. Playfair had been in failing health for some months, heart trouble—complicated by an attack of appendicitis—having kept him entirely to his house until a very few weeks before his death, when he went to Bournemouth in the hope of regaining strength. During the day of Feb. 1st he had been much as usual but shortly after retiring to rest he had a sudden attack of heart failure and passed away quietly in a few moments. He was buried at Edinburgh on Saturday, Feb. 6th, there having been a service in the Bromley parish church on the previous evening, at which the large attendance of all classes—the church being full to overflowing—attested to the esteem in which the deceased was universally held.

GEORGE COLVILLE MILLIGAN, M.A., M.B., C.M. ABERD.

REGRET for the death of Dr. G. C. Milligan will be felt by a wide circle of his friends both in the British Isles and in Switzerland, where he was assistant at one time at the Belvedere Sanatorium, Davos-Platz. The deceased gentleman had not been in good health for some considerable time, but up to within a few days of his death, which took place on Jan. 23rd, he was visiting his patients and following his profession with zeal. Dr. Milligan was the eldest son of the Rev. P. Milligan, minister of Guthrie. He received his education at the University of Aberdeen, where he graduated M.A in 1884. In 1888 he took the M.B. and C.M. degrees of his university and subsequently went to Forres as an assistant to Dr. G. L. H. Milne whose practice he afterwards acquired. His *clientèle* was a large one and in addition to his private practice he held the post of medical attendant at Cluny Hill Hydropathic Establishment and was surgeon at Leanchoil Hospital, Forres. Ill-health compelled him to spend his winters in Switzerland and for many years he practised alternately in Scotland and at Davoz-Platz. Dr. Milligan was held in the highest esteem and regard by all who knew him. He was a keen sportsman, took an active interest in golf, and was enthusiastic in the national game of cricket, besides being a capable exponent of tennis. In all of these games he took more than an academic interest for he recognised their value as agents in the maintenance of health and participated in them with the knowledge of an expert. He leaves a young widow and one son to mourn their loss, for whom the deepest sympathy will be felt.

DUNCAN CAMPBELL LONGDEN, M.B., F.R.C.S., D.P.H. EDIN., M.R.C.S. ENG.

Dr. D. C. Longden died in London at the house of his brother, Mr. E. W. Longden, on Jan. 18th, at the early age of 37 years. His medical education was obtained in Edinburgh and while a student he gained various prizes and honours, including in 1886 the gold medal scholarship in anatomy at the Royal College of Surgeons. He graduated at the University of Edinburgh as M B. and C.M. in 1887, and was appointed by Dr. J. Macdonald Brown to be senior demonstrator of anatomy at Surgeons' Hall. Thenceforward he devoted his entire energies to anatomy and his labours at Surgeons' Hall not only won for him the esteem of his colleagues but the admiration of the numerous students who attended the classes during the succeeding three years. In 1890, owing to ill-health, he was reluctantly compelled to resign his position, and at a smoking concert given in his honour he was presented by the students with an address and a gold watch. In 1891 his health improved considerably and for the ensuing two years he lectured on anatomy in the School of Medicine for Women in Edinburgh until he was obliged by a recrudescence of chest symptoms finally to abandon teaching and to go abroad. In 1894 he proceeded to St. Helena, where he resided for six months. During the next five or six years he acted as a surgeon in the British India Steamship Company's Service and in that capacity made frequent passages to India and to the Cape of Good Hope. In 1900, while at the Cape, he obtained permission to leave his ship and was appointed medical officer for the Boer refugee camp at Barberton, Transvaal. He remained there until March, 1903, when he returned to England. Although gradually becoming weaker and weaker he was nevertheless able to appear at Buckingham Palace in November last when he received the Transport Service medal at the hands of the King. The funeral took place on Jan. 21st at Kensal-green Cemetery. Dr. Longden was a man of singular gentleness of disposition, a brilliant teacher, a sound anatomist, and a faithful friend.

WILLIAM HUTCHISON, M.D. ST. AND., L.F.P.S. GLASG.

Dr. William Hutchison, who died at his residence at Brightlingsea in Essex on Jan. 32rd, saw a good deal of military life in his early days. When he became qualified as L.F.P.S. Glag. in 1854 the Crimean war was in progress. Having volunteered for medical duty he served as a civil surgeon on the medical staff and did much useful work in attending the wounded. He was present at the battles of Alma, Inkerman, and Balaclava, as well as at the siege and fall of Sebastopol. After the war he spent some time in long sea voyages. Returning to England he practised in Loughborough, Leicestershire, for many years and was on the staff of the Loughborough Hospital for a long period. In 1862 he graduated as M D. at the University of St. Andrews. During the Franco-German war in 1870 Dr. Hutchison and his wife took an active part in the collection of clothing and money in Loughborough on behalf of the Red Cross Society, which was at the time sending ambulances and stores to the continent for the relief of the wounded. An account of a case of stricture of the rectum under his care in the Loughborough Hospital was published in THE LANCET of June 1st, 1878. About 13 years ago he disposed of his practice in Loughborough and since that time lived mostly at Brightlingsea where he died. Some of his family, however, are resident in Loughborough and it was in the cemetery there that the funeral took place.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Paul Grassnick, formerly Sub-director of the Kaiser Wilhelm Academy for Military Surgeons. He served with distinction in the Franco German war. He retired a short time ago with the rank of major-general. His age was 69 years.—Dr. Conrad Clar, extraordinary professor of balneology and climatology in Vienna, at the age of 59 years.—Dr. Peypers of Amsterdam, who founded the journal *Janus*, which is devoted to medical history and geography.—Dr. Gustav Neusser, a Cracow alienist.

RESEARCH FELLOWSHIP AT ST. JOHN'S COLLEGE, OXFORD.—This College will shortly proceed to elect as an Ordinary Fellow a person whose attainments in literature, science, or art shall in its judgment qualify him to be a Fellow and who shall undertake, if required, to perform some definite literary, scientific, or educational work in the College or in the University or (under the direction of the College or the University) elsewhere. Applications (together with any evidence of qualification which the candidate may desire to submit) should be sent to the President before Feb. 20th and may include a statement of the work which the candidate proposes to perform if required.

providing more of these unobstrusive baths and washhouses for the Manchester slum dwellers. The Bishop (Dr. Knox) referred to Birmingham and said that he had the satisfaction of knowing before he left that the work there, begun on the Manchester model, was extending. "An authority acknowledged to him that it was one of the best things done for the improvement of the health of the city." He thought there were great advantages in the voluntary superintendence of ladies over paid visitors. "They approached the work from a point of view which the purely official mind could not grasp, the point of view of one who longed to raise human nature to a higher plane and who was not bound by considerations of what the ratepayers would think of this or that expenditure." Both the Ladies' Health Society and the Sanitary Association could do more effective work with more funds and more helpers.

LITERARY INTELLIGENCE.—On the 15th of this month Messrs. Kegan Paul and Co. will issue a new monthly journal entitled "Our Hospitals and Charities Illustrated." It will endeavour to awaken and to stimulate interest in the work of our hospitals and charities, particularly amongst men and women of moderate income It is to be essentially a journal for the public and all matters of controversy and technicality will be avoided It is hoped that it will assist in preparing fresh ground for successful appeals on behalf of our hospitals and charities. The price will be 3*d.* monthly.—The fifteenth annual issue of "Burdett's Hospitals and Charities, the Year book of Philanthropy and Hospital Annual," will shortly be published by the Scientific Press, Limited, 28 and 29, Southampton-street, Strand, London, W.C.

GUERNSEY NATURAL SCIENCE SOCIETY.—The introductory lecture at the commencement of the current session of this society was delivered by the President, Dr. John Aikman, the subject of discourse being Some Aspects of Light He showed that in proceeding from the red end of the spectrum to the blue end the visible rays displayed progressive increase of refrangibility and of wave frequency. The heating power of the red rays, the actinic effect of the blue rays, and some of the properties of the ultra violet rays and of Fraunhofer's lines were also explained. The discovery of radium and the phenomena of radio-activity manifested, though in a less degree, by other substances was touched upon, after which Dr. Aikman discussed the *rationale* of Professor Finsen's application of light in the treatment of disease.

COOKERY AND FOOD EXHIBITION.—The Universal Cookery and Food Association is holding its fifteenth exhibition at the Royal Albert Hall in April next from 26th to 29th inclusive, under the distinguished patronage of Her Majesty the Queen, the chairman of the council being Mr. J. C. Buckmaster and the chairman of executive Mr. A. Judah. Competitions for children, teachers, soldiers, and others, and demonstrations by experts will be of daily occurrence, while professional chefs, confectioners, and bakers will be represented by their best efforts in the respective departments. Exhibits also of every description of simple dishes will be showr [illegible] sections. Valuable prizes, [illegible] trophy, and cash awards ar[illegible] comprises food products and commercial exhibits covering a wide range of subjects of interest to caterers, as well as to the general public

CENTRAL MIDWIVES BOARD.—At a meeting of the Central Midwives Board held on Jan. 28th, Dr F. H Champneys being in the chair, letters were read from Mr. E Hastings Tweedy, the Master of the Rotunda Hospital, Dublin, and from Professor J. W. Byers, physician to the Incorporated Belfast Maternity Hospital, calling the attention of the Board to the practical impossibility of pupil midwives trained in these institutions complying with the requirements of Section O. The answer of the Board has already been recorded in THE LANCET of Feb 6th, p. 401, and in our present issue (p. 457) will be found the correspondence between Mr. Tweedy and the secretary of the Board. After consideration of applications for certificates the names of 1040 women were passed under Section 2 of the Act and ordered for entry on the Roll. Of this total 269 claimed as holding the certificate of the Obstetrical Society of London, 14 that of the Rotunda Hospital, 26 that of Queen Charlotte's Lying-in Hospital, 14 that of the Glasgow Maternity Hospital, 14 that of St. Mary's Hospital, Manchester, two that of the Liverpool Lying in Hospital, one that of the Edinburgh Royal Maternity Hospital, one that of the City of London Lying-in Hospital, and 699 were admitted as having been in *bonâ-fide* practice for one year prior to July 31st, 1902.

NEWCASTLE-UPON-TYNE LYING-IN HOSPITAL.—The annual report of this institution has just been published and it shows that the progress which commenced in 1901 has been more than fully maintained during the past year. The total number of cases has increased from 380 in 1902 to 674 in 1903. The committee reports that the hospital has been recognised by the Central Midwives Board as a training school for midwives.

PRESENTATION TO A MEDICAL PRACTITIONER.—Mr. W. P. Johnstone, M.B., C M. Edin , J.P , Witwatersrand, South Africa, has recently been presented by the officers of the 1st Battalion Gordon Highlanders with a silver cigarette box suitably inscribed. Prior to this presentation he received a silver teapot, also suitably inscribed, from Captain Shearman and Captain Poole of the 10th Royal Hussars, and several cases of surgical instruments from Captain Peck of the Royal Horse Artillery. Dr. Johnstone formed, and was in charge of, the temporary hospital at Maraisburg during the South African war.

DONATIONS AND BEQUESTS —By the will of Mr. Edmond Dresden pictures and portraits are bequeathed to the Children s Hospital, Great Ormond-street, to be hung in the wards, as well as a sum of £25,000 for the maintenance of beds to be called the "Dresden Cots," which are to be contained in a ward to be called the "Dresden Ward." Middlesex Hospital, St Mary's Hospital, the Royal Free Hospital, the Hospital for Consumption, Brompton, and Queen Charlotte's Lying in Hospital each receive a donation of £5000 Under this will a sum of £250,000 will be available for charitable purposes and each of the hospitals mentioned will, under certain conditions, receive further legacies.

SOME NOVEL PATENTS.—An American inventor has patented "an apparatus for disinfecting paper money, consisting of two endless aprons travelling in holding contact with each other, the contacting portions moving in the same direction, a series of moistening, feed, and heating rollers, around which the endless aprons travel, and means for applying the liquid disinfectant to the bills, as they are fed between the moving endless aprons, to be subjected to the action of the vaporised disinfectants" Another inventor has patented a comb for applying liquid to the scalp; it has a hollow back and teeth and the fluid issues from perforations in the points of the latter. Specifications and drawings of both of these contrivances are given in the *Official Gazette* of the United States Patent Office issued on Jan. 26th.

THE ANNUAL DINNER OF THE PAST AND PRESENT STUDENTS OF THE DURHAM COLLEGE OF MEDICINE —This dinner was held in the County Hotel, Newcastle-upon-Tyne, on Jan 30th, Mr. Frederick Page, professor of surgery, being in the chair. The principal guests were the Warden of the University, the Earl of Durham, the President of the College of Medicine, Professor R Howden, and others. The dinner was well attended by past and present students, about 130 being present. The Earl of Durham, who is a great favourite with the students, in reply to the toast of "Our Guests," made a very interesting and amusing speech. He said that he was sure the college authorities all desired free trade in brains. They did not mind how much of the raw material was dumped down in the College of Medicine; he was sure that it would be turned out as a highly finished article and that in future they would be able to polish off their fellow creatures in the most scientific manner possible.

T [illegible]

on t [illegible] Plymouth before the Teachers Guild Dr. F G. [illegible] discussed some questions which ought as much as possible to be impressed on the minds both of teachers and of the rising generation under their charge. He said that the Education Department had confined itself mainly to regulations intended to insure the physical well being of children, had drawn up building rules which, he understood, were often disregarded, had provided for the exclusion of children or for the closing of schools during epidemics, and had sanctioned a course of physical training conducted according to a specified system. It was obvious, however, that there were many respects in which regulations excellent in themselves and officially recognised as authoritative could only produce their anticipated effect when the teachers were really convinced of the practical value of such injunctions. The general hygiene of schools, and especially the ventilation of class rooms, required much attention and the system followed by the teacher constituted an object lesson which might be influential in forming the habits of the children. Teachers ought therefore before receiving their certificates to be required to show some acquaintance with the elements of hygiene and with the laws governing the spread of infectious diseases.

NEWCASTLE-UPON-TYNE CHILDREN'S HOSPITAL.—The annual court of governors was held on Feb. 2nd in the hospital. The amount of work done was about the same as in the previous year. The out patient department having become inadequate considerable additions to it are in course of erection and the fund for these extensions now amounts to £6207. During the past year the hospital has been most unfortunate in losing by death four of the most important and valued vice-presidents who were also the most generous donors to the hospital.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Physical Condition of Children.

ON a date which has not yet been fixed Sir JOHN GORST will move that a select committee be appointed to inquire and to report as to the best method of keeping a record of the physical condition of children attending schools which are aided by Parliamentary grants.

Cancer Returns.

Mr. WEIR has been interesting himself in the question of the registration of cancer cases in India and he proposes to ask Mr. Brodrick whether the Indian Government has yet arranged to have such cases recorded separately in dispensary and hospital returns.

Private Members' Bills.

About 40 Private Members' Bills have been read a first time in the House of Commons this week. Two of the number affect the medical faculty, one being General Laurie's "hardy annual" for the amendment of the Medical Act of 1886 and the other the Revaccination Bill standing in the name of Sir John Batty Tuke. Mr. Long, on behalf of the Government, has intimated his intention to bring in a Bill to amend the Public Health Acts.

HOUSE OF COMMONS.

FRIDAY, FEB. 5TH.

Arsenical Poisoning.

Sir CUTHBERT QUILTER asked the President of the Local Government Board whether his attention had been called to the confirmation by the Royal Commission on Arsenical Poisoning of the opinions expressed in the Minority Report of the Beer Materials Committee issued five years ago, prior to the outbreak of the beer poisoning epidemic, that legislation or other provision was necessary to prevent the use of deleterious substances in the manufacture of beer and that a court of reference, as recommended by the Committee on the Adulteration of Food Products (a recommendation since endorsed also by the Food Preservatives Committee), should be established for fixing standards of purity for the purposes of the Sale of Food and Drugs Acts; and if so, whether he would say what action it was proposed to take to give effect to the recommendations of the Royal Commission, more especially as regards the protection of the public against the use of injurious ingredients in beer and the fixing of a standard of purity.—Mr. LONG replied: I had, before the issue of the report of the Royal Commission on Arsenical Poisoning, had under consideration the expediency of promoting legislation with a view to the constitution of a court of reference for the decision of certain scientific questions in relation to food of the kind referred to in the question and I had been in communication with the Board of Trade and the Board of Agriculture on the subject. I am continuing to give attention to the matter, but having regard to the large and important recommendations of the Royal Commission on Arsenical Poisoning I think it will be necessary that a conference should be held of representatives of the Government departments concerned before a decision as to the course to be adopted can be arrived at.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent-garden, W.C.

Drugs, their Production, Preparation, and Properties. By H. Wippell Gadd, F.C.S., Member of the Pharmaceutical Society and of the Society of Public Analysts. Price 3s. 6d. net.

Midwifery for Midwives. By W. Denison Wiggins, M.R.C.S., L.R.C.P., D.P.H., Assistant Medical Superintendent of the Greenwich Infirmary. Price 3s. 6d. net.

BOERICKE AND TAFEL, Philadelphia, U.S.A.

The Pathogenic Microbes. By M. Le Dr. P. Jousset, Physician to the Hospital Saint-Jacques. Authorised translation of Horace P. Holmes, M.D. Price, cloth, $1.00.

CHURCHILL, J. & A., 7, Great Marlborough-street, W.

Subjective Sensations of Sight and Sound, Abiotrophy, and other Lectures. By Sir William R. Gowers, M.D., F.R.C.P., F.R.S. (Lectures on Diseases of the Nervous System. Second series.) Price 6s. net.

FISCHER, GUSTAV, Jena.

Handbuch der Experimentellen Pathologie und Pharmakologie. Von Dr. med. R. Heinz, Privatdozent an der Universität Erlangen. Erster Band. Erste Hälfte. Price M.15.

Herz- und Kreislaufstörungen. Von Dr. Th. Rumpf, Professor o. o. an der Universität Bonn. (Vorträge aus dem Gebiete der Allgemeinen Therapie. Erstes Heft.) Price M.1.

GLAISHER, HENRY J., 57, Wigmore-street, Cavendish-square, W.

Charles White, F.R.S.: A Great Provincial Surgeon and Obstetrician of the Eighteenth Century. An address delivered before the Medical Society of Manchester, Oct. 7th, 1903. By Charles J. Cullingworth, M.D., F.R.C.P., &c., &c. Price 2s. 6d. net.

JOHN BALE, SONS, AND DANIELSSON, LIMITED, 83-89, Great Titchfield-street, Oxford-street, W.

Vaginal Tumours, with Special Reference to Cancer and Sarcoma. By W. Roger Williams, F.R.C.S. Price 5s. 6d. net.

LONG, JOHN, 13 and 14, Norris-street, Haymarket, London.

Nurse Charlotte. By L. T. Meade, Author of "Stories from the Diary of a Doctor," &c. Price not stated.

MALOINE, A., 23-25, Rue de l'École de Médecine, Paris.

La Torsion du Cordon Spermatique et l'Infarctus hémorrhagique du Testicule. Par le Dr. André Lapointe, Ancien Interne Lauréat des Hôpitaux de Paris. Price not stated.

MARLBOROUGH, E., AND Co., 51, Old Bailey, E.C.

Spanish Self-taught (Thimm's System). With Phonetic Pronunciation. Revised and enlarged edition. By W. F. Harvey, M.A. Price 1s., cloth 1s. 6d.

NEW SYDENHAM SOCIETY (Agent: H. K. LEWIS, 136, Gower-street, W.C.).

An Atlas of Illustrations of Clinical Medicine, Surgery, and Pathology. Compiled for the New Sydenham Society. (A Continuation of the "Atlas of Pathology") Fasciculus XVIII. (Double Fasciculus). Being VIII. and IX. of the Clinical Atlas. Eruptions, &c., caused by Arsenic, Urticaria Pigmentosa, and Illustrations of the Phenomena of Leprosy. Price to non-members £1 1s.

OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, 8, Hastings-street, Calcutta.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. New Series. No. 6. First Report of the Anti-Malarial Operations at Mian Mir, 1901-1903. By Captain S. P. James, M.B. Lond., I.M.S. (on Special Duty). Price 12 annas, or 1s. 2d.

PERLES, MORITZ, 1, Seilergasse, 4, Vienna.

Erfolge der Röntgentherapie. Mitteilungen aus dem Institute für Radiographie und Radiotherapie in Wien. Von Dr. Eduard Schiff, Professor an der Wiener Universität. Price not stated.

REBMAN, LIMITED, 129, Shaftesbury-avenue, W.C.

Progressive Medicine. Edited by Hobart Amory Hare, M.D., assisted by H. R. M. Landis, M.D. Volume IV., December, 1903. Price 15s. net. (Subscription for one year, £2 12s. 6d.)

SMITH, ELDER, AND Co., 15, Waterloo-place, S.W.

A Handbook of Ophthalmic Science and Practice. By Henry E. Juler, F.R.C.S., Ophthalmic Surgeon to St. Mary's Hospital. Third edition, revised and enlarged. Price 21s. net.

STEINHEIL, G., 2, Rue Casimir-Delavigne, Paris.

Organes Genito-Urinaires de l'Homme. Par Henri Hartmann, Sous directeur des Travaux Pratiques de Médecine, Opérateur à la Faculté de Médecine. Price Fr. 15.

SWAN SONNENSCHEIN AND Co., Limited, Paternoster-square, E.C.

The Public Schools Year-book. With a Select List of Preparatory Schools. Fifteenth year of publication. 1904. Founded by three Public Schoolmen—Eton, Harrow, Winchester. Price 2s. 6d.

TREAT, E. B., AND Co., 241-243, West 23d-street, New York.

The Blues (Splanchnic Neurasthenia), Causes and Cure. By Albert Abrams, A.M., M.D. Heidelberg, F.R.M.S., Consulting Physician, Denver National Hospital for Consumptives. Price $1.50.

The Self-cure of Consumption without Medicine. With a Chapter on the Prevention of Consumption and Other Diseases. By Charles H. Stanley Davis, M.D., Ph.D., Member of the Connecticut State Medical Society; Physician to the Curtis Home for Old Ladies and Children. Price 75 cents.

UNIVERSITY TUTORIAL PRESS (UNIVERSITY CORRESPONDENCE COLLEGE PRESS); Warehouse, 157, Drury-lane, W.C.

Matriculation Directory, No. XXXVI., January, 1904. With List of Text-books for use under the New Regulations. Price 1s. net.

UNWIN, T. FISHER, 11, Paternoster-buildings, E.C.

Up-to-date Tables of Imperial, Metric, Indian, and Colonial Weights and Measures, Simple Suggestions for Metric Adoption, Imperial Decimal Coinage, &c. Compiled and written by Alfred J. Martin, *Fellow of the Surveyors' Institution,* England. Price not stated.

A Penny Supplement for Beginners to Martin's *Up-to-date Tables* being a Guide to Simple Arithmetic, showing how decimals can be taught at a very early age.

VIGOT FRÈRES, 23, Place de l'École de Médecine, Paris.

Penseur [illegible] Hygiène. Par le Dr. Gélin [illegible] Préface du Docteur Caban [illegible] Price 4 francs.

Étude [illegible] de l'Œil et de ses Annexes [illegible] linique Ophthalmologique [illegible] édition, revue et augmentée. Price 5 francs.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ANDREW, WILLIAM, M.B., C.M.Edin., has been appointed Medical [illegible] Wales, Australia.

BOWES, T. A., M.D. Cantab., has been appointed Certifying Surgeon under the Factory Act for the Herne Bay District of the county of Kent.

[illegible] M.D. Lond., has been appointed to the post of [illegible] Southampton Gas Works.

GRANT, L., M.D., M.S. Edin., has been appointed Certifying Surgeon under the Factory Act for the Ballachulish District of the county of Argyll.

HARRIS, MATTHEW M.B. Aberd., has been appointed Physician to the Wee Waa Hospital, New South Wales, Australia.

HEDLEY, A. S., M.B., B.S. Durh., has been appointed Certifying Surgeon under the Factory Act for the Rothbury District of the county of Northumberland.

LANCASTER ERNEST LE CRONIER B.A., M.B., B.Ch. Oxon., M.R.C.S. Eng., has been appointed Physician to the Swansea General and [illegible]

[illegible] ..Lond., has been appointed [illegible] Vaccinator at Gunning, New [illegible]

[illegible] has been appointed Medical [illegible] Hospital, New South Wales, Australia.

MILWARD F. VICTOR, M.B., B.C. Cantab., F.R.C.S. Eng., has been appointed Medical Referee under the Workmen's Compensation Act for [illegible]

NOLAN, H. [illegible] appointed Assistant [illegible] Throat, Royal P[illegible] alia.

NUTHALL, A. W., F.R.C.S. Eng., has been appointed Surgeon to Outpatients to the Birmingham and Midland Free Hospital for Sick Children.

SALOMON HENRY, M.D. Boston, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Medical Officer to the Leicester Dispensary.

SERVICE J., L.R.C.S., L.R.C.P. Edin., has been appointed Government Medical Officer and Vaccinator at Rylstone, New South Wales, Australia.

WILSON, J. CLARK, M.D., C.M. Edin., D.P.H. Camb., has been appointed Pathologist to Friedenheim Hospital, Upper Avenue-road, N.W.

YOUNG R. C. TAYLOR M.D., C.M. Glasg., has been appointed Assistant Gynæcological Surgeon, Royal Prince Alfred Hospital, New South Wales, Australia.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRKENHEAD UNION INFIRMARY, WORKHOUSE, AND SANATORIUM.—Resident Assistant Medical Officer. Salary £120 per annum, with board, washing, and apartments.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House Surgeon. Salary £75 per annum, with board and attendance.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY [illegible].—Clinical Assistant.

[illegible] sualty Officer. Salary [illegible]

[illegible] Surgeons, for six and twelve months respectively and one House Physician, for twelve months. Salaries at rate of £50 per annum, with board, lodging, and washing. Also one Obstetric and Ophthalmic House Surgeon for six months. Salary at rate of £40 per annum, with board, lodging, and washing.

[illegible] Salary £100, with [illegible] Officer. Salary £75 [illegible] ng. Also Honorary Anæsthetist.

BURTON-UPON-TRENT, COUNTY BOROUGH OF.—Medical Officer of Health [illegible] rgical Registrar. [illegible] fficer, unmarried, [illegible] attendance, &c.,

CARMARTHEN, JOINT COUNTIES ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, apartments, and washing.

CHARING CROSS HOSPITAL.—Assistant Physician to Dermatological [illegible] and washing.

COUNTY COUNCIL OF MIDDLESEX.—Medical Officer of Health. Salary £700 per annum, with travelling expenses.

CROYDON GENERAL HOSPITAL.—Senior and Junior House Surgeons, unmarried. Salaries £105 and £60 respectively, with board, laundry, and residence.

DUDLEY, GUEST HOSPITAL.—Senior Resident Medical Officer. Salary commencing £100 per annum increasing to £120, with board, residence att[illegible]

GESTO HOSPITAL [illegible] Salary £200 per annum [illegible]

GUILDFORD, RO[illegible] House Surgeon, Sa[illegible]

HEIGHAM HALL [illegible]

HOSPITAL FOR S[illegible]—House Physician un[illegible] h board [illegible]

[illegible] n, W.—House Physician for [illegible]

[illegible] SPITAL.—Resident Medical [illegible] annum, with board, residence, &c.

LANCASHIRE COUNTY [illegible] Warrington.—Assistant [illegible] increasing, [illegible] cal Officer, [illegible] with apartments [illegible] ant House Surgeon for [illegible] and lodging. [illegible] r House Surgeon. Salary [illegible]

[illegible] AND WOMEN, Waterloo [illegible]

[illegible] DISEASES.—Second Assistant [illegible] um, with board, lodging, and attendance.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fourth Assistant Medical Officer. Salary £150, rising to £180, with board, &c. Also Fifth Assistant Medical Officer. Salary £140, rising to £160, with board &c.

WIGAN, ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary £80, with board, apartments, and washing.

Births, Marriages, and Deaths.

BIRTHS

[illegible]

MARRIAGE.

THORNTON—SPOTSWOOD.—On Dec. 16th, at the Garrison Church, Maritzburg, George Thornton, M.D. Edin., M.R.C.P. Lond., D.P.H. Oxford, Medical Superintendent, Pretoria Hospital, Pretoria Transvaal, to Myra Lyne, daughter of the late Dr. Maurice Spotswood, Cahirciveen, co. Kerry.

DEATHS

BUSWELL.—[illegible] Hammersmith, Richard [illegible] Arthur James,

DOLMAN.—[illegible] M.R.C.S., L.R.C.P., eldest son of the late [illegible] Dolman, Surgeon, of Derby aged 31 years.

JONES.—At his residence, 2, Vauxhall Bridge-road, Feb. 3rd, 1904, Robert William Jones, M.R.C.S., L.R.C.P., &c., formerly of St. Thomas's Hospital.

SCOTT-WATSON.—On Feb. 8th, at Sidlands Lodge, Sidmouth, Charles Scott-Watson, M.R.C.S. Lond., aged 49 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

OVERCROWDING ON THE UNDERGROUND EAST-END TRAINS.

To the Editors of THE LANCET.

SIRS,—In an annotation in THE LANCET I once saw the statement that in the journey from Charing Cross to East Ham by the new connexion of the Underground with the London, Tilbury, and Southend Railway it was a common experience to find about 18 or more persons in a compartment who, besides enduring great discomfort, ran perilously near to being suffocated. Since then the overcrowding seems to have become worse. In one of the morning papers a correspondent recently wrote that "train-packing is becoming a fine art on the District Railway East Ham trains." I understand the object of a fine art to be to give pleasure, but the train packing on the East Ham trains gives decided pain. I hardly expect an international medical journal to devote more space to the complaints of an unimportant section of the London public, and yet there are a good many of us daily inconvenienced, while the public health aspect of the matter seems to me, a prejudiced sufferer, not without importance. A few days ago 32 of us rode in one compartment. Each compartment was built to seat ten people and even that not too comfortably, as many of the compartments are narrow, and in the most favourable circumstances the third-class passenger knocks knees with the passenger opposite. This railway serves to some extent what is, perhaps, the poorest part of London, so that certain of the passengers are evidently and necessarily uncleanly in their persons because of the character of their work. Others wear clothes suitable to their superior work and find the contact very annoying. No accusation of snobbishness can be founded upon this. A clerk must wear garments which are not improved by being closely pressed against oily or mucky corduroy. The breath, again, of some British workmen is highly charged with the odours of stale beer and rank tobacco. I do not despise the workmen because of this, but I ask you, Sirs, to commiserate with the less robust passenger who is not partial to those spicy flavours, for on the London, Tilbury, and Southend Railway he must perforce grin and bear the fumes, because the propagator of them is wedged within six inches of his mouth.

The way people are allowed to crowd into the carriages of this line in the busy hours of the morning and evening is nothing short of a standing disgrace to London and, though knowing nothing whatever about it, I doubt if troops will be conveyed from Moscow to Mukden in circumstances of greater hardship. I dare hardly imagine what would be the direful consequences in case of a collision on this mainly underground line. Many of the passengers are fastened in like sticks in a bundle of firewood and would be scarcely able to lift a finger to attempt to save themselves. Let the influential shareholders be wise in time and have a care and contemplate the possible amount of the damages they may be called upon to pay. It does not matter whether a passenger pays second- or third-class fare—he is suffocated and jammed just the same. A few of the first-class carriages are kept locked sometimes. Why this disgusting and appalling overcrowding should be permitted on this railway and on some other railways, and should be forbidden in omnibuses and tramcars travelling in open streets where there is considerably more fresh air, is beyond comprehension. A railway company should no more be allowed to take money for accommodation which is not provided, and which the company knows is not provided, than any ordinary trader is allowed to take and to keep money for goods that he cannot supply.

Is there not a public health side to this matter which will encourage you to call further attention to a scandal? The risk of infection by inhalation of germ-laden breaths is surely much exaggerated when 32 passengers ride in a box improperly constructed to hold ten.

I am, Sirs, yours faithfully,
Feb. 11th, 1904. SARDINE.

*** Our correspondent has our sincere sympathy. A railway company seldom listens to isolated complaints from however many points such complaints reach them. What is wanted is combination among the passengers to insist upon the reform of a condition of affairs which, as described by our correspondent, must be insanitary. —ED. L.

A NEW FORM OF SCABIES.

WE have received the copies of an interesting correspondence which has taken place between the East Suffolk County Education Committee and Dr. C. W. Low, medical officer of health of the Stowmarket urban and rural districts. The first letter informs Dr. Low that "scabies is very prevalent in the B—— school and he is requested to send" an order for the necessary closing of the school whilst the disinfection of the buildings is proceeding." Dr. Low very properly wrote back to say that he could not give an order for closing the school but could only recommend the issue of such an order, if he thought it to be necessary, to the rural district council, in which body alone such discretion is vested. He added, however, that he had made a careful investigation at the school where scabies was stated to be prevalent and had satisfied himself that no single case of the disease had occurred there. On inte viewing the mistress of the school he had learnt from h that three children only had been absent by reason of the allege outbreak of scabies and that no medical evidence of the nature of th disease had been obtained. A local druggist had given a ce tificate to a parent of the absentee children, which certificat the parent refused to show or to surrender. Dr. Low accordingl visited the home of the absentee children, examined them, and coul detect no trace of the alleged disease. He then, in the interests the Education Committee, instructed another medical man to vis the children in order that a proper medical certificate might obtained as to the nature of their ailment. This was done and th medical certificate showed that the children were "suffering fro a little dry, scaly eczema. ...... I cannot find a trace of scabi even with a very strong glass." Dr. Low closes his com munication by requesting the education committee to pa certain out-of-pocket expenses and a fee of one guinea to him for services not involved in the duties of his office. Then follows copy of the druggist's letter, in which the word "scabies" is no used, the lay distributor of medical certificates, confining himself t the opinion that "as the skin affection your boys are suffering fro is of a contagious nature I think it is your duty not to send them t school until quite cured." Lastly comes a letter from the Ea Suffolk County Education Committee, very properly acknowledg Dr. Low's services and admitting that fees are due to him and to th second medical man who examined the children.

The story is very instructive as showing the trouble that can arise to a community by the habit that certain druggists have o assuming medical functions. Here is a druggist who is shown tha very ordinary condition, a little dry eczema of the scalp, and a once certifies it as contagious skin disease, during the progress o which the patients must not be sent to school. From this fact arises a report that scabies is prevalent in the school and on this follows the natural and reasonable suggestion from the local authority that the school should be closed. And so because a druggist chooses to make an excursion into medicine the education of the children of the district comes near to being dislocated. The functions of a pharmaceutical chemist do not include the diagnosis and treatment of cutaneous, or other, diseases or the giving o *medical certificates.*

SANITATION IN CUBA.

IN an official report which is published by the *Archives de Médecine Navale* for December, 1903, Dr. Pungier of the French navy gives a very interesting account of the sanitary ameliorations which have resulted from the American occupation of the island of Cuba. A few years ago, he says, Santiago had a most unenviable reputation for insalubrity. Scavenging was unknown, there were no drains either on the surface or beneath it, household refuse thrown out of doors putrefied in the streets, and in every hollow there was a stagnant pool. Close to the town on its western side a vast swamp exhaled foul emanations and afforded a breeding place for myriads of mosquitoes. Malaria reigned supreme and yellow fever was permanently established. The annual mortality, according to Dr. Caminero, was at the rate of 34 per 1000. The American soldiers had no sooner taken possession of the place than at once the medical officers began to remedy this disastrous condition of things. The measures which they adopted were sufficiently drastic and necessitated the expenditure of 60,000 dollars a month. Live stock of every description was banished from the town or, as Dr. Pungier expressively puts it, "dogs, poultry, and cattle were suppressed." Where it was possible to do so ponds were filled up or drained, while swamps too extensive to be dealt with after this fashion were deluged over and over again with petroleum. Pending the construction of a network of sewers, for which a contract, to be completed in five years, was given to a local company, a system of conservancy was organised for the daily removal of filth. Lime-washing and carbolic acid sprinkling were freely employed inside the habitations as well as outside and in a word all the latest innovations for insuring the public health were carried out. The beneficial effects of these measures, which were supplemented by judiciously applied regulations for the treatment and control of epidemic diseases, were not long in making themselves felt. Yellow fever disappeared as if by magic, the last case which occurred having been noted in December, 1899. Paludism has diminished to a wonderful extent; Dr. Pungier was assured by a competent authority that the only cases now observed took place amongst workmen who are employed on the railway to Havana. From 34 per 1000 the mortality has fallen to less than 15 per 1000 per annum. Instead of being an exceptionally insalubrious town Santiago may now be called one of the most healthy in the world. In Havana, which was also inspected by Dr. Pungier, the Americans, he says, have succeeded in accomplishing marvels. Like Santiago, the capital of Cuba was formerly the home of paludism and yellow fever, its sanitary condition, owing to the remains of its extensive fortifications which shut out the sea breezes and excluded light and air, being, if possible, more deplorable than that of the former town. The whole of the obstructive ruins has now been removed to make way for verdant lawns and spacious tree-planted promenades and boulevards. The existing sewers have been thoroughly overhauled but can only be regarded as a makeshift pending the installation of more up-to-date constructions. In dealing with the sanitation of private residences in Havana the Americans, says Dr. Pungier, have exhibited a rigour which was absolutely draconic. Rich and poor were treated alike; 22,200 houses were cleansed and put in order from basement to garret, water-closets according to a uniform pattern, with ventilating shafts opening above the roof, being established in each Soiled hangings and unclean furniture were pitilessly thrown into the streets by the sanitary agents, but the results have been most brilliant. During the 11 years from 1890 to 1900 the average annual number of deaths in Havana from yellow fever was 467, in 1901 there were five deaths from that disease, and in 1902 there were none. In 1899 the deaths due to malaria numbered 909, in 1900 the deaths from that cause amounted to 325, in 1901 to 151, and during the first ten months of 1902 to 73. In conclusion Dr. Pungier describes the Quinta de Salud Covadonga hospital for 500 patients. "I have inspected," he says, "the Charity at New Orleans, the Johns Hopkins at Baltimore, and the New York and the St Luke's in New York, but none of these hospitals gave me the same impression of comfort and intelligent luxury or anything like it as I felt when visiting the new hospital at Havana."

THE CONTROL OF THE MANUFACTURE OF AERATED WATERS

In a leading article in The Lancet of July 4th, 1903, p 40, we dealt with a very important report presented to the London County Council by Dr. W. H Hamer upon the conditions under which aerated waters are manufactured. A resolution was ultimately adopted by the Council in favour of forwarding a copy of this report to the Local Government Board, together with an expression of opinion that legislation was desirable in order to secure the manufacture of aerated water under sanitary conditions. The Council having received no intimation from the Local Government Board as to whether it was its intention to promote legislation in the direction indicated decided at a recent meeting again to communicate with the Local Government Board with the view of urging upon it the importance of the matter and the desirability of introducing a Bill upon the subject in the present session of Parliament.

THE LAW UNION AND CROWN INSURANCE COMPANY AND ITS MEDICAL EXAMINERS.

We have received further communications from medical men to whom the district managers of the Law Union and Crown Insurance Office have suggested that they should examine persons proposing to insure their lives for less than £200 at a reduced fee of half a guinea One medical man informs us that he has refused to comply with the view of the district manager and has expressed his surprise at the innovation. Another correspondent makes the cynical suggestion that he should take the reduced fee and give the company reduced service for it. For a fee of half a guinea he considered that the company ought to be satisfied if he half examined the proposer. This gentleman has logic on his side. If the company hucksters it cannot complain that huckstering is practised against it In trade if a person is prepared to pay only half he can purchase only half, and the Law Union and Crown Insurance Company has approached medical men in a trade spirit Of course, no member of our profession would sign a docu- [illegible] been examined into but whose chests and urines remain unassayed The retaliation, though impossible, is, as we have said, logical

CLUB PRACTICE MEDICINE.

To the Editors of The Lancet.

Sirs,—If Hunyadi Janos water be prescribed by a club medical officer for his patient to take it for some time is such water considered medicine or not? I am, Sirs, yours faithfully,

Feb. 9th, 1904. Inquirer.

*** We cannot, of course, tell what views the committee of the club in question would hold on the point, but the water named certainly is a medicine —Ed. L.

CHILDREN AND FIRE.

Notwithstanding the frequent occurrence of inquests on children who have been the victims of flannelette numbers of people are sceptical as to its dangers. But they are chiefly well to-do people who do not leave their little ones where the grate is without a fireguard while there is no one to see to their safety. It is happily but seldom that such an object lesson occurs as in Manchester the other day. Three inquests were held on Jan 23rd by the city coroner on three children, each two years of age, in three different parts of the city, who were burnt to death from their flannelette clothing catching fire One little girl was acting as nurse and rocking her baby brother close to the fire, where there was no guard The mother thought a cinder had set the child's flannelette nightdress on fire. The other cases were from playing with fire, which has an irresistible fascination for most children Mr. E A Gibson, the coroner, said that in all probability they would not have died if they had not been wearing this dangerous material. "It flamed up like gunpowder and it was almost impossible to extinguish the blaze before great injury had been done." It is cheap and warm, which of course makes it popular, but it might easily and inexpensively be rendered non inflammable, and it is quite time that the authorities should prevent its sale unless this is done. There is such a material on the market that goes by the not very attractive name of "Non Flam," but we fancy that its sale is small compared with that of the ordinary variety. Mr. Gibson showed some to the jury and applied a light to samples of each, the flannelette immediately burned into a blaze, while the other was proof against the light. As he said to the jury, "It was perfectly heartrending to have a list like that with three small children all burned on the same day from the same cause." Apart from the question of inflammable dress materials the provision of fire-guards when children are left alone in rooms where a fire is burning should be enforced by law.

THE STANDARDISING OF SEWAGE

We understand that with the approval of the Council of the Sanitary Institute Mr. Scott Moncrieff's sewage testing apparatus can now be seen in the Parkes Museum. The apparatus has been designed for the purpose of obtaining exact information upon which to base bacterial sewage disposal schemes, particularly as to (1) the depth of filter required to produce the necessary standard of purity in the effluent, (2) the quantity of air necessary for the life processes of the organisms in the filter, (3) the correct rate of flow per unit of filter-bed surface in order to obtain the best results; and (4) the best period of rest between each discharge to prevent gelatinous growths in the filtering material.

"FILTHY LUCRE."

Our annotation under this heading in The Lancet of Feb. 6th, p 381, has attracted considerable attention and we have received some correspondence upon the subject in which the writers cordially approve of our suggestion that in those places where banks receive a large number of coins in bulk which are subjected to the defilement of fish, meat, and other more or less dirty traffic, such coins should be cleaned in some simply designed washing apparatus before being returned to circulation. We understand that at a certain bank near Billingsgate Fish Market some such cleansing apparatus is adopted Several of our correspondents mention an invention of their own for this purpose. We cannot consider the merits of these or advise as to whether their apparatus would bring any substantial reward to the respective inventors. They should consult a respectable patent agent or communicate with the banks We may repeat, however, that if a cheap and handy machine were devised and adopted for rapidly washing and scrubbing coins at the bank it would amount to a great public benefaction and would be a step of the highest sanitary importance.

A JURY OF MATRONS

It is rare nowadays to see empanelled a jury *de ventre inspiciendo.* From very ancient times—long before the advent of the registered medical practitioner—it has been the law that when a woman sentenced to death pleads pregnancy as a bar to execution, a jury of matrons or discreet women shall be called together to examine her and to advise the judge whether or not she is "quick with child" In latter days this procedure has dropped into disuse and the evidence of medical men has been substituted. It was [illegible] revived at the last [illegible] of the prison [illegible] and having [illegible]

FURTHER OBSERVATIONS ON THE VALUE OF GARLIC AS A TREATMENT FOR TUBERCULOSIS.

To the Editors of The Lancet.

Sirs,—Having read the most interesting article by Dr. Giulio Cavazzani upon the action of garlic as a prophylactic in cases of tuberculosis which appeared in The Lancet of Jan 9th, p 90, and in which he expresses the hope that it may lead to a discussion upon the subject, I beg that you will allow me to record a brief account of my experiences with it as a remedy in almost all forms of tuberculosis, as I believe the results obtained from it are more encouraging than from any other treatment yet brought forward

In the *Medical Press and Circular* (Dublin, June 4th, 1902) I published a paper giving some of my experiences with garlic as a remedy for tuberculosis in its various forms After this publication I was made aware that Dr. G V Poore of University College Hospital, London, had already recommended that garlic should be taken internally in pulmonary tuberculosis in his book "Nervous Affections of the Hand and other Studies" (published by Smith, Elder, and Co, 1897), p 275, also that Dr Cavazzani had recommended it to be similarly used in a publication in a foreign journal in 1901. The fact of the discovery of its utility being made in three places so remote from one another and quite independently is in itself good evidence, I think, of its virtues in this disease [illegible]

When I first commenced to use [illegible] tuberculosis, now something over [illegible] internally with varying success I [illegible] in some cases, usually very early cases or old standing fibroid cases, [illegible] cases showed little or no improvement. I [illegible] nal treatment, employed an [illegible] to the sponge of an inhaler [illegible] ey Yeo for use with antiseptic [illegible] advised the inhalation to be [illegible] daily. I have had some very [illegible] treatment and I can strongly [illegible] t is suited to similar cases to those above mentioned and with such will give most satisfactory results, yet it leaves much to be desired.

Since the publication of my paper in 1902 I have further discovered that garlic when applied locally is freely absorbed by the skin and penetrates to the deeper tissues, and I have had very gratifying results from the application of poultices of freshly pulped or pounded garlic over diseased areas, and I now employ these three methods combined in pulmonary cases with much success. Garlic when applied in this manner acts as a strong blister, the various varieties of it being of widely different strengths. Some varieties will blister in from four to six hours, whilst others take 24 hours or even longer.

It may be advanced that its beneficial effects when applied in this manner are due to its action as a blister, whilst also a certain amount of inhalation takes place. I think, however, it is absorbed by the skin, penetrating to the deeper tissues, as I have had remarkable success with it in cases where the inhalation had failed. Further, it is a most successful treatment when applied locally to any tuberculous lesion, such as a joint, tuberculous glands, &c., even though the skin be unbroken. The garlic when pulped or pounded and applied in this way appears to act more beneficially than the fresh juice. Cases of laryngeal tuberculosis if not very far advanced rapidly yield to the application of garlic either by gargle, or spray, or internal administration (or combined), accompanied by a poultice (or blister) of pulped garlic externally. It is an excellent treatment for lupus, and has the advantage that it can be applied to almost any part and over a very extensive lupoid area. Where it can be borne, a blister of pulped garlic is the best and most rapid mode of treatment, leaving it on three or four hours and re-applying in a few weeks, but it can be very efficiently treated with the fresh juice as I described in my paper in the *Medical Press and Circular*. This method has the advantage of not being at all severe but it is not nearly so rapid in its results. Garlic is a powerful germicide worthy of the careful consideration of bacteriologists and I have the strongest reasons for believing that a poultice of it applied over the seat of inoculation and also given internally will prevent the development of hydrophobia in a person bitten by a rabid animal. Dr. Poore in his work "Nervous Affections of the Hand and other Studies," p. 275, states: "The allyl compounds, such as allylic alcohol and oil of mustard, were shown by Koch to be strongly antiseptic and to have a remarkable power of inhibiting the growth of the bacillus anthracis." The farmers in this part of the country largely use garlic for the treatment of symptomatic anthrax, or "blackleg," in cattle and it is most effective.

The London Pharmacopœia formerly recognised garlic and some preparations of it are still officinal in the United States Pharmacopœia. It is described as being an antiseptic, an expectorant, a rubefacient, a diuretic, an antispasmodic, and a carminative. It contains a volatile oil—sulphide of allyl—to which it possibly owes its virtues. In an old work on therapeutics to hand, by J. Moore Neligan, M.D., 1851, he states that "garlic consists of an acrid volatile oil, fecula, albumen, and a saccharine matter; its medicinal properties depend on the volatile oil, which is heavier than water, of a yellowish colour, and a very penetrating odour; it is composed of six atoms of carbon, five of hydrogen, and one of sulphur" (Wertheim). He further recommends it as an excellent remedy in ascarides.

It is, of course, a very harmless substance (especially when diluted) in doses of the juice from half a drachm to one drachm two or three times daily. The addition of a little tr. lavand. co. and syr. simplex makes a fairly palatable mixture, the former masking the odour to a great extent. An infusion with milk is a favourite way of taking it. Half an ounce to one ounce of the bulb may be taken in this way daily.

One word of warning I must give regarding its use. I have found some surgeons (to whom I recommended the local application of garlic to tuberculous joints, &c.) fell into the error of injecting the fresh juice with a hypodermic syringe into the joints, &c. This should never be done, as owing to its vesicating action a violent inflammation will at once be set up. The local application should be altogether external but may be applied over a broken surface of skin and is not then much more severe than if the skin remains unbroken.

As some persons are rather susceptible to its blistering effects it is well not to leave the first poultice on more than four hours, after which it will be more easy to judge the length of time to leave the other poultices, which will require to be repeated frequently at intervals of three or four weeks to check the disease in the deeper tissues. The more severely it is blistered the more rapidly will the disease be checked, I think The blistered surface heals quickly under any ordinary oily application.

Such a powerful germicide as garlic, which is freely eliminated by the lungs as well as being freely eliminated and absorbed by the skin is, I think, a most reasonable one to use in the manner above described in such a disease as this under consideration, especially when one considers its harmless nature.—I am, Sirs, yours faithfully,

Kells, co. Meath, Jan. 25th, 1904. WM. C. MINCHIN, M.D. Dub.

DIET IN ITALIAN NAVAL HOSPITALS.

THE *Annali di Medicina Navale* for December, 1903, contain a long article on diet in the Italian naval hospitals by a medical officer of the first class V. Tiberio who is in charge of the pathological laboratory at Venice. There are, it would seem, four diets, named, respectively, entire, three quarter, half, and quarter. In all the ingredients are pretty nearly the same, the chief differences being in quantity. The question of the nutritive value of each diet is exhaustively treated comprehension being assisted by a series of very elaborate analytical tables. The main conclusion arrived at is that on the whole the several diets are fairly sufficient but that in some particulars they are not quite in accordance with the teaching of modern dietetics. It may be noted that all the diets include an allowance of wine which is thus specified: "The wine shall be of the best quality, made in Italy, red, genuinely pure, perfectly sound, free from acidity and mouldiness, without bad smell or bad taste of any kind whatsoever, pleasant to the taste, at least a year old, of not less than 12 degrees of alcoholic strength, and costing 40 centimes the litre."

THE VIAVI TREATMENT.

To the Editors of THE LANCET.

SIRS,—Can you tell me anything of the above? I had an idea I saw something about it in an old copy of THE LANCET but cannot find it. Was it dealt with in *Truth*? Some of my friends speak of it enthusiastically, hence my query. I am, Sirs, yours faithfully,

Feb 8th, 1904. SCEPTIC.

⁎ The Viavi Treatment is undiluted humbug and quackery. Our correspondent will find our opinion of it in THE LANCET of Jan. 17th, 1903, p. 211. *Truth* has also dealt with the matter.—ED. L.

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Batharon.—(1) The titles are synonymous and therefore (2) any one of them can be used. (3) A qualified medical man is qualified to practise medicine in the wide sense of the word in all its branches. It is not usual for a medical man to assume the designation of a specialist—ophthalmic surgeon or dentist, for example—without having undergone special training or enjoyed special opportunities, but we do not think such assumption would be construed by the General Medical Council as a professional offence.

Hon. S. Coleridge.—We do not intend to insert any letter from a correspondent who founds upon an obviously accidental and completely unimportant slip accusations of deliberate immorality. Mr. Coleridge can publish his letter elsewhere, can shriek that we have refused him a hearing, and can try to persuade people that we have acted from innate vileness. It is his own complete discourtesy that has decided us to ignore his communication.

Mr. H. A. Matheson.—The preparation about which our correspondent inquires was examined some years ago in our laboratory. It is a weak solution in water of sulphurous acid gas (SO$_2$).

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.)

TUESDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.)

WEDNESDAY (17th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (18th).—St. [illegible] (1.30 P.M.), St. Thomas's (3.30 P.M.), University [illegible] P.M.), St. George's (1 P.M.), London [illegible] Middlesex (1.30 P.M.), St. Mary's [illegible] West London (2 P.M.), Gt. N[illegible] 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.)

SATURDAY (20th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal *London* Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES

MONDAY (15th).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish square W.).—9 P.M. Mr. C. B Lockwood: Aseptic Surgery in Theory and Practice. Lecture II.-Materials and Dressings (Lettsomian Lecture)

TUESDAY (16th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).-8 30 P.M. Card Specimens will be shown by Dr. J. H. F. Broadbent and Dr. J. R Lunn Discussion on Arterio-

of Marine Objects mounted by Mr. H. J. Waddington Papers:—Mr. E. M Nelson: (1 On the Vertical Illuminator; (2) The Influence of the Antipoint on the Microscopic Image shown Graphically.—

OF LONDON (11, Chandos-

Paper:—Dr. M. Coplans:

LECTURES, ADDRESSES, DEMONSTRATIONS, &C.

MONDAY (15th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. T. C. English: The After Effects of Head Injuries. (Hunterian Lecture.)

POST GRADUATE COLLEGE (West London Hospital, Hammersmith-

placement of the Uterus.

Wards

EGE OF SURGEONS OF ENGLAND.—

ie After Effects of Head Injuries.

London Hospital, Hammersmith-

MEDICAL GRADUATES'

W.C)—4 P.M. Mr.

Mr S. Stephenson:

HOSPITAL FOR CONSU

ton).—4 P.M. Dr. B. Shaw: Non tubercular Apical Disease of the Lungs.

LONDON TEMPERANCE HOSPITAL (Hampstead-road, N.W.)—4 P.M. Lecture:—Diseases of the Stomach. (Post-Graduate Course)

ndon Hos-

icers of the

nies-street,

5.15 P.M.

and Treat-

SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone road, N.W.).—3 P.M. Mr. A. C. Butler-Smythe: Moveable Kidney.

POST GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M

MEDICAL GRADUA

Chenies-street,

W.C.).—4 P.M.

NATIONAL HOSPIT

ILEPTIC (Queen-

square, Bloomsb

Russell: Tabes Dorsalis.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II of 1903, which was completed with the issue of Dec. 26th, were given in THE LANCET of Jan. 2nd, 1904.

VOLUMES AND CASES

VOLUMES for the second half of the year 1903 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 11th, 1904.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rainfall	Solar Radia in Vacuo	Maximum Temp Shade.	Min. Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
Feb. 5	29 50	S W	0 01	75	49	42	43	44	Cloudy
" 6	29 46	S W		52	48	42	42	44	Cloudy
" 7	29 61	W.	0·05	72	47	36	35	36	Fine
" 8	29 00	S W	0 21	69	51	36	43	45	Cloudy
" 9	29 09	S W		74	46	41	43	44	Raining
" 10	28 93	S W	0 49	78	50	39	42	44	Cloudy
" 11	29 07	N.W.	0 21	46	43	41	39	41	Overcast

During the week marked copies of the following newspapers have been received *Sunday Sentinel (Milwaukee), Highland News, Cork Constitution, Evening News (Portsmouth) Cork Examiner, Aberdeen Daily Journal Aberdeen Free Press (Weekly) Westminster Gazette, West Cumberland Times Carlisle Journal, Dublin Evening Mail, Daily News Surrey Advertiser, Bristol Mercury Dublin Express, Morning Post Sanitary Record, Local Government Chronicle, Mining Journal, Hertfordshire Mercury, Burton Chronicle, Army and Navy Gazette, Medical Examiner, Knowledge, Illustrated Scientific News, &c.*

The chief lesson learnt from the cases was that the great bulk of the patients who suffered from head injuries became absolutely well, provided that they submitted to the necessary period of mental rest after the injury. The reason why so many hospital patients suffer from after-effects is that their treatment is too often too short. Those who suffered from remote consequences, those who gradually drifted, were the patients who returned to their business soon after the accident, before they had completely recovered. The history of these cases was often as follows. The patient said that he had a family to keep and must be at work, that he could not afford to rest; the dangers of his action were pointed out and were ignored. But he found that work required nearly twice as much effort as before and soon headache started and persisted. In about a month or so he consulted a medical man who perhaps said that he wanted a purge and a week-end in the country. But the headache returned and continued and so the case gradually drifted on, the patient being less capable of work, more depressed, slowly tending in the direction of melancholia, and sometimes dementia. Owing, then, to inadequate mental rest recovery is frequently incomplete after fractures of the skull and there is more than an element of truth in the popular idea that "a man is never the same after a head injury." In the out-patient department one is particularly struck with the number of cases applying for the treatment of symptoms consequent on these injuries; and in following up my own cases I was again and again met with the statement on the part of the relatives or friends that the patient "was never the same again."

The third series, the miscellaneous cases, includes a very important group which from their nature are not found in Series 1 and 2 I refer to those very mild forms of concussion in which loss of consciousness lasts a few seconds only or may be practically absent. Their importance has been emphasised by Sir William Bennett. Such cases are rarely admitted into hospital and the apparently trivial nature of the injury usually leads to entire neglect of treatment or to treatment of an entirely inadequate kind. Thus it comes about that grave consequences are more liable to follow the slighter forms of concussion the seriousness of which is overlooked than the more marked cases in which proper treatment is enforced.

Having thus indicated the general results of head injuries I shall now pass to their *effect upon the wage earning capacity* and then deal individually with the various symptoms which have come under my notice. The effect of head injuries upon the wage-earning capacity is a practical question and second to none in importance to the patient. Often he is the bread-winner of the family and we are asked how long it will be before he can return to his work and whether he will be able to do the same amount of work as before the accident. The question is of especial importance from the point of accident insurance, and again it is invariably raised in the litigation which often follows these injuries. I therefore took especial care to inquire into the effects of these injuries upon the patient's work, ascertaining how long they were kept from work and how much work they were able to do later. The results may be summarised as follows. The average interval between the date of the accident and the return to work after simple concussion was four and a half weeks, after cerebral contusion nine and a half weeks, and after a fracture of the skull or cerebral laceration 13 weeks. Only those patients who resumed work within one year are included.

Now as to the ultimate effect on the working capacity. Information upon this point is available in 86 of the fracture cases. 52 of these were doing the same work as before the accident and earning practically the same wages; 13 were doing lighter work, the average fall in wages in the labouring classes being from 27*s.* 6*d.* to 15*s.* a week; seven could only do very little work; eight had been compelled to give up their trade and take to other work; and six were totally disabled from work. Turning to the cases in which there had been loss of consciousness without apparent fracture we obtain the following results in 78 cases; 51 of these were working as well as before; 12 were doing the same work but said that they did not show the same interest and energy as formerly; six were doing lighter work; four could only do a little work; two had given up their trade; and three were totally disabled for work. In 59 per cent., therefore, of the cases in the first series and in 80 per cent in the second series the injury entailed no marked diminution in the working capacity or loss in wages.

Effects on Working Capacity.

	First series.	Second series.
No marked effects	52	63
Did lighter work	13	6
Only able to do a little work	7	4
Gave up trade	8	2
Totally disabled	6	3
Total	86	78

It will be noticed that in ten cases the patient had to give up his trade and to take to lighter or more suitable work. One of these was a builder and had fits; six had attacks of giddiness in ascending ladders or working at any height; of these six, three were carpenters, one was a bricklayer, and one was a painter; the sixth, a scaffolder, who had sustained a fracture of the base, was readmitted into hospital 16 months later with concussion and a fractured humerus, the result of a fall in an attack of giddiness whilst working on a ladder. Two cabmen had abandoned their cabs on account of giddiness, inability to stand hot weather, and especially owing to difficulty in remembering the names of streets. The last case was that of a police constable, to whom I am referring later.

We see, then, that diminution of the working capacity depends largely on the presence of certain disabilities following the head injury but partly on the particular trade or occupation which the patient is following. After severe head injuries patients are no longer fit to follow certain trades and occupations, especially those which involve ascending heights or which entail great responsibility. Thus the builder's labourer and the bricklayer can no longer with safety ascend ladders and work on scaffolding, the sailor cannot clamber in and out of the rigging, the fireman is untrustworthy at great heights, the engine-driver is no longer to be trusted, for his nerve might fail at any moment. These figures have dealt mainly with the labouring classes, but if we turn to the intellectual workers, to more highly educated patients, we find that the effect upon their work is distinctly more serious. A business man, for instance, who had sustained a severe head injury will not be fit to return to his business for several months and a long interval may elapse before he is capable of intricate calculations; the higher intellectual functions are always the last to be restored and the arithmetical faculty is an excellent example of this. Several of the patients I examined were city clerks and in these, as a rule, twice as long a period of rest was required as in those whose occupation involved purely manual work.

Beneficial effects resulting from head injuries are almost entirely confined to the imaginations of novelists. In real life they are comparatively rare. In this connexion I may mention a remarkable case seen last summer in which concussion caused *inhibition of chorea*. A boy, aged ten years, suffering from concussion, was admitted into St. George's Hospital under the care of Mr. A. Marmaduke Sheild. He had struck his head and had fallen backwards down some stairs. On admission there were marked bruising in the left occipital region and slighter bruising in the left frontal region. For two months preceding the accident he had suffered from chorea, and from the father's description it was clear that the chorea had been severe, affecting the right side of the body mostly. During the time that he was in hospital there were only occasionally very slight choreic movements, a fact which surprised the relatives greatly, and even when he was allowed up there was no return of the symptoms. The situation of the bruising showed that the left cerebral hemisphere must have received the greater part of the shock at the time of the accident, and this is the probable explanation of the inhibition of the right-sided chorea. I have since heard from his father that there was some return of the disease later but in a much milder form.

The etiological factors in these cases are numerous and varied. The following are the main conditions which influence the after-progress of patients who have sustained head injuries: (1) the natural temperament of the patient; (2) antecedent state of health; (3) the severity of the injury; (4) the efficacy of treatment adopted after the injury; and (5) other factors such as age, influence of alcohol, and social status of the patient. The natural temperament of the patient is a factor of far reaching importance. Where there is inherited or acquired nervous instability the results of head injuries are unusually severe and nervous disturbances are apt to be very persistent; indeed a neurotic inheritance may render the prospects of ultimate cure almost hopeless. I shall point out in my third lecture that traumatic insanity occurs mainly in patients with a strong predisposition to nervous disturbances; this predisposition is often a more potent factor than the actual injury. The antecedent state of health must be taken into account. With the increasing competition of modern times there is an ever-increasing number of persons who are working at high pressure with inadequate rest and such are least fitted to withstand the effects of cerebral injuries. This remark applies not only to adults; it applies also to young people in whom mental overwork is so common with our modern method of forced education. Previous acute illness, and in particular influenza, will often render the symptoms more serious. The nature and the results of previous treatment must be ascertained. Imperfect recovery after head injuries is most likely to occur in mild cases where the treatment immediately after the injury has been inefficient, and in severe cases where inefficient treatment has occurred at a later period.

I have already stated that I believe that inadequate mental rest is responsible in most cases for imperfect recovery. In again referring to this point I cannot do better than quote the remarks of Hilton: although written some 40 years ago they apply with undiminished force to the present time, for the extreme importance of this principle does not yet appear to have been thoroughly grasped. "Recognised lesions of the brain and its membranes, associated with injuries to the head, do not generally or as a principle of treatment obtain that extent of mechanical rest which is consistent with the expectation of perfect and complete structural repair. This error in the treatment of such cases is one of the chief sources of diseases of the brain. A disturbed brain recovers itself slowly; it soon becomes fatigued after use, and if claims are made upon it too soon after the injury the patient is very likely to suffer from serious consequences."

One other fact comes out strongly in my series of cases and that is, the real importance of operation in all depressed fractures of the vault. In the first series are 21 cases of depressed fractures which had been treated by operation. Of these 15 presented no ill-effects of any kind, three had slight symptoms, and three had marked symptoms; in one of the latter cases fragments of bone had been overlooked at the primary operation and were removed later. There were six cases in which depressed fractures had not been operated upon and five of these patients had not recovered from the effects of their injury. In the third series also there were several instances in which it seemed clear that injurious symptoms would not have resulted if trephining had been performed shortly after the injury; this applies mainly to cases of slightly depressed fractures in which perhaps the damage chiefly involved the inner table of the bone, the external lesion appearing trivial. These results are very striking and point to the importance of the more frequent employment of operative measures in fractures of the vault, even when there is no apparent depression.

In regard to the age of the patient, I have found that injurious effects are most likely to result at two periods, in early life and in old age. The seriousness of severe head injuries in young children seem to lie in their occurrence at a time when the higher intellectual faculties are being developed. It is usually stated that children recover remarkably well from injuries to the head, but my experience has not borne out this statement. We know that injuries to other parts of the body, when in the process of active development, are frequently followed by impairment of growth; injuries to epiphyses afford a striking example of this. It would be logical to expect that injuries to the brain in children would be even more likely to result in some permanent impairment, for its structure is more delicate and its development is more complex than that in any other region. In the aged the powers of recuperation are comparatively feeble and mental defects and impairment of memory are frequent and persistent.

It has been frequently pointed out that one of the strongest hindrances to recovery is the suspense and unsettlement of mind incidental to litigation and disputes as to compensation, and remarkable improvement may follow the termination of legal actions quite apart from the element of malingering.

In proceeding to discuss the individual *symptoms* I must point out that the investigation deals more particularly with those symptoms which, less obvious at first, interfere later with the patient's comfort and ability for work or to earn his living. epilepsy It would list of the various remote consequences which may follow injuries to the head and no attempt will be made to do so. These consequences are so numerous and varied and so frequently combined that a full description is out of the question.

I shall avoid any reference to what is known as traumatic neurasthenia, for our knowledge of the causation of the various symptoms following head injuries is as yet vague; it will, therefore, be simpler to deal with the symptoms individually. But it is, of course, of the highest importance whenever possible to determine whether symptoms are due to functional changes in the cerebral centres or whether they are the result of definite organic lesions, and further to remember that functional changes may be maintained and aggravated by organic lesions. This point has a very practical bearing on the question of treatment, for the functional disturbances can usually be cured by appropriate medical treatment, whilst the effects of organic lesions may be curable by operative measures.

Traumatic cephalalgia.—Chronic headache is by far the commonest symptom met with in patients suffering from the later effects of head injuries. It may occur alone or in combination with other symptoms and in the latter case may be the cause of, or may exaggerate, some of these other symptoms. It was present in 58 out of the 69 cases which presented any symptoms in the first series and in 43 out of the 52 in the second series. The varieties of headache in the cases are many, a fact which is readily explained by the complexity of head injuries. The pain may be continued or intermittent, localised or diffuse, fixed or radiating, in the latter case usually following the branches of the fifth nerve. Most usually it takes the form of a constant, dull, aching pain, most intense over the seat of injury. Accurate classification is obviously difficult but for practical purposes the following is useful. The pain may be general or local; in the *general* form it is referred to a large area of the head, such as the frontal, occipital, or vertical regions; the whole head seems to ache, but this aching is most intense in one particular region. The *local* forms of headache may be divided into three distinct groups: 1. The neuralgic headache, in which the pain is sharp and intermittent, radiating along the course of definite sensory nerves; this is often associated with neuralgic scars and with scars adherent to the underlying bone. 2. Headache with local tenderness. This is met with in cases in which the bone is in a condition of chronic inflammation or of osteo-sclerosis, a condition to which I shall refer later. 3. Local fixed pain without localised tenderness. In the majority of cases this is due to local intracranial lesions and more especially to meningeal adhesions. The seat of the pain, however, does not always correspond to the seat of the external injury. Pain may be on the side of the head opposite to the seat of injury, in which case the probable lesion is contrecoup bruising of the cortex with formation of adhesions. The condition may persist for years or even be permanent and is a very serious matter as it leads to insomnia, depression, and loss of appetite, and may prevent the patient following his work and attending to the ordinary duties of life. The effect of the headache upon the patient's aspect is extremely characteristic: it gives him an expression easily recognised as typical of chronic headache. Traumatic cephalalgia is frequently kept up and aggravated by alcohol and my patients almost unanimously admitted that alcohol increased any tendency to headache. The exact cause of the headache is not always certain in individual cases, for the causes are many and there is often more than one cause at work. The true neuralgic cases are not common and are almost invariably due to implication of sensory nerves in scar tissues. Such cases are usually cured by free excision of the scar down to the bone. In the neuralgic cases it is said that neuromata of the scalp or neuritis of its nerves are sometimes responsible for the pain but I know of no evidence of this.

From a surgical standpoint, by far the most important condition is that of osteo-sclerosis which occurs comparatively commonly and is peculiarly amenable to operative treatment. The pain originates in the sclerosing bone and is similar to that met with in chronic inflammation of other bones; it is fixed and usually intense, whilst there is always the characteristic local tenderness on firm pressure. The suggestion that such pain arises from the nerves of the dura mater under the thickened bone is improbable. Sir Victor Horsley was the first to insist upon the origin of this form of headache in a paper read at the Berlin Congress in 1890. He pointed out that in these cases, which are characterised by intense cephalalgia resisting all medical treatment, there are none of the sensory or motor affections met with in traumatic neurasthenia and hysteria; moreover, operation relieves not only the pain but cures the mental condition of the patient also. That sclerosing osteitis of the bone is not infrequent after fracture of the skull has been abundantly proved and this is exemplified in certain of my cases. It is probably due to the increased vascularisation after the injury and reveals itself clinically either by excessive local tenderness of the bone or as a chronic ostealgia becoming more intense under the influence of anything which increases the blood flow to the head. Occasionally atrophy of the bone follows these fractures and the symptoms may be exactly similar in character but are usually less marked. Sometimes under the atrophied osseous bone one finds enlarged Pacchionian bodies which have been accused, wrongfully no doubt, of causing the symptoms.

In other cases various lesions of the bone, meninges, or brain similar to those described in the morbid anatomy of traumatic epilepsy have been found; in some cases no lesion of any kind has been discovered and yet operation has done good. 15 months ago a patient returned to hospital two years after a bullet wound of the left parietal region, complaining of constant intense cephalalgia which prevented her performing any work. She was trephined over the seat of injury and three depressed splinters of bone, one of which had penetrated the dura mater, were removed; the headache disappeared after operation and I have recently heard that she has had no trouble of any kind since. The cerebral substance is apparently destitute of sensibility under normal conditions but it does not follow that it may not be the seat of pain after injury or in disease; indeed, small lesions in the brain not approaching the surface may cause intense pain. The dura mater receives numerous sensory and sympathetic fibres and, if the seat of acute or chronic inflammation, may unquestionably cause pain. The pia mater is said to be innervated by sympathetic fibres only, but other structures receiving only sympathetic fibres may be painful when inflamed.

The subject of *painful or tender scars* is inseparably connected with that of traumatic cephalalgia. Scars, when present, were painful in about 40 per cent. of the cases. Pain in a scar may originate either in the tissues of the scalp or in the underlying bone. In the former case the symptom usually occurs in cases where the scalp wound has been lacerated, or has not healed by first intention, or where the scar is adherent to the bone. On pulling the hair over the scar sharp pain may be complained of and is probably due to a neuralgia affecting entangled nerves; such patients may bear firm pressure on the scar without feeling any pain. The patient may tell one that tenderness of the scar is mostly noticed when he brushes his hair. In others pressure was attended by severe pain and in these cases thickening of the underlying bone is to be suspected. Pressure on the scar may produce other symptoms; thus in one case the patient was unable to lie on that part of the head on which the scar was situated owing to the intense dizziness produced by the pressure. Three patients told me that they had a sensation of "something dragging or pulling at the wound," especially when the head was placed so that the brain fell away from the region of the wound. Quick movements of the head were thus found impossible owing to the intense giddiness produced. It is possible that these symptoms are due to adhesions between the damaged part of the brain and the dura mater, so that at every movement of the head and every change of position this part of the brain is slightly dragged upon. It is obvious from mechanical considerations that the amount of cerebral movement within the cranium is very limited, but it is possible that a very small degree of traction may give rise to the sensations described.

Vertigo occurs in a large proportion of cases and may be very persistent. It was complained of in 22 out of the 100 fracture cases and, as already stated, was responsible for six patients having to give up their employment. Vertigo is independent of any aural symptom; it generally occurs with any quick movement of the head and is usually associated with headache. Often it is most noticed when the patient gets out of bed in the morning. It occurs in rising suddenly from a chair or in stooping down to tie a bootlace. It is best tested for in children by standing the upright and telling them to look up to the ceiling, especially the ceiling is high. It is obvious that these attacks giddiness may be a source of great danger. Amongst m cases are three instances in which patients were admitte into hospital with concussion, they having fallen in attac of giddiness consequent upon previous head injuries. O patient complained that giddiness in the street had sever times caused him to be mistaken for a drunken man. In few cases isolated attacks of giddiness occur without a obvious cause. In the middle of his occupation, without a preceding symptoms, the patient may suddenly be attacke with giddiness and faintness. This condition is transito and after a few hours no trace remains behind beyond t feeling of a little fatigue. I carefully considered the po sibility of this symptom being connected with lesions of t central or peripheral connexions of the vestibular nerve, b could find no evidence to support this idea. Vertigo common after injuries of all kinds and I believe it is usua a manifestation of general cerebral instability.

Attacks of *vomiting* are sometimes found and in m experience are always associated with headache an giddiness, the latter being marked. The immediate cau is probably increased irritability of the vagus centre, t wide extent of the central relations of this centre explainin its occurrence after injuries to various parts of the bra The vomiting resembles that in other cerebral affections that is to say, food is rejected soon after it is taken, the are no local gastric symptoms, nor is pain or discomf produced by the presence of food in the stomach. Nau- is often absent but occasionally may be very distressing U lateral furring of the tongue is said to occur occasionally, b I doubt if it is ever observed apart from neuralgia or disea of the fifth nerve I have frequently looked for it but ha never seen it after head injuries.

A change of disposition or character was noticed in cases in the first series and in 23 in the second seri In some the tendency was usually towards persistent depr sion and melancholia, and this was a striking feature certain of my cases. Such patients were despondent a depressed; they had lost interest in life and took pessimistic view of everything. This *depression* may the preliminary stage of a definite melancholia and th suicidal tendencies are especially strong. Three of cases had attempted to commit suicide and in two in t miscellaneous series suicide was actually committed. T evidence of depression or melancholic tendency is usua plainly marked on the man's face.

In others the change of disposition was in the directi of *irritability;* the temper became short, the patient w easily annoyed, the slightest noise, the simplest questi might arouse a furious passion. To quote an expression u by Dr. T. Clifford Allbutt, "Doors bang and windows ra as they never did before; if but a shoe-string break an i precation is on the lips; business matters are in a conspir to go wrong." The condition is at once recognised by friends or employers of the patients He is frequently fa aware of it himself and this is a sign of good progno more especially if he is anxious to overcome the sympto It shows itself in the ordinary events of every-day l there is extreme annoyance for trivial reasons. The pat gets possessed of an idea that people are conspi together against him and becomes abnormally sensitive. walking in the street he is apt to misjudge his distan and knock against people. Thinking that they were do this intentionally he flies into a temper. Drop a tray of t things in a man's room, if he has recovered from his h injury, he will use only the ordinary expressions; if recovery is incomplete he will probably fly into a vio attack of intense passion. The patients are, as it w explosive; there is loss of control. This mental irritabi is a common feature after head injuries and may last only a few months but frequently forms a permanent part o man's character.

The question naturally arises as to whether this men irritability leads ultimately to insanity. A surgeon of many years' experience, to whom I was speaking on t subject, said that "mental irritability is very comm after head injuries, whilst traumatic insanity is rare"; I certainly have found this to be the case, judging from patients whom I have investigated. The difficulty in giv an opinion on this question lies in the difficulty of keep such patients under constant observation for a large num of years and when this is possible there undoubtedly c [illegible] asylum. A typical case of this description is recorded by Mr. C. T. Dent in Tuke's "Encyclopædia of Psychological Medicine." The two conditions, depression and irritability, coexist in the majority of the patients, but one is usually more prominent than the other. In the greater number there is well-marked irritability with some depression; in most irritability is the conspicuous feature of the case.

Nervousness is another important symptom in this group. The patients are easily startled, they are frightened by slight noises, and jump violently in their chairs when doors slam. They will often tell you that they have lost their nerve. I have recently seen a police constable who was in hospital two and a half years ago with a fracture of the middle fossa followed by cerebral irritation. He is now quite unfit for work and has been placed on a temporary pension. In addition to the headache, vertigo, and irritability he has lost his nerve completely; he says he no longer has any confidence in himself; he cannot face the street traffic, and is almost afraid to cross the road by himself.

Inability for mental or physical exertion occurred for some months in practically all the severe cases of head injury which I investigated; often it lasted for a much longer period and was sometimes permanent. It was found that unusual effort was required to perform the simplest tasks, such as writing a letter. The effects of physical exertion, mental overwork, anxiety, or agitation were easily produced and unusually severe. There was fatigue on the slightest mental effort or strain of attention with a dazed, bewildered, and confused state of mind. The cerebration was sluggish and the intellectual faculties were blunted. As one of my patients expressed it: "The brain did not seem to recognise the work of the eye as before."

Some patients are apathetic. A clerk, aged 37 years, was seen suffering from nervous effects the results of concussion one and a half years previously. He described his state of mind by saying that he experienced a feeling to which he was a stranger before—namely, a dull insensibility, or, perhaps, a stolid indifference to affairs in every phase of life. He was very emphatic in stating that his symptoms were mostly felt when he was indoors and left him when he was out in the open air. This condition is essentially the result of an inadequate period of rest after the injury. The patient returns to his work before he has completely recovered and finds that any attempt at mental work results in severe headache; he is unable to concentrate his attention on any subject for more than a short time, whilst there may be neither the energy nor the ability to do physical work.

Disturbed sleep is often associated with headache, depression, and other mental symptoms. Sometimes there is short light sleep which is easily disturbed and broken by troubled dreaming. Sometimes the patients are unusually sleepy but their sleep is heavy and unrefreshing. This insomnia aggravates and is aggravated by the other nervous symptoms. Many of the patients had aged considerably since the accident and premature greyness of the hair was common. One patient, seen six years after a fracture of the base followed by severe cerebral irritation, stated that he thought the accident had added ten years to his life. In this case it was eight months before he could re-start his work as a joiner and he now cannot do very much of this.

Increased susceptibility to the influence of alcohol occurred, broadly speaking, in all the cases and forms a very striking feature. It was admitted in 60 per cent. of the fracture cases and 35 per cent. of the concussion cases. I only found but few undoubted instances in which this symptom was definitely absent. Increased susceptibility to alcohol is one of the most constant evidences of lowered resistance of the nervous system. A glass of champagne may produce headache, although formerly three or four glasses had been taken without harm. This effect is a fairly well-known one and many of my cases had not taken alcohol since the accident, in accordance with medical or other advice. The effect, moreover, is readily recognised by the patient. In other cases, where alcohol is not discontinued various secondary effects follow which must carefully be distinguished from the primary effects of the head injury. The alcoholic factor must always be taken carefully into account. Some of the patien[illegible] confirmed alcoholics and in su[illegible] was rapidly deteriorating. This [illegible] an important part on the etiology of traumatic insanity. A glass of wine or beer may produce an irritable explosion or suffice to turn these patients from apparently sane beings into irresponsible criminals.

Another feature frequently observed was *inability to stand high temperatures.* Exposure to the sun after head injuries may produce headache, giddiness, faintness, and sometimes nausea and vomiting. Direct sunlight is more injurious than mere hot weather and the oppression preceding thunderstorms is keenly felt. Occasionally a definite attack of sunstroke occurs: a boy was admitted into hospital last April with concussion; three months later he was sent to the convalescent home; one morning whilst out of doors with a cap on he suddenly had a severe attack of sunstroke, although it was quite early in the year and the sun was not particularly strong. I was recently called upon to examine a cab driver who was claiming compensation for the effects of a head injury sustained some two years ago. One complaint was that he had been unable to drive his cab during hot weather or in strong daylight owing to the giddiness and headache which resulted. This inability to bear high temperatures may become permanent and any conditions such as loss of power of concentration or failure of memory are always more marked under the influence of heat. The same result may be produced by artificial heat, as when the patient sits in front of a hot fire or works in a close confined room. In these circumstances intense head[illegible] easily produced [illegible]

I cannot give full figures upon this point. The symptom was, however, present in more than half of the patients in whom I inquired for it. Occasionally I met with cases whose symptoms were not influenced by heat but were always aggravated by cold and wet weather.

ABSTRACT OF

An Address

ON

THE PSYCHIC SIDE OF THERAPEUTICS.

Being the Annual Oration of the Hunterian Society, delivered at the London Institution on Feb. 10th, 1904,

BY J. F. WOODS, M.D. DURH.,
SUPERINTENDENT OF HOXTON HOUSE ASYLUM.

[AFTER a few prefatory remarks Dr. Woods continued as follows:—]

Year by year our knowledge of physiology and morbid anatomy increases and year by year we realise the more how great was the stimulus which the genius of Hunter gave to these sciences and how many of the practical developments of medicine and surgery had their origin in the great founder whose name and work we commemorate to-day. On this occasion I propose to dwell somewhat on the subject of Hunter's physical infirmities and to refer to certain of his views concerning the physiology of the nervous system and the manner in which body and mind act and react upon one another.

It is not a little remarkable that but few of our great geniuses have been men of robust physique, though many of them have shown great tenacity of life. John Hunter formed no exception to this rule. He was a diminutive man, some 5 feet 2 inches in height, of slender build and sensitive organisation, by its very nature prone to physical suffering, but his forceful mind ruled the small and ailing body, compelling its obedience where many a man of less dominant personality would have been ruled by it and would have drifted into confirmed invalidism. For the first 40 years of his life Hunter appears to have enjoyed fairly good health, at least there is no evidence of his having suffered any serious illness up to this time. In the spring of 1769 he had an attack of gout and in 1773 some trouble, probably of a domestic kind, affected him deeply and seems to have had mater under the thickened bone is improbable. Sir Victor Horsley was the first to insist upon the origin of this form of headache in a paper read at the Berlin Congress in 1890. He pointed out that in these cases, which are characterised by intense cephalalgia resisting all medical treatment, there are none of the sensory or motor affections met with in traumatic neurasthenia and hysteria; moreover, operation relieves not only the pain but cures the mental condition of the patient also. That sclerosing osteitis of the bone is not infrequent after fracture of the skull has been abundantly proved and this is exemplified in certain of my cases. It is probably due to the increased vascularisation after the injury and reveals itself clinically either by excessive local tenderness of the bone or as a chronic ostealgia becoming more intense under the influence of anything which increases the blood flow to the head. Occasionally atrophy of the bone follows these fractures and the symptoms may be exactly similar in character but are usually less marked. Sometimes under the atrophied osseous bone one finds enlarged Pacchionian bodies which have been accused, wrongfully no doubt, of causing the symptoms.

In other cases various lesions of the bone, meninges, or brain similar to those described in the morbid anatomy of traumatic epilepsy have been found; in some cases no lesion of any kind has been discovered and yet operation has done good. 15 months ago a patient returned to hospital two years after a bullet wound of the left parietal region, complaining of constant intense cephalalgia which prevented her performing any work. She was trephined over the seat of injury and three depressed splinters of bone, one of which had penetrated the dura mater, were removed; the headache disappeared after operation and I have recently heard that she has had no trouble of any kind since. The cerebral substance is apparently destitute of sensibility under normal conditions but it does not follow that it may not be the seat of pain after injury or in disease; indeed, small lesions in the brain not approaching the surface may cause intense pain. The dura mater receives numerous sensory and sympathetic fibres and, if the seat of acute or chronic inflammation, may unquestionably cause pain. The pia mater is said to be innervated by sympathetic fibres only, but other structures receiving only sympathetic fibres may be painful when inflamed.

The subject of *painful or tender scars* is inseparably connected with that of traumatic cephalalgia. Scars, when present, were painful in about 40 per cent. of the cases. Pain in a scar may originate either in the tissues of the scalp or in the underlying bone. In the former case the symptom usually occurs in cases where the scalp wound has been lacerated, or has not healed by first intention, or where the scar is adherent to the bone. On pulling the hair over the scar sharp pain may be complained of and is probably due to a neuralgia affecting entangled nerves; such patients may bear firm pressure on the scar without feeling any pain. The patient may tell one that tenderness of the scar is mostly noticed when he brushes his hair. In others pressure was attended by severe pain and in these cases thickening of the underlying bone is to be suspected. Pressure on the scar may produce other symptoms; thus in one case the patient was unable to lie on that part of the head on which the scar was situated owing to the intense dizziness produced by the pressure. Three patients told me that they had a sensation of "something dragging or pulling at the wound," especially when the head was placed so that the brain fell away from the region of the wound. Quick movements of the head were thus found impossible owing to the intense giddiness produced. It is possible that these symptoms are due to adhesions between the damaged part of the brain and the dura mater, so that at every movement of the head and every change of position this part of the brain is slightly dragged upon. It is obvious from mechanical considerations that the amount of cerebral movement within the cranium is very limited, but it is possible that a very small degree of traction may give rise to the sensations described.

Vertigo occurs in a large proportion of cases and may be very persistent It was complained of in 22 out of the 100 fracture cases and, as already stated, was responsible for six patients having to give up their employment. Vertigo is independent of any aural symptom; it generally occurs with any quick movement of the head and is usually associated with headache. Often it is most noticed when the patient gets out of bed in the morning. It occurs in rising suddenly from a chair or in stooping down to tie a bootlace. It is best tested for in children by standing them upright and telling them to look [illegible] the ceiling is high. It is obv[illegible] giddiness may be a source of great danger. Amongst my cases are three instances in which patients were admitted into hospital with concussion, they having fallen in attacks of giddiness consequent upon previous head injuries. One patient complained that giddiness in the street had several times caused him to be mistaken for a drunken man. In a few cases isolated attacks of giddiness occur without any obvious cause. In the middle of his occupation, without any preceding symptoms, the patient may suddenly be attacked with giddiness and faintness. This condition is transitory and after a few hours no trace remains behind beyond the feeling of a little fatigue. I carefully considered the possibility of this symptom being connected with lesions of the central or peripheral connexions of the vestibular nerve, but could find no evidence to support this idea. Vertigo is common after injuries of all kinds and I believe it is usually a manifestation of general cerebral instability.

Attacks of *vomiting* are sometimes found and in my experience are always associated with headache and giddiness, the latter being marked. The immediate cause is probably increased irritability of the vagus centre, the wide extent of the central relations of this centre explaining its occurrence after injuries to various parts of the brain. The vomiting resembles that in other cerebral affections—that is to say, food is rejected soon after it is taken, there are no local gastric symptoms, nor is pain or discomfort produced by the presence of food in the stomach. Nausea is often absent but occasionally may be very distressing. Unilateral furring of the tongue is said to occur occasionally, but I doubt if it is ever observed apart from neuralgia or disease of the fifth nerve I have frequently looked for it but have never seen it after head injuries.

A change of disposition or character was noticed in 35 cases in the first series and in 23 in the second series In some the tendency was usually towards persistent depression and melancholia, and this was a striking feature of certain of my cases. Such patients were despondent and depressed; they had lost interest in life and took a pessimistic view of everything. This *depression* may be the preliminary stage of a definite melancholia and then suicidal tendencies are especially strong. Three of my cases had attempted to commit suicide and in two in the miscellaneous series suicide was actually committed. The evidence of depression or melancholic *tendency* is usually plainly marked on the man's face.

In others the change of disposition was in the direction of *irritability;* the temper became short, the patient was easily annoyed, the slightest noise, the simplest question might arouse a furious passion. To quote an expression used by Dr. T. Clifford Allbutt, "Doors bang and windows rattle as they never did before; if but a shoe-string break an imprecation is on the lips; business matters are in a conspiracy to go wrong." The condition is at once recognised by the friends or employers of the patients He is frequently fully aware of it himself and this is a sign of good progress, more especially if he is anxious to overcome the symptoms. It shows itself in the ordinary events of every-day life; there is extreme annoyance for trivial reasons. The patient gets possessed of an idea that people are conspiring together against him and becomes abnormally sensitive. In walking in the street he is apt to misjudge his distances and knock against people. Thinking that they were doing this intentionally he flies into a temper. *Drop a tray of tea things in a man's room, if he has recovered from his head injury, he will use only the ordinary expressions; if his recovery is incomplete he will probably fly into a violent attack of intense passion.* The patients are, as it were, explosive; there is loss of control. This mental irritability is a common feature after head injuries and may last only for a few months but frequently forms a permanent part of a man's character.

The question naturally arises as to whether this mental irritability leads ultimately to insanity. A surgeon of very many years' experience, to whom I was speaking on this subject, said that "mental irritability is very common after head injuries, whilst traumatic insanity is rare"; and I certainly have found this to be the case, judging from the patients whom I have investigated. The difficulty in giving an opinion on this question lies in the difficulty of keeping such patients under constant observation for a large number of years and when this is possible there undoubtedly occur of securing his full confidence, which, having done, I get him to relax his muscles to the utmost, and I insist on complete silence, the only sound heard being that of the rhythmic movement of my hand as I stroke the upper part of the face or, as sometimes happens, the arms. This silence I have found in many cases more impressive than words and a suggestion made at the end of a pause of this sort is, in my experience, far more effective than the uninterrupted drone of a voice making the same suggestion in different phrases, as is the custom of Bernheim who, like myself, resorts to treatment by suggestion without hypnosis. All this time I remain myself as reposeful as possible. I seek in fact to create an atmosphere of repose and silence which is in itself impressive and tends to induce a feeling of well-being and expectancy in the patient. If, when the psychological moment has arrived, I make a suggestion I get an effect such as I cannot so readily obtain in any other way, save by inducing actual hypnosis, which many patients object to and for which there is in the majority of cases no necessity whatever. In most cases there is no need whatever to send the patient to sleep. Suggestions can in almost all cases be made quite as effectually without hypnosis as with it and certainly in the case of many patients whom it would be impossible to hypnotise. A further advantage of this plan is that treatment can often be carried out in séances of quite short duration and in the consulting room, though in difficult cases it may be advisable to visit the patient at his own house in the evening at the hour of natural sleep and in still more obstinate cases it may be necessary to remove the patient from injurious home influences.

With regard to the suggestion, which is the essential curative agent, there must be no kind of uncertainty about the manner of making it; it must be forcible, deliberate, unmistakeable. John Hunter says: "A fixed principle fixes the mind but a doubtful one leaves it no rest." He goes on to say: "Anxiety is expressive of the union of two passions—desire and fear." In the patient's mind the desire is to get well; the fear is that many kinds of treatment having already failed this one will fail also. The suggestion must therefore be made in such a way as to give the patient confidence both in the physician himself and in his methods. The patient's desire to be restored to health must be accentuated and any doubt that this will not be accomplished dispelled. But before the physician can speak with this necessary authority he must have gauged the exact condition of his patient and himself be inspired with confidence in his powers so that he may infect his patient with it. It is this very confidence, or arrogant pretence of it, which enables the blatant charlatan often to succeed where the legitimate but more modest and hesitating practitioner may fail, for though the latter may begin by feeling pretty sure of success doubts are almost certain to crowd up in his mind—the strange vagaries of disease, the unexpected turns it may take, the infinite variety of constitution and temperament that are encountered, the manifold outside influences that may operate injuriously but especially in the case of the neurotic—all these considerations rise up to disconcert him and to rob him of that very confidence which is so necessary to success in inducing hypnosis or in making an effective suggestion. I find, surprising as it may seem, that more confidence and experience are required to implant an effective suggestion independently of hypnosis than are required to induce the hypnosis itself and I am therefore in the habit of advising beginners always to seek to produce complete hypnosis before offering the therapeutic suggestion, later to practise Bernheim's method of constantly repeating the suggestion without first inducing hypnosis, gradually feeling their way towards the more simple method which I have described.

[Dr. Woods here referred to the facilities which asylum pr[illegible] the art of psycho-therapeusis ar[illegible] ysician should make all the use he can of suggestion, so contrariwise the physician who devotes himself especially to this line of treatment should be prepared to make full use of other therapeutic methods besides suggestion, should they be called for. Thus if a patient suffers from chlorosis I of course give iron; if there is neuralgia from gummatous formation I prescribe large doses of iodide; if there is chronic gastro-enteritis I recommend a careful dietary; or if the patient is profoundly emaciated I may find it necessary to resort to the Weir-Mitchell treatment. But in all these methods of treatment I find I get great help from suggestion. In a case undergoing Weir-Mitchell treatment much can be done by suggestion to calm a restive patient, to improve sleep and digestion, and to remove such disagreeable symptoms as neuralgia and headache. In these cases I sometimes find it necessary to see the patient daily, but for the majority two or three visits a week suffice; later, a single weekly visit may be sufficient. Here let me emphasise the importance of securing the services of the right kind of nurse in carrying out the rest cure. She must be tactful, resourceful, gentle, firm, quiet, and patient, a combination of qualities possessed, I need scarcely say, by but few.

The disorders in which the best results are obtained by suggestion are, of course, those depending upon functional disturbances of the nervous system, such as tremor, chorea, neuralgia, headache, sleeplessness, palpitation, epilepsy, mental diseases, chronic alcoholism, and the various drug habits. But, as I have already said, suggestion may prove of service in the treatment of most maladies and I have by its means been able to alleviate serious organic diseases, such as valvular disease of the heart Graves's disease, and locomotor ataxy. It is, of course, needful to tell the patient in all such cases that absolute cure cannot be effected.

[Dr. Woods here showed elaborate tables containing statistical results. The names of the several diseases treated and the number of patients suffering from each of them were as follows.—Neurasthenia, 245; writer's cramp, 10; chronic alcoholism, 115; stammering, 6; headache, 158; melancholia, 79; dyspepsia, 62; arthritis, 43; neuritis, 20; insomnia, 44; neuralgia, 95; lumbago, 6; torticollis (spasmodica), 13; sea sickness, 3; sickness of pregnancy, &c., 4; impotence, 8; sciatica, 39; asthma, 4; masturbation, 9; nocturnal incontinence, 5; gout, 10; urticaria, 3; blushing, 2; pain, 5; night terrors, 2; stage fright, 10; biting nails, 1; epilepsy, 26; functional paralysis, 9; hysteria, 7; menorrhagia, 4; morphia habit, 7; tinnitus, 4; sprain, 1; spinal neuralgia, 5; chorea, 35; obsession, 2; locomotor ataxy, 3; spasm, 2; delusions, 2; bad temper, 2; pianist's cramp, 1; rheumatism, 2; tremors, 3; delirium tremens, 1; deafness, 8; and palpitation and heart troubles, 11. The grand total of patients treated was 1129, of whom 868 were tabulated as "apparently recovered," 125 as "improved," and 136 as "no apparent change." Dr. Woods also gave detailed clinical descriptions of 14 cases, from among which the six following are selected as illustrative. Lantern pictures were shown exhibiting the handwriting (before and after treatment) of several patients suffering from writer's cramp and chorea. In all cases the writing was better after the treatment.]

CASE 1.—The patient was an unmarried female, 24 years of age. She had suffered from facial neuralgia for four years. No medicine relieved her for more than a few days. [illegible] not sleep and was weak and depressed. She was [illegible] th, 1892, and sugges- [illegible] 15 minutes, to awake with no pain, to be bright and cheerful, and to sleep well at night. Everything happened as suggested. The patient awoke laughing without any pains and slept well at night, the neuralgia not returning until 12 days afterwards, when she was again hypnotised, since when (with the exception of a few hours' pain due to a carious tooth during November, 1895) there has been no recurrence of pain.

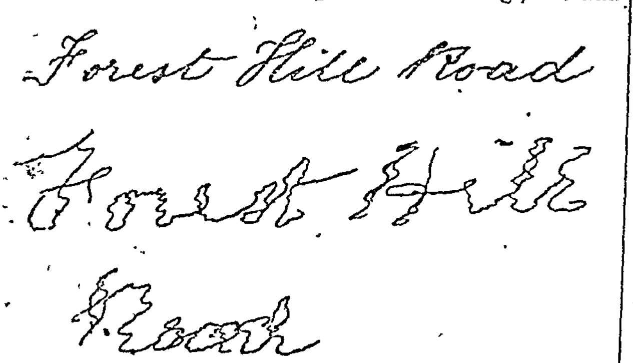
CASE 2.—The patient was a married woman, 36 years of age. She consulted me in the summer of 1897 for sciatica in the right leg. She had been laid up on and off for about eight months and the pain was at times very acute. Such was the case when I saw her; she limped and was obliged to support herself [illegible] during the [illegible] blisters, ba[illegible] by suggestion only, placing my hand very gently on the back of her hip, outside her dress, when she immediately expressed herself as free from pain. It disappeared instantly. This was the quickest result I have had and surprised no one more than myself. I told her to lie on the couch for half an hour afterwards and then to get up. There was no return of the pain at the end of this time. On leaving me she laughed and said, "I daresay you think I am a fraud, but I asssure you I suffered tortures." She came again three days afterwards, expressed herself as feeling well, and had had no appreciable pain, but the leg was a little weak. In 1902 I saw her again for other troubles but she had kept entirely free from sciatica.

CASE 3.—The patient was a man, 34 years of had [illegible] the [illegible] leg for 18 [illegible] and had been treated at home and abroad during the whole period of his illness. He came to me in 1895 saying that he could not sleep or walk 100 yards without acute pain. I treated him by suggestion and pressed my fingers outside his clothes on the painful spots and gently stroked his leg from above downwards. In about ten minutes all pain vanished and he performed various gymnastic feats in order to see if the pain would return but it did not. At the same time he told me that he did not believe in me or my treatment but he meant to give everyone a trial until he got relief. He walked up and down my room for about an hour, doing all sorts of movements, and then went for a brisk two-mile walk, and in two days I had a letter from him saying that he felt a little tired after walking but the pain had not returned. He visited me two or three times after this to show how well he had remained since the treatment.

Case 4.—The patient was an unmarried female, 37 years of age. She was sent to me by Dr. D. Ferrier from the National Hospital for the Paralysed and Epileptic, suffering from functional paralysis of the left leg. She had been under treatment for two years, her leg was wasted and cold, and she walked on crutches, dragging the foot and unable to put her weight on it. I treated her by suggestion only three times in one week and she was able to walk after the third treatment. For the first treatment I suggested that her leg should feel warm and comfortable. It actually became warm in a quarter of an hour. For the second treatment I suggested that she should be able to move it, which she did slightly in ten minutes. For the third treatment I suggested that she should be able to stand on it and walk, which she did in half an hour, but only with great difficulty on account of the weakness. After this she steadily improved; in about a month the leg was of the same size as the other and she walked then as if she had never been ill.

Case 5.—The patient was a married woman, 60 years of age. She consulted me on Nov. 9th, 1901, complaining of constant pain in her right leg, extending from the knee to the ankle on the outer side. The pain had lasted for six months and nothing gave her relief. No cause for the pain could be ascertained. She had recently undergone a rest cure (Weir-Mitchell) and had had treatment for gouty dyspepsia and neurasthenia and expressed herself as feeling well except for the pain in her leg. I treated her by suggestion only, saying that the pain would go, placing my hands where the leg was painful. In about ten minutes she told me that every vestige of pain had disappeared and she walked with comfort about the room. I saw her last summer and she told me that she had had no pain in her leg since I treated her. One treatment was sufficient.

Case 6.—This case is well known to you. The patient was at King's College Hospital under the care of Dr. Ferrier and was sent to me by Sir Hugh Beevor at the end of January, 1895. I show examples of her writing; she had a peculiar tremor of the right hand. She was treated by short hypnotic sleeps and I believe has kept well.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Specimens of handwriting of patient (Case 6).

Objections.

Some members of our profession have still a rooted aversion to treatment by hypnosis and from their writings one would almost suppose that they would rather not cure at all than resort to it. For this they assign various reasons, the most important being that the operator can if he so chooses acquire an undue and injurious influence over his patient. This grave indictment has been so effectually disposed of by Dr. J. Milne Bramwell in his excellent work[2] that it is unnecessary for me to say anything further on it. Even granting, however, that the medical man could obtain through hypnotic means an unhealthy influence over his patients the fact could not legitimately be used as an argument against the therapeutic use of hypnosis. Should he so wish to influence his patients there is surely no ne to resort to hypnotism for the purpose; but why should desire it any more than he should desire to injure them the employment of other well-tried therapeutic mean Assuming that he can make a poisonous use of hypnosi can he not also make a similar use of drugs? and no ma worthy the name of physician is likely to do the one an more than the other.

But while this absurd charge carries its refutation upo the very face of it the case is far otherwise in regard to th employment of hypnotic treatment by the unskilled layman The danger here is not so much that the operator shal acquire an undesirable influence as that he shall, through random and indiscriminate use of a subtle and potent agent, inflict serious injury. The public is constantly suffering a the hands of the so-called healer. This over-credulous and gullible public is willing—nay, anxious—to regard the power to hypnotise as some mysterious spiritual gift rather than as an attribute possessed by all and explicable on known natural laws. They cannot look upon hypnotic treatment as they do upon treatment by drugs or electricity, or Roentgen rays, or other recognised therapeutic agent to be prescribed by a physician only.

The so-called faith-healer knows nothing of the nature of the disease which he presumes to treat or of the difficulties which lie in his path. Blind men have by faith been made to see, deaf men to hear, lame men to walk, then why should not (so he argues) a cure of the case before him be similarly effected? The fact that there may be an insurmountable barrier in the way of cure, that the case may be essentially one for surgery or for antisyphilitic treatment, enters not into his mind. If it should chance to be one which lends itself readily to his methods he will succeed for a time at any rate; and if not he recks nothing of the precious time and opportunity he may be wasting while the patient is being deluded with the false hope of recovery.

There are, however, signs that the opposition which treatment by suggestion has met with is growing daily less and less and that this potent therapeutic method bids fair soon to be taught in our schools as a matter of routine. For myself I am gratified and proud to say that I have received much help and encouragement from my professional brethren in pursuing this line of treatment and my relations with them have ever been most cordial and pleasant.

ABSTRACT OF

An Inaugural Address

ON

THE DIMINISHING BIRTH-RATE AND WHAT IS INVOLVED BY IT.

Delivered before the British Gynæcological Society o Feb 11th, 1904,

By JOHN W. TAYLOR, M.Sc. Birm.,
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PRESIDENT OF THE BRITISH GYNÆCOLOGICAL SOCIETY.

The address was divided into four parts. The first was devoted to a critical study of the statistics of the subject during the last 25 years. The birth rate of the United Kingdom was compared with that of other countries, both east and west, and it was shown that during the last 20 years no other nation has sustained so great a loss as we have in this definite period of time. The marriage-rate in the United Kingdom during the same period was found to be slowly rising so that the "birth loss" was necessarily due to causes operating in the married life of our population and not simply due to celibacy. The value of the population of to-day was then compared with that of 20 years ago and it was found that in juvenile criminality, in mental disease and brain weakness, and in alcoholism the restricted population of the present day compared unfavourably with the freer population of a former generation. A tentative *effort* was then *made over* a limited field to compare the general culture of the more intellectual classes of the two generations and this (so far as it went) was found to work out disadvantageously to the present generation. The work of Professor Karl Pearson on heredity was then considered and was found to point to a similar conclusion. "All of this tended to show that the marriages of to-day *were not only relatively sterile but either* (1) *that the* children born of such marriages were weak, neurotic, specially liable to alcoholism, criminality, and insanity, and so far unfit for the battle of life; or (2) that marriages of the middle and better classes were now so sterile that quite an [illegible] generation was [illegible], the more vicious [illegible]

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[2] Hypnotism: Its History, Practice, and Theory, 1903.

The second part of the address dealt with the cause and life-history of these "relatively sterile" marriages. The cause was traced to the deliberate prevention of conception and reasons were brought forward supporting the view that this was not only destructive of the future life of the nation but seriously injurious to those who practised it and to such children as were "arranged" for and produced. The prevalent neurasthenia of the present age was increased by the practice and the absence of sexual restraint encouraged by it had an evil effect on the moral character which was liable to be transmitted to the children. In addition to this, the child of the relatively sterile marriage suffered from a debased and stunted education. "Reared in greater comfort or comparative luxury, with no brothers or sisters of similar age to rub off its angles and selfishness, it was ill-prepared for every step of the succeeding battle of life and it was very frequently the child of the larger family and poorer parents who pushed his way [illegible]"

The p[illegible] the third part of [illegible] present condition and statistics of France where, for 60 years, the birth-rate had been falling until the population had become stationary or even less than stationary. "During the last 50 years criminality had trebled in France, that of children and young people being specially remarkable, and particularly so regarding crimes of lust and prostitution. During the last 20 years the consumption of alcoholic drinks had trebled and France had passed from the seventh place in order of consumption of alcohol to the first. Insanity was steadily increasing and the ratio of suicides had risen from 112 per million in 1880 to 205 (or nearly double) in 1885" It was pointed out that after half a century of trial with an increasingly limited population France showed more and more a lowered and still falling moral average, a lessening virtue or strength, and an increasing national neurasthenia which seemed to crave and to need the help of constant stimulation in order to face the ordinary routine of life. The future danger of this under a democratic form of government was considered and insisted on. So long as the race progressed the people could be trusted with the powers of government, but when decadence had been going on for years, and even ages, what could be the final outcome of such democracy but anarchy and confusion?

The fourth part of the address dealt with the treatment of this national evil, apportioning to the Church, the State, and the profession of medicine their proper share in the re-creation of a healthier moral standard and practice. "The birth loss in the United *Kingdom must be due to* causes operating in the married life of its inhabitants." Therefore there was no reason to fear any high ideal of chastity or continence and especially when this was associated with the care of those forces which go for the defence of the nation and that child life which was its future hope. On the other hand, there was every reason to fear that debased ideal of married life which was secretly and insidiously working for the ruin of the nation's power and for the destruction of its hope. National decay or degeneration was by no means the inevitable consequence of age, as some had supposed. The history of Japan was one evidence of this and it was worthy of notice that the pre- [illegible]

Insisting on the necessity of arousing the public conscience and of aiming at a truer and braver conception of life, Mr. Taylor concluded by saying that he must confess when he heard of thoughtful men among the Boers in South Africa, military authorities in St. Petersburg, and Japanese in *far Japan noticing and counting on their own racial increase* and comparing this (kindly or unkindly) with our own comparative stagnation, he would like if he could to sting his fellow countrymen into some proportionate sense of shame and duty. He thought that in his responsible position as the temporary head of a great British society, which was an authority on such questions he was surely not overstepping *his province if he asked*, not so much *for* any *following* of his leadership, as for the fullest independent investigation into all the facts, figures, and arguments which he had brought forward.

THE USE OF ANTISTREPTOCOCCIC SERUM IN THE TREATMENT OF SCARLET FEVER AND OF DIPHTHERIA.

By F. PERCIVAL MACKIE, F.R.C.S. Eng.,
LIEUTENANT, I.M.S.; LATE RESIDENT MEDICAL OFFICER AT THE BRISTOL CITY ISOLATION HOSPITAL.

DURING the 18 months in which I had charge of the Bristol City Isolation Hospital (June, 1900, to January, 1902) nearly 950 cases of scarlet fever passed through my hands and the mortality of all these worked out at just over 2·25 per cent. These figures when compared with those, say, of the Metropolitan Asylums Board, where the mortality is rarely under 4 per cent, look satisfactory. It would, however, I think be erroneous to draw any deductions from this comparison as the total number of Bristol cases is small, and moreover epidemics of scarlet fever vary so much in their severity that very large numbers of cases must be examined before one can draw accurate deductions. My object in this paper is not, however, to institute comparisons between sets of statistics but to examine individual cases as carefully as possible and to note what effect the use of antistreptococcic serum produces on severe cases of scarlet fever. I have notes on 22 cases so treated and five cases of diphtheria which have been treated both with antistreptococcic serum and diphtheria antitoxin. This latter series of five cases I shall refer to separately as they present unusual features and are of particular interest.

With the exception of a few cases which were admitted in such a condition as to render any treatment useless, all the severest cases were treated with serum; so, though the cases were selected, it was only the very worst of the patients (with the above exceptions) who were submitted to it. The serum at first used was that obtained from the Lister Institute of Preventive Medicine; latterly that prepared by Messrs. Burroughs, Wellcome, and Co. was also used, and I then gave the different strains alternately. If I were treating a number of patients with anticoccic sera again I should procure samples from as many sources as possible and give them alternately, on the principle that one would be more likely to hit off the particular variety of coccus causing the disease under treatment

In reading records of cases of various diseases—e.g., puerperal fever, ulcerative endocarditis, pyæmia, erysipelas, &c., which have been treated with antistreptococcic serum—one cannot help *being* struck with the inconsistence in the results. One man writes enthusiastically to record a brilliant result and another in apparently similar cases reports repeated failure. This inconsistence is fully borne out by my own experience and in watching other cases in hospital, and one can never say beforehand, even with a full bacteriological report before one, which case is likely to be benefited by serum treatment and which will not. The treatment, though rational in theory, is empirical in its results. The reason of this is that bacteriology has not yet decided the relationship between the numerous forms of cocci met with in quite dissimilar diseases. Are they all the same organism under different degrees of attenuation or virulence, modified by the reaction of the tissues in which they find themselves and by the function or anatomical position of the organ in which they

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are flourishing? Or, on the other hand, have such dissimilar diseases as osteo-myelitis and meningitis, general peritonitis and stitch abscess, ulcerative endocarditis and boils, each their own peculiar micrococcus? If the first condition holds then the serum from any of these cocci should produce at least some effect on all these different diseases, whilst if the latter supposition is correct then one would expect a disease to react only to the serum prepared from that particular strain of organism. Until, therefore, the identity or otherwise of the numerous cocci known to bacteriologists is settled, treatment with antistreptococcic serum must remain in the regions of empirical therapeutics.

I have inquired into the possibility of manufacturing a polycoccic serum—i.e., one made from a number of cocci from various sources—and I understand that some laboratories have considered (or have actually carried out) the preparation of such a serum.

I now proceed to deal with the various phenomena more in detail.

Type of disease.—In 16 out of the 22 cases the type was that known as anginal or anginose with evidence in every case of a greater or lesser degree of sapræmia. In four cases there were signs of either septicæmia or pyæmia and in the latter cases abscesses were found either ante or post mortem either in joints or one or other of the viscera. The local condition of the throat in these anginose cases was as follows. The milder cases showed much exudation of muco-pus and the pharyngeal walls were stiff and brawny and excessively painful; well-marked cervical buboes were present. The severest cases (and these formed by far the larger number) presented actual ulceration and sloughing of the soft palate and tonsils, the throat was choked with pus, often stinking, and hæmorrhage was not infrequent. Ulcerative stomatitis was often seen involving large areas of the inner aspect of the cheeks and purulent rhinitis which excoriated the nostrils and double otitis media were very frequent complications. Large cervical buboes which went on to suppuration also occurred. The two great dangers from this condition were first that arising from the continuous absorption of septic material and sapræmia and secondly that of insufficient feeding. The first was combated with two-hourly lavage of the throat with chlorine solution and the latter was met only by increasing vigilance and unremitting attention and patience on the part of the nursing staff (particularly on the part of the sister in charge of the infant ward).

Bacteriology.—In six cases where the blood was examined during life it was found sterile in three cases; in two pure staphylococcus pyogenes albus was found and in one mixed staphylococci and streptococci. In four cases where the blood was examined after death one was sterile, one contained pure streptococci, and two showed mixed cocci. In seven cases where cultures were made from the throat six grew mixed cocci and one showed chiefly streptococci. In several cases cultures were made from the pus of secondary abscesses or from internal organs where generalised infection was suspected. In every case that died a complete post-mortem examination was made. In two cases my finger was pricked when sewing up the corpse and in both instances severe lymphangitis and small local abscess resulted. From the first abscess pure staphylococcus pyogenes albus was cultivated and in the second abscess a short streptococcus was found, in each case the same organism previously cultivated from the patient's blood during life. Two cases had tracheotomy performed for œdema of the glottis; both died.

Serum injections.—One bottle (approximately ten cubic centimetres) was the invariable dose. Six patients had one dose only, five patients had two doses only, six patients had three doses only, two patients had four doses only, one had five doses, one had six and one had seven doses. One patient had, in addition, 1000 units of antidiphtheritic serum and another had 5000 units of the same on the suspicion of their having diphtheria which was not subsequently confirmed by bacteriological examination. The serum was introduced by means of an antitoxin syringe with asbestos plug, the whole instrument being taken to pieces after each injection and boiled. The injection was made into the flank or abdomen under antiseptic precautions. Beyond causing slight irritation at the time the injection caused no discomfort in most cases. There was a blush seen round the site of injection in three cases next day with slight tenderness which both disappeared in a few hours. One child developed a local chronic abscess at the site of injection; at the end of a week it was opened up and a teaspoonful of ropy pus like starch emulsion was evacuated. Cultures made from this pus grew a weakly coccus only after four days' incubation; this coccus quickly died out. This patient subsequently developed a large abscess around the shoulder-joint and later one in the abdominal wall and only recovered after a tedious illness. I have dwelt on this case because it is the only one where I suspected the serum of having done harm. Even in this case it is impossible to say whether the condition of pyæmia which arose subsequently and the staphylococcus pyogenes albus found in the blood stream were due to the inoculation of septic serum or whether these complications arose in the natural course of the disease.

Effect of the serum on the temperature, &c.—In the majority of cases no marked effect on the temperature was noted, though the general tendency was for the thermometer to rise from 0·5° to 1° F. Sometimes the injections were followed by a marked rise of 3° or 4° and I think in these cases the serum seemed to be beneficial.

Rashes.—The occurrence of well-marked maculo-urticarial rashes was not uncommon. The first evidence was the presence of salmon-coloured angular maculæ on the face and neck; these deepened in colour and became markedly urticarial and irritating. The colour disappeared on pressure, leaving a yellow stain, and the rash lasted about two or three days, gradually fading. Other rashes were noted which probably depended on the absorption of septic material. Some were of the nature of dark hæmorrhages over the body and especially over points of pressure—e.g., heels and buttocks, and others were present as multiform punctate hæmorrhages and purpuric blotches.

Albuminuria was common but actual nephritis was rare; only about three cases of frank nephritis occurred in 900 cases, though in several instances the kidneys were found post mortem to present evidence of early disease. It may seem anomalous to state that hæmaturia was commoner than albuminuria, but over and over again I was attracted to a very smoky urine expecting to find a large quantity of albumin and only to find a barely detectable trace.

Five Cases of Diphtheria treated with Diphtheria Antitoxin and Antistreptococcic Serum.

CASE 1.—The patient was a child, eight years old, who had been taken ill with malignant diphtheria six days before admission to hospital and was in a hopeless state when admitted, the throat being filled with putrid sloughs and blood and emitting an indescribable stench. The neck was swollen up to the level of the chin. Klebs-Löffler bacilli and mixed cocci were present. The child's temperature was 97° F. Ten cubic centimetres of antistreptococcic serum and 4000 units of diphtheria antitoxin were given in one dose. The child died on the day after admission. The necropsy showed partial destruction of the soft palate and tonsils, as well as the presence of suppurative adenitis, hæmorrhages into the tissues, necrotic areas in the small intestine, and septic bronchitis.

CASE 2.—The patient was a child, 12 years old, who showed a good deal of membrane in the throat and had a temperature of 103·6° F. The general symptoms were very severe. On admission to hospital the patient was covered with an extraordinary rash of the following characters. It was composed primarily of circles of erythema, each circle varying in size from that of a sixpence to that of a shilling and being of a dull scarlet colour. Some of these circles were discrete but others had coalesced into a large patch or patches of about the size of a saucer with crenate edges due to the circular shape of the composing elements. In most of the circles there was an eccentric ulcer or scab and sometimes there was a small pustule. The hands looked as if their palms and backs had been dipped in red ink. These scarlet areas were not painful; they disappeared on firm pressure, returning instantaneously. On the left side of the neck from the clavicle to the ear there was a dusky red area not painful or swollen but disappearing on pressure. The left ear was deeply congested and purple. The throat yielded diphtheria bacilli on culture and staphylococci and streptococci as well. The blood withdrawn from the cephalic vein grew a few isolated colonies of streptococci and white staphylococci. The leucocytosis was 13,700 per cubic millimetre. Widal's reaction was negative. There were marked nervous phenomena, semi-coma or busy delirium, subsultus tendinum, and marked tremor of the hands. On the day of admission 3000 units of diphtheria antitoxin, obtained from Messrs. Burroughs, Wellcome, and Co., were given. On the second day 3000 units of diphtheria antitoxin plus 10 cubic centimetres of antistreptococcic serum were given. On the third day only 10 cubic centimetres of antistreptococcic serum were given. On the fourth day 1500 units of diphtheria antitoxin plus 10 cubic centimetres of antistreptococcic serum were given. On the fifth day the temperature was between 101° and 102°; on the sixth day it fell to normal and did not rise again.

This was one of the severest cases treated with serum and no hope was given of the patient's recovery. He apparently had pyæmia as well as diphtheria. Death seemed inevitable on the fourth day and on the sixth he was practically convalescent. Diphtheria bacilli were found in his throat at intervals for several weeks. The curious rash mentioned lasted till the sixth day and then faded. He subsequently developed paralysis of the soft palate (complete), of the irides (complete), of the diaphragm and lower intercostals (apparently complete), and of both arms (partial). He also had marked cardiac irregularity. He was ultimately discharged well having recovered from all his paralyses (strychnine was freely given). In reference to the peculiar rash I have seen a similar condition in the case of a man who suffered from pyæmia and was under the care of Dr. A. J. Harrison of the Bristol General Hospital whilst I was his house physician. This man was subsequently treated with antistreptococcic serum but died. I believe these small ulcers or pustules are due to pyæmic emboli in the skin which later become surrounded with vivid erythema. This explanation was suggested to me by the case of a man dying from ulcerative endocarditis who in his last hours had a shower of emboli discharged into his blood stream most of which lodged in the skin of the abdominal wall. This was the early stage of the circular erythematous condition above noted.

CASE 3.—The patient was three years old and was too far gone for benefit to be expected from any treatment. The child was admitted with severe anginose scarlet fever and diphtheria was only discovered the day before death. Vomiting set in early, rectal feeding failed after one day's trial, and for two days before death no nourishment was retained. Two doses of antistreptococcic serum were given on the third and fourth days respectively, and 8000 units of diphtheria antitoxin on the day before death. Klebs-Löffler bacilli were found in the throat culture with mixed cocci. The heart's blood after death yielded a small variety of pure staphylococcus albus and cultures from the spleen showed fine colonies of a long streptococcus.

CASE 4.—The patient was eight years old and suffered from malignant diphtheria with huge brawny swelling of the neck and suppurative cervical adenitis. The throat was filled with putrid black sloughs and oozing blood giving off a horrible fœtor. There were hæmorrhages at various points over the body. On the first day the temperature was 101° F.; 6000 units of diphtheria antitoxin, obtained from Messrs. Burroughs, Wellcome, and Co., were given. On the second day the temperature was 99·6°; 2000 units of diphtheria antitoxin and ten cubic centimetres of antistreptococcic serum were given. On the third day the temperature was 98·6°; ten cubic centimetres of antistreptococcic serum were given. The swelling in the neck subsided rapidly but the general symptoms of toxæmia prevailed and death took place on the sixth day very rapidly from cardiac failure.

CASE 5.—The patient was four years of age and the symptoms were chiefly laryngeal from the first, so that tracheotomy was performed on the morning after admission. On the first day 4000 units of diphtheria antitoxin were given. On the second day tracheotomy was performed and long strips of membrane were taken out of the trachea. On the third day 4000 units of diphtheria antitoxin were given. There was frequent vomiting and early nephritis was noted. The throat was almost stopped by œdema and thick pus. On the fourth day 4000 units of diphtheria antitoxin and ten cubic centimetres of antistreptococcic serum were given. Nothing was retained by the mouth and only a little by the rectum. On the fifth day all the symptoms were alleviated and the tracheotomy wound was healthy; ten cubic centimetres of antistreptococcic serum were given. The child died suddenly on the same evening whilst being fed, presumably from heart failure. The necropsy showed an antemortem clot in the right auricular appendix.

CONCLUSIONS.

It is only recently that the paper has been compiled from clinical, bacteriological, and post-mortem notes and temperature charts which had been kept for three years, and these conclusions are arrived at only after the careful re-examination of the cases at a distance of time when any excess of bias may reasonably be expected to have evaporated.

1. Antistreptococcic serum is of distinct value in a certain number of cases of scarlet fever, particularly in those where the throat lesion is severe and toxæmia is going on.
2. Bacteriological examination will give no sure guide as to the cases in which serum will be beneficial, therefore it is advisable to give the serum early and to make the bacteriological examination afterwards.
3. The serum ought to be given early in the disease just as in diphtheria. The longer the disease has lasted before the serum is used the less likelihood is there that it will be beneficial. Antistreptococcic serum is too often brought in with the strychnine and oxygen when it is unreasonable to expect it to do good.
4. If the first dose or two have no effect on the temperature its continuation will probably not be of any value.
5. The serum is liable to produce urticario-erythematous rashes.
6. Even in those cases in which it does no good there is no evidence to show that it does harm.

Diphtheria treated with Combined Sera.

At the Public Health Laboratories in Bristol, where for a period of several years I had the opportunity of examining many hundred cultures of diphtheria, it was our experience that the severest cases clinically were those whose cultures showed an admixture of streptococci and Klebs-Löffler bacilli. Conversely when the cultures showed almost pure Klebs-Löffler bacilli the clinical characters were generally returned as "mild." It would be too much to say that the severity of the clinical symptoms was in inverse proportion to the number of Klebs-Löffler bacilli present in the culture, but that statement would be as true as many medical aphorisms are. Particularly severe cases are said to be associated with the presence of so-called "battalion cocci"—i.e., streptococci arranging themselves in squares or squads—and this statement is also borne out by my experience. An epidemic of diphtheria in North Somerset in which I was responsible for the bacteriology only confirmed my views on the above points. These things being so, the *raison d'être* for the treatment of diphtheria by antistreptococcic serum is established, its value remains to be proved.

On looking through the five cases recorded one can by no means say that the treatment was successful, but as at least three patients out of five were almost moribund on admission, as one died from heart failure when convalescent, and as one recovered almost miraculously the result was not so bad as the figures tend to show. I am strongly of opinion that in all cases of diphtheria where there is good evidence of septic infection—i.e., where there are sloughing in the throat and any degree of swelling of the neck and a high temperature—antistreptococcic serum should be given, with some confidence that in a certain number of the cases the septic element will be alleviated. In most cases of diphtheria where death occurs during the first week or ten days of the disease the patients die from the septic element, not from the diphtheritic and, again, in most cases where death ensues after tracheotomy the patients die from septic infection of the air passages. In conclusion, therefore, those cases of diphtheria which present septic symptoms and those where tracheotomy may be required may with advantage be treated with antistreptococcic serum as well as with diphtheria antitoxin.

My best thanks are due to Dr. D. S. Davies, medical officer of health of Bristol and medical superintendent of the isolation hospitals, who always placed his laboratory at my disposal and was always ready to help me with his advice and to give me the benefit of his valuable experience.

Sikkim, India.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN.—It is hoped that the recent most successful ball at Covent Garden Theatre, organised by the Countess of Derby, on behalf of this deserving institution (the oldest so far as can be ascertained in the world), may be followed by a Waterloo Day Dinner during next season. Meanwhile, through the kindness of Mr. Charles Morton, anyone who is interested in seeing the erection of the new and enlarged hospital and is unable to spare time to cross Waterloo-bridge can see the building work now taking place on the bioscope at the Palace Theatre nightly about 11 P.M.

NOTES ON A CASE OF BACKWARD DISLOCATION OF THE HEAD OF THE HUMERUS CAUSED BY MUSCULAR ACTION.

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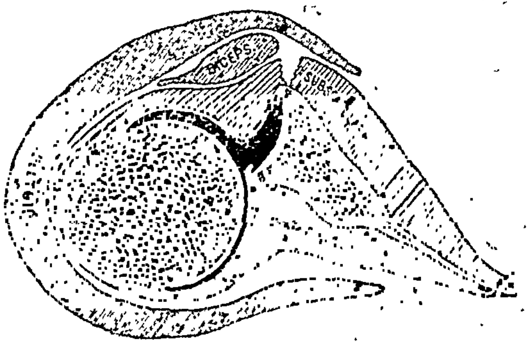
BACKWARD dislocation of the head of the humerus is rare, but backward dislocation produced by muscular action alone is, so far as I (C. W. M. M.) know, unique. The patient who met with this injury was a rather stoutly built but muscular man of about middle age, who was playing tennis. Trying to take a ball breast high with a back-handed stroke he missed his aim and instantly his arm dropped by his side, useless, and he was seized with violent pain in the shoulder. Dr. C. Gould May of Cadogan-place, who was immediately sent for, diagnosed a backward dislocation of the head of the humerus and called me in There was no doubt as to the nature of the injury. The patient was sitting in the characteristic attitude nursing his elbow, which was flexed and pointing slightly forwards. The whole shoulder seen from the outer side had a peculiarly squared appearance. The arm was a little abducted and rotated inwards; there was a great hollow under the deltoid in front, so that the anterior portion of the glenoid fossa could be felt through the muscle, and there was a corresponding prominence behind. Active movement was impossible and any attempt at passive motion caused great pain. The patient was placed under an anæsthetic and as soon as the muscles were relaxed the arm was slightly abducted, drawn downwards, and rotated outwards. The head of the bone slipped in at once and there was no further trouble, the patient regaining perfect use of the arm in the course of a few weeks.

The mode in which this peculiar injury was caused is a matter of some interest. The head of the bone was caught behind the posterior lip of the glenoid fossa and held there. Probably the capsule was not torn or, at least, was not torn sufficiently to allow the head of the bone to protrude through it—an occurrence which, though not common, is not unknown in connexion with ordinary dislocation of the shoulder. The rapidity and the completeness of the recovery certainly favour this. The subscapularis was tensely stretched across the glenoid fossa and as soon as the head of the bone was dislodged by external rotation, combined with abduction and traction downwards, dragged it suddenly back into its place. The patient did not fall down or strike his hand or his elbow against anything, so that the displacement of the head of the humerus could not have been caused by leverage in the ordinary sense of the term. Nor can it be explained by sudden arrest of the momentum of the arm, for this would have carried the head of the bone forwards. The only explanation that appears to me to be feasible is that in the sudden knowledge that he had missed or was going to miss the ball, and perhaps in some way in an attempt to save the stroke, conflicting orders were sent down from the nervous system, the coördination of the muscles around the shoulder-joint, upon which its security depends, was improperly carried out, and the head of the bone was simply dragged directly backwards over the lip of the glenoid fossa by the violent and unopposed contraction of the short external rotators I am greatly indebted to Dr. Keith for having worked out so thoroughly the anatomy of this dislocation, and to Dr. H. Balean for the excellent illustration that he has made from Dr. Keith's preparation.

Anatomy of the Parts concerned in Subspinous Dislocation of the Shoulder, by DR. KEITH.

At the commencement of a back-handed stroke the humerus is rotated inwards, so that the anterior margin of the humeral head is in contact with the anterior margin of the glenoid cavity (see the points *a* and A in Dr. Balean's drawing). The subscapularis is then fully contracted and the anterior part of the capsule is thrown into a fold beneath the insertion of that muscle. The infraspinatus and teres minor are then relaxed but the posterior part of the capsule, which lies beneath their insertions, is taut and covers nearly two-thirds of the head of the humerus. In the rotation outwards which occurs in a back-handed stroke the posterior margin of the head of the humerus comes rapidly in contact with the posterior margin of the glenoid cavity (see the points *b* and B in Dr. Balean's drawing). During this movement the posterior part of the capsule, under the insertions of the infraspinatus and teres minor, is thrown into a fold, while the anterior part becomes taut over the anterior two-thirds of the articular head of the humerus. In the specimen from which Dr. Balean's drawing is made the subscapularis was cut across (i.e., thrown out of action), the infraspinatus and teres minor were kept on the stretch, and the arm was then rapidly rotated outwards. In this movement the head of the humerus, acting on the glenoid ligament (B in illustration) as a fulcrum, moved outwards and occupied the fold formed by the posterior part of the capsule, assuming a position similar to that seen in Mr. Mansell Moullin's case. The glenoid ligament is the representative in the shoulder of the semilunar cartilages in the knee and there seems to me to be a similarity between this form of dislocation of the shoulder and that of a semilunar cartilage of the knee. Because the knee ligaments are so strong it is the cartilage which is dislocated; in the shoulder, where the ligaments are so lax, it is the *bone* that is displaced.



Section through left shoulder-joint, looking towards hand.

70 CASES OF LOBAR PNEUMONIA:

AN ANALYSIS OF THE CLINICAL FEATURES AND POST-MORTEM CHANGES.

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FROM January 1st, 1902, to March, 1903, inclusive we had at Kensington infirmary upwards of 70 cases of pneumonia with 29 post-mortem examinations. Many of the patients being older than the average hospital patient we think that it may be of some interest to publish a brief summary of these cases, of which we kept notes. With the exception of three or four cases that recovered in January, 1902, they include every case occurring in Kensington workhouse and infirmary during 15 months.

As to seasonal prevalence March to June were the chief months. There was no case in July but August, which was unusually cold, gave us five cases and October seven cases. The patients were chiefly males. 32 males and six females recovered and 21 males and 11 females died.

With regard to the portion of the lungs affected, in 37 cases that recovered and three cases that died without post-mortem examinations the physical signs pointed to the following: consolidation of the right lower lobe, 27; consolidation of the left lower lobe, eight; right apex, three; and both lower lobes, two. As to morbid anatomy, in 29 post-mortem examinations we found the right lower lobe consolidated in ten, the left lower lobe in three, the right upper lobe only in three, both lungs in four, the whole right lung in three, the whole left lung in four, and the left upper lobe only in two. If we add these together we obtain: right lower lobe, 37; left lower lobe, 11; right upper lobe, six; left upper lobe, two; whole right lung, three; whole left lung, four; and both lungs, six.

As to the relation of duration of illness to the nature of the hepatisation, in the St. Thomas's Hospital Reports[1] it is pointed out that the average duration of illness in those with grey hepatisation is only half a day longer than in those with red hepatisation, that in those intermediate between red and grey it is still shorter, and in the shortest illnesses of all grey hepatisation was found. The series consisted of 128 post-mortem examinations. It is suggested from this that grey hepatisation precedes red hepatisation in point of time. In our short series in the same way grey hepatisation was present in four out of five that died before the fourth day; on the other hand, those dying after the eighth day had grey hepatisation with one exception. The day of onset was known in 25: death before the eighth day, six red and 12 grey; death after the eighth day, one red and six grey. One with death on the twentieth day of illness had red hepatisation only. The factors in determining how soon red or grey hepatisation shall be established seem difficult to understand. It seems to have no relation to the age of the patient. The above 25 divide up thus: under 50, three red and eight grey; over 50, four red and ten grey. In two of our cases grey hepatisation had gone on to local gangrene.

The lymphatic glands at the bifurcation of the trachea were noted in 26 of the post-mortem examinations. They were enlarged in 17 and not enlarged in nine. In five the enlargement was limited to one side. In one of these curiously the enlargement was on the healthy side. Compared with other diseases on which we made post-mortem examinations these glands seem more often enlarged in pneumonia than in other diseases with certain exceptions, of which pulmonary tuberculosis is certainly one. For the sake of comparison we have tabulated our other post-mortem examinations.

—	Bifurcation glands affected.	Glands not affected.
Pulmonary tuberculosis	42 cases.	2 cases.
Diseases not thoracic	3 "	35 "
Broncho-pneumonia	5 "	3 "
Bronchiectasis...	1 case.	—
Chronic pulmonary congestion due to mitral disease...	4 cases.	6 cases.
Pericarditis	6 "	4 "
Empyema	2 "	—

The heart was always dilated. A white clot was noted in the right auricle and ventricle 15 times and was absent seven times. In pneumonia, as in all other post-mortem examinations, we very rarely found white clot in the left auricle. We, of course, do not know whether white clot is ante-mortem or not.

The following lesions in other organs were found in 29 cases: chronic interstitial nephritis and liver normal, 6; large white kidney and liver normal, 1; normal kidney and liver cirrhotic, 3; normal kidney and liver fatty, 4; large white kidney and liver fatty, 2; pericarditis, 2; pericarditis and endocarditis and empyema, 1; mitral stenosis, 1; pulmonary tuberculosis, 1; carcinoma of the uterus, 1; congenital syphilis, 1; diabetes, 1; and jaundice due to the pneumonia, 2. We had no case of meningitis although delirium was common, and coma occurred four times. Empyema occurred once in the cases that recovered.

Influenza preceded pneumonia, we believe, in five cases; of these three died. The case of pulmonary tuberculosis was in an early stage and no symptoms of this disease had occurred during life. Phthisical patients do not seem prone to lobar pneumonia. During last year 135 patients were under treatment for advanced tuberculosis of the lungs at Kensington These were exposed to abundant fresh air in special wards and some were left out in the open under an awning through the winter. No case of pneumonia occurred among them.

With regard to the prognosis in pneumonia in old age it is grave; in middle age it is dependent on the condition of other organs, especially the kidney, judging from post-mortem examinations; in youth it is good. In cases between 16 and 30 years, 16 recovered and 3 died; between 30 and 40 years, 7 recovered and 5 died; between 40 and 50 years, 6 recovered and 7 died; between 50 and 60 years, 5 recovered and 7 died; between 60 and 70 years, 3 recovered and 3 died; between 70 and 80 years, 1 recovered and 6 died; between 80 and 90 years, none recovered and 1 died. Below 50 years of age only two of the fatal cases were in sound health before the pneumonia, the post-mortem examination revealing a chronic lesion of some other organ in ten cases; chronic alcoholism was admitted in two more, and plumbism in a third. Above 50 years of age the prognosis in a man previously healthy is certainly graver, but even between 60 and 70 years in our fatal cases some other lesion was present in each one. After 70 years of age, on the other hand, of the ten deaths four presented no other lesion and three only a fatty liver. A chronic interstitial nephritis was present in the remaining cases. That we need not despair on account of age alone, however, is shown by the following case. A man, aged 72 years, had a crisis after a typical pneumonic attack. After this he developed a hectic temperature and became delirious at night. A few days later an empyema was detected. Dr. H. P. Potter drained this by incision without resection of a rib and by inserting a small tube. Recovery followed.

The text-books teach that sweating before the crisis is unusual: thus Dr. P H. Pye Smith says,[2] "Sweating during the height of the disease is uncommon and when present is not of bad import." In the present series it has not been very unusual and has been a good sign. 33 cases sweated before the crisis—seven died. 37 cases cases did not sweat—of these 25 died. In the 33, in over half sweating occurred throughout the attack on each day, but not the whole day. Sweating at the crisis occurred in nearly all. Sweating after the crisis only occurred once and this case nearly died from collapse at this time. Notes were taken from the beginning of this series in special reference to sweating.

Curiously enough, we only had one case of delirium tremens with pneumonia; this case recovered. It is, no doubt, the exception. The common delirium was an active one, trying to get out of bed being a common symptom, but without the hallucinations of delirium tremens. Mechanical restraint in such cases makes the prognosis much worse, we believe. 24 had delirium throughout part or all of the illness; of these, 14 recovered. 46 had no delirium and of these 25 recovered. The only case that developed delirium after the crisis for the first time had an empyema. In the majority delirium ceased with the crisis, but two had delirium before and after the crisis for two or three days. Authorities differ as to the prognosis of delirium; thus Dr. Pye-Smith finds only 15 per cent. of a series of 86 post-mortem examinations had delirium and regards prognosis as favourable. The St. Thomas's Hospital Reports, on the other hand, give out of 1142 cases of pneumonia delirium in 22 per cent. of the non-fatal and 49 per cent. of the fatal. Hence, in this series the prognosis has been influenced adversely by delirium. In our series the prognosis was only made slightly worse by delirium except when this occurred throughout the entire illness; of these cases half died.

In two cases coma was the first symptom; both died. In two others unconsciousness supervened during the last day or two of life and deepened into coma. We had no case in which coma was followed by recovery.

With regard to the extent of the lesion, double pneumonia occurred in six cases with one recovery. This man was the only teetotaler of the six—aged 44 years; the onset was influenza. The average age of the fatal cases was 51 years. The authorities differ on the prognosis in these cases. Dr. Pye-Smith and Professor Osler both regard the prognosis as worse in double than in single pneumonia; the St Thomas's Hospital Reports, on the other hand, show no increase in the risk of double over single pneumonia. They state that 10·3 per cent. of the non fatal cases were double pneumonia, 11·8 per cent. of the fatal were double, hence the risk is not raised appreciably.

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[1] Vol. xix., by Dr. W. B. Hadden, Dr. Hector Mackenzie, and Dr. W. M. Ord.

[2] Clifford Allbutt's System of Medicine, vol. v., p. 119.

As to apical pneumonia, we had eight cases, with five deaths. In half there was no delirium. In the fatal cases the age and the other lesions present would have been sufficient to cause death whatever the extent of the pneumonia had been. Professor Osler thinks that apical pneumonia is not specially dangerous, nor does it belong to the cerebral type as a rule. Dr. Pye-Smith says that "apical pneumonia is no more prone to delirium than basic." The St. Thomas's Hospital Reports show "only 7 per cent. of the apical pneumonias had delirium." In spite of these statements in the text-books there is a common belief that apical pneumonia is usually of the cerebral type.

We think that the pulse-rate is of great value in prognosis. In our cases it was very rarely above 120 in those that recovered. Once it was 150 and in another case 140 with recovery. In those that died it was very rarely below 120 towards the end of the illness. We had no case of hyperpyrexia. The fatal cases included two in which the temperature was remarkably low. In one for ten days it was from 97° to 98° F., once reaching 99°. This case presented pericarditis and pneumonia at the post-mortem examination. A second case after six days' pyrexia had for 12 days a temperature of from 97° to 98° and then died.

The mode of termination was as follows: crisis in 29 cases; lysis in seven. The seventh and ninth days are the chief for crisis in our cases, the sixth and eighth days for death—that is to say, the patient dies on the day preceding what otherwise would be the crisis. Three days was the time usually occupied by lysis.

As to the diagnosis, in a typical case this is easy; in an atypical case it is by no means so. Seven times our diagnosis was made in the post-mortem room and once a diagnosis of pneumonia was proved to be mistaken. There is a class of case in which coma is the chief symptom and the treatment may be (erroneously) that for uræmia in consequence, as in the following cases.

A man, aged 35 years, convalescent from Bright's disease, had been up some days, when on Jan. 13th he lost consciousness suddenly while up; he remained unconscious for 24 hours and then came round. On the 15th his temperature rose to 100° F. On the 16th his temperature was 100° and urgent dyspnœa of a hissing kind began On the 17th there was gradual loss of consciousness ending in coma; the temperature fell. Death occurred on this day. Post mortem the upper two lobes were red and the right lower lobe was grey; the kidneys were small and white.

A man, aged 61 years, on May 15th fainted; he was admitted to hospital cold, blue, and giddy, but there was no pain. The heart was feeble. The lungs showed no signs of consolidation. There was no cough. Shortly after admission he became unconscious with stertorous breathing; he had incontinence of urine and repeated vomiting. The temperature was 102° F., the pulse was 140, and the respirations were 32 On May 16th he was still unconscious; the pupil reflex was present but the conjunctival reflex was absent. The temperature was from 103° to 104°, the pulse was 140, and the respirations were 42. The urine was suppressed, the breath was heavy, the skin was dry, and the chest signs were negative. Uræmia was diagnosed Strychnine, pilocarpine, and a hot pack were given. The urine passed was albuminous. There was some sweating in the pack; collapse followed and death ensued six hours later. Post mortem there was right apical pneumonia in the red stage; the heart was dilated; the kidneys were normal. We had two other cases of the same class.

Another type of case is admitted as a lunatic. Of this class the combination of delirium tremens and pneumonia is doubtless the most common, although not so in our series. We had the following rather curious case.

A man, aged 65 years, was sent in with an outside diagnosis of "bronchitis and mental," as he had picked up a knife to throw at another man. His temperature was found to be raised; there was crackling at both bases; and his temper was irritable. His six days' temperature was from 101° to 103° F., his pulse was from 120 to 128, and his respirations were from 36 to 40 The sputum was scanty and rusty; the skin was dry. Pneumonia was diagnosed Then followed 12 days' apyrexia. There was delirium for the last 16 days. The diagnosis of pneumonia was somewhat doubted during this time. Death ensued. Post mortem there was right apical pneumonia in the red stage.

Another type resembles acute tuberculosis.

The patient was a male, aged 16 years. He suffered from congenital syphilis. He had cough, wasting, and night sweats five weeks before admission. His breathing was harsh and there were abundant crackles on the right side; the right side was dull. The sputum was not rusty but muco-purulent. He was treated for six weeks, making 11 weeks in all. His temperature during this time was from 100° to 102° F. He had frequent sweats and there was progressive wasting. Tubercle bacilli was searched for many times; the result was negative, otherwise acute phthisis would have been diagnosed. During the last three weeks the sputum was offensive; empyema was now suspected, a needle was inserted and went into something of the consistency of liver and withdrew a little blood. The breathing was a little hurried. There was gradual exhaustion and death ensued. Post mortem in the right lung there was grey hepatisation with numerous patches of necrotic lung varying in size from that of a pin's head to that of a walnut; the right pleura was very thick, the cavity was obliterated, and the left lung had compensatory hypertrophy.

We had only one case of this kind. It shows the value of examining the sputum in cases that seem typical acute phthisis.

The only case in which rusty sputum was not diagnostic of pneumonia in our cases was the following.

The patient, a man, aged 71 years, was admitted for loss of flesh and strength. A low, irregular pyrexia persisted for upwards of a month. Cough was frequent. The sputum was rusty for 28 days and to within three days of death. There were dulness and weak tubular breathing in both posterior bases. Post mortem there was double hydrothorax; the lungs were a little compressed only; there was no pneumonia; the liver and kidney were cirrhotic.

When an elderly patient becomes slightly delirious at night and is noticed to be breathing fast he is more likely to have pneumonia than anything else whatever his temperature may be. He may, however, have pericarditis, especially if he has chronic Bright's disease When, on the other hand, an elderly or bedridden patient has a rigor and sudden rise of temperature to 104° F. he is more likely to have erysipelas than pneumonia It may be surgical kidney and in one case it proved to be perisplenitis at the necropsy. If the patient be an old soldier he generally tells you he has his old malaria again. This was not really so once in the 15 months at Kensington.

With regard to treatment, in these cases we tried to secure sleep by Dover's powder in the early stages, generally with some success and much to the patient's relief. In the latter part of the illness we tried, often unsuccessfully, to relieve the heart with leeches, strychnine, digitalis, and about three ounces of brandy. We did not see much benefit from doses of brandy above four ounces. We did not use oxygen.

In conclusion, we have to thank Dr. Potter, the medical superintendent, for his kind supervision of our work and for permission to publish these notes.

CANCER IN AUSTRALIA: A COMPARISON WITH OTHER COUNTRIES, TOGETHER WITH A SPECIFIC TREATMENT FOR THE PREVENTION AND ARREST OF THE DISEASE.

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(Concluded from p. 428.)

TREATMENT.

THE treatment of cancer may be divided into two classes—viz : (1) the preventive, and (2) the arrestive.

Preventive treatment.—Herein lies the only cure for cancer, as only by preventing or avoiding the exciting causes can we hope to diminish the increase in the disease and its progressive death-rate. From the results of my investigation and practical evidence in my own practice I have not the slightest hesitation in stating that I believe syphilis to be one of the greatest exciting factors in the cause of malignant disease. It is not too much to state that the majority of victims suffering from the effects of this disease, either acquired or inherited, have not received treatment for the necessary length of time to arrest the undermining of their tissues; and by the time they arrive at the cancer age their sad condition favours the development of malignant disease, more particularly in those who have inherited a malignant tendency. There is [illegible] in every country at an [illegible] we consider therefore [illegible] in discovering a successful treatment for arresting the ravages caused by this disease, also the length of time that has elapsed since the discovery was made, it amounts to almost criminal negligence on the part of those Governments, religious bodies, and faddists, who have deliberately delayed [illegible] their fellow subjects [illegible] disease.

[illegible] unate children who have inherited syphilis and are *daily attending our schools*, suffering day after day, year after year, their little brains, nervous systems, and general tissues being gradually undermined and ripening for such diseases as cancer, general paralysis, and other forms of insanity, while Governments and other public bodies look on hesitating to legislate, in spite of repeated warnings by nearly every section of medical science of the horrible results of this malady. Dr. Robert Jones, superintendent of the London County Council Asylum, Claybury, in a scholarly address on Development of Insanity in regard to Civilisation, delivered as late as July, 1903, at the annual meeting of the British Medical Association at Swansea, clearly points out the dire *effects of this disease upon the nervous system, thereby* causing general paralysis and other forms of insanity, and Dr. J. W. Ballantyne of Edinburgh has also pointed out that women suffering from syphilis at the commencement of pregnancy are usually unable to carry to full term and mostly abort before the seventh month unless specific treatment is begun early. It is not necessary to look far, therefore, for at least one, if not the greatest, cause of the decrease of population in the Commonwealth of Australia and other countries.

Syphilis for the same reason also is one of the greatest irritating causes of malignant disease of the uterus, repeated miscarriages leaving their dire effect on this organ by the time the menopause is reached—the most favourable time for the development of cancer. It is evident, therefore, that unless notification and treatment of this disease are made compulsory the prevention and cure of cancer and the other diseases named will be sadly hampered. Alcohol, sugar, beer, and sweet wines should be avoided by all those predisposed to malignant disease or by those who have a rheumatic and gouty tendency, and the two latter constitutional diseases should be carefully nursed during life in all those who have any *degree of cancer history*. The avoidance of all substances which cause constant local irritation is absolutely essential to prevent cancer. I think it is not saying too much to infer that the constant irritation for a long period of the corset in females is one of the principal exciting causes of cancer of the breast, even more so than excessive lactation, as is shown by its prevalence among females who have never suckled a child. If women will persist in using such an unnecessary and in *many cases fatal weapon let it be made in* such a manner that the breast will not hang over the front or in any way rest upon the same, as the constant friction on the breast caused thereby is doing gradual but sure mischief. Great attention should also be given by medical practitioners to the repair of lacerations of the cervix, the vagina, and the perineum, thereby avoiding the continual use of pessaries which no doubt from the constant irritation upon the lacerated and cicatricial tissue promote a susceptibility to cancer. *Circumcision should always be* performed upon those suffering with phimosis. The pipe should be avoided by those predisposed to cancer and bad teeth should be attended to. The native mode of carrying the kangri in India under the clothes, hanging on the abdomen, thereby causing kangri cancer by continual friction, should be done away with and another method of suspension insisted upon. The native habit of chewing the betel leaf should be discouraged as it causes constant irritation and cancer inside the mouth which *is so prevalent* among the native population of India.

The improved sanitary conditions of the people and large cities of Australia have apparently had an indirect influence in preventing the susceptibility to cancer in the majority of the native population. The fact that the general death-rate is much below that of any of the European states and is steadily declining is no doubt largely due to the methods of paving the principal streets of the cities with hard wood *blocks cut from the eucalyptus or gum trees*, also to the improved system of drainage. The antiseptic and other sanitary properties of the eucalyptus hard wood, apart from its excellent economical wearing properties, render it particularly suitable for street-paving and for building purposes. It should be largely taken advantage of in England and other countries as a means of improving sanitary conditions in the large cities.

Arrestive treatment.—The antidote or specific which I have no hesitation in saying is capable of arresting and preventing malignant disease and which has been a great success in my own hands is an Australian eucalyptus oil, to which for the purpose of distinguishing it from other *eucalyptus oils* the name "*mulyptol*" has been given at my suggestion. Mulyptol is an oil of a very high standard which is scientifically prepared from various species of the eucalypts *indigenous only to the Commonwealth of Australia.* It contains constituents possessing therapeutic properties which are not to be found in any eucalyptus oil obtained from any species grown outside of the Australian Commonwealth. It possesses not only the highest properties of the eucalyptus globulus oil but also valuable therapeutic properties which are *not to be found in this oil. Mulyptol*[1] *may be* relied upon as to the con [illegible] of its component parts [illegible] experience in the use [illegible] commerce was that they varied so much in this respect as to be absolutely unreliable to compass the results which I have recounted. The British Pharmacopœial requirements likewise afforded no protection, but, on the contrary, left many loopholes for adulteration by the addition of other deleterious agents. This nefarious practice is eagerly and unscrupulously carried out in this and other countries to such an extent with some oils that it renders prolonged internal and local administration (a necessity, as I maintain, in the successful *treatment of malignant disease*) absolutely dangerous. It is in my experience very necessary that the highest oxygenating and other valuable properties of the various species of the Australian eucalypts should be combined if the best results are to be obtained.

In order to make clear the foregoing remarks it is absolutely necessary that one should possess a little more knowledge of the chemistry and therapeutic properties of eucalyptus oil than can be found in the British Pharmacopœia or its excellent companions *or even any of the modern text-books on* materia medica or therapeutics. I may therefore be pardoned for giving the following brief description of the chemical constituents which are to be found in the Australian eucalyptus oils, many of which are the outcome of a scholarly research on the eucalypts of Australia, especially in regard to their essential oils, carried out by Mr. R. T. Baker, F.L.S., and Mr. Henry G. Smith, F.C.S., curator and botanist and assistant curator and chemist respectively to the Technological Museum *in the State of* New South Wales, Australia, and published by the Government of that State in 1902. The research in question covered an analysis of over 125 different species and too much praise and encouragement cannot be given to these able scientific workers who have well laid the foundation for therapeutists to discover the medicinal values of the chemical substances determined so far among which are the following:—

[illegible] d amyl.
[illegible] butaldehyde, valeraldehyde.
[illegible] (peppermint constituents).
[illegible] ne,
[illegible] and lævo-rotatory).
[illegible] l endesmate, valeric acid ester and
[illegible]

As many of the above constituents possess very valuable therapeutical properties, and as these are not to be found in *any one* of the species, it follows that the only method to obtain an oil possessing the full therapeutic properties of the eucalypts of Australia is to select a suitable one as a base and by a scientific *system of fractionalising* and distillation any of the above constituents may be obtained which possess any therapeutic value and can be added to the base oil, thus securing a more valuable oil than can be derived from any single species. To illustrate this more clearly: for many years the oil from the eucalyptus amygdalina was the most valued variety and was included in the British Pharmacopœia of 1885, but it is now excluded by the tests given by the British Pharmacopœia of 1898, owing to the fact that it contains a large amount of phellandrene, an irritating substance. Yet this species contains other valuable properties, such as eucalyptol, pinene, peppermint ketone, and traces of eudesmol. The oil from the eucalyptus globulus, the principal commercial variety, on the other hand, possesses no phellandrene and contains a fair amount of eucalyptol, therefore this oil has been largely adopted for experimental purposes and for internal administration owing to the fact that it possesses no irritating substances. This I perfectly agree with, but, on the other hand, although possessing valuable oxidising properties, it is very much more deficient in these than many oils from other species; for instance, it possesses only traces of eudesmol, a very valuable oxide found very largely in other species. It possesses no aromadendral, piperitone, and many other valuable constituents. Another very important fact is that the eucalyptus globulus is the only species that appears to have taken kindly to the soil of other countries where it has been transplanted, and I may state that I have tested the therapeutic properties of the eucalyptus globulus oils obtained from Italy, the United States, Algeria, Portugal, and many other countries and in every instance I have found that they do not come up to the standard of the indigenous eucalyptus globulus of Australia. The very fact that only one or two of the numerous species indigenous to Australia can be grown with any success in other countries and that they have been robbed of their indigenous soil should be sufficient proof of this statement. At the same time, I do not wish to infer that they possess no real therapeutic value but only that [illegible] are uncertain in action. Many of these are sold as [illegible] oils, therefore it is time such misrepresentation [illegible] official notice and the profession and public be [illegible] the foregoing remarks and brief description of [illegible] oils will be an answer to the following statement which appears in an official publication issued by the United States Department of Agriculture, Bureau of Forestry, Washington, 1902, entitled "Eucalypts cultivated in the United States," by Alfred James McClatchie, M.A., agriculturist and horticulturist of the Arozona Experimental Station, Phœnix, Arozona, which tends not only to deceive the medical profession and public but to injure severely one of the most promising industries in the Australian Commonwealth. The paragraph to which I particularly desire to draw attention appears under the heading "Uses of the Eucalypts," p 39: "The medicinal properties of the various component parts of the eucalyptus oil differ widely. Hence the oils from different species have very different medicinal values. Unless eucalyptol, the chief ingredient of the blue gum oil, has the same effect upon the human system as phellandrene—the prominent ingredient of the peppermint tree oil—the oils from these two trees must necessarily have different medicinal properties and the oil from a forest of mixed species must have very uncertain medicinal properties. The eucalyptus oil produced in America, where the groves from which leaves are obtained for oil are commonly of one species and where with rare exception a single species (blue gum) is the source of all the oil extracted, will necessarily be a produce whose properties are better known and more constant than that produced from mixed native forests. *Hence the importation of eucalyptol or eucalyptus oil from Australia or elsewhere is both unnecessary and a disadvantage to the consumer.*" (The italics are mine.) I may here state that I have recently brought the matter under the notice of various agents-general of the States of the Commonwealth, suggesting that all eucalyptus oils manufactured in Australia should be inspected and certified to by the various Government State analysts, defining when possible the species from which the oils are manufactured and that they should also receive the Government stamp in order that the medical profession and public may rely upon having an Australian eucalyptus oil manufactured from Australian indigenous foliage and not from the eucalyptus foliage of another country.

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[1] "Mulyptol" is prepared by the Australian Eucalyptus Chemical Company, 18, Mansion House Chambers, Queen Victoria-street, London, E.C., from whom it may be [illegible]

Sanitary properties.—The late Baron von Mueller, F.R.S., K.C.M.G., M.D., &c. (Government botanist of the State of Victoria), in his masterly work, "Eucalyptographia," makes the following statement: "The sanitary influence of the eucalyptus vegetation was surmised by more than one of the early Australian settlers, who were reluctant to place their conjectures on public record without positive investigation and final proof." He further states: "The incontestable sanitary effect of these prevailing myrtaceæ throughout Australia, except in some of the tropical coast tracts, must be ascribed to a complex of causes: (1) the ready and copious absorption of humidity from the soil by eucalypts and closely allied trees; (2) their corresponding power of exhalation much greater than that of many other kinds of trees; (3) especially the evolution of a peculiar highly antiseptic volatile oil; and (4) the disinfecting action of the dropping foliage on decaying organic matter in the soil, eucalyptus leaves themselves not causing any noxious effluvia through their own decomposition." The disinfecting and deodorising virtue of the tree being unquestionable, it was placed by Dr. Mosler and Dr. Goeze of Greifswald and Dr. A. Buettner of Melbourne in the wards of hospitals.

The germicidal properties of the eucalyptus globulus oil have been the subject of much research. Dr Bucholtz has shown that as a germicide it is of three times the strength of carbolic acid. Dr. Omelchenko's experiments have proved that the vapour of eucalyptol does not destroy bacilli so quickly as that of the oil of eucalyptus itself, the former taking 134 hours to kill the bacilli of anthrax while the latter only took 72 hours to destroy them. Mr. Th. Taylor found that albuminous compounds could be preserved in water which by maceration of leaves of eucalyptus globulus had absorbed some of their oil and perhaps other preservative particles, a few drops of the oil added to water serving the same purpose. Other kinds of volatile oils act very variously in this respect. He also observed "that it may be injected into veins and arteries of cadavers for purposes of preservation." Eucalyptus oil will preserve flesh of any kind as well as creasote. Beef sprinkled with it will dry hard without putrefaction. Mr. Taylor attributes its hygienic action to its high oxidising power as exemplified in the decomposition of miasmata.

It was through His Grace Dr. T. A. Goold, R.C. Archbishop of Melbourne, that the plantations of the eucalyptus globulus were first established for subduing the miasmatic exhalations of the Pontinian swamps, and this prelate, writing to Baron von Mueller on Dec. 17th, 1879, says: "It was first raised in the Campagna from seeds kindly presented to me by you on my visit to Rome in 1869 to attend the Vatican General Council. I handed the seeds to the superior of the Trappist monks who then occupied the monastery and grounds of the Tre Fontane, a most fever-stricken locality. On my next visit to Rome, made a few years later, I had the pleasure to see the good results of your kind and thoughtful presentation in the vigorous growth of many gum trees acting most wholesomely on the poisonous air of that part of the Campagna."

Therapeutic properties.—The first positive experiments upon the febrifugal virtues of leaves of eucalyptus globulus were made by Dr. Tristan in Spain and were published in the *Compilator Medico*, 1865. Dr. Tristan's observations were subsequently confirmed after grave clinical research by Dr. Adolph Brunel of Toulon, Dr. Carlotti and Dr. Tedeschi of Corsica, Dr. Gimbert of Cannes, Dr. Mares, Dr Bertherand, and Dr. Miergues of Algeria, Professor Lorniser of Vienna, Dr. Caston of Montpellier, Dr. Sacchero of Sicily, and many others, all of whom have placed the antifebrile properties of eucalyptus oil beyond a doubt. The success achieved by Mr. J. B. Curgenven in the treatment of scarlet fever; Dr. J. C. Voight, Mr. L. Kesteven, Dr H Bengafield, who will appear to believe it is a specific in typhoid fever; Dr. Voight, Sir John Cockburn, Dr. Bengafield and others, in diphtheria and croup; Dr. B. Ball in the treatment of phthisis uses hypodermic injections of eucalyptol and believes it counteracts the septic phenomena of the malady, as does Dr. Conas[2] in the treatment of certain pulmonary affections, such as chronic ulcerative phthisis and pulmonary catarrh. In gangrene, ulcerative diseases of the bladder, bowels, nose, and ear, gonorrhœa and syphilis, various applications have proved very beneficial. My first use of eucalyptus oil was in connexion with my gynæcological operations, having adopted it early in 1893 as my only antiseptic, owing to its non-irritating, non-poisonous, deodorising and already proved highly antiseptic properties. All dressings used in connexion with my work were prepared from this oil. It was therefore the success achieved by its use in these operations, particularly in the treatment of accessible malignant lesions, that prompted me to investigate its actions internally, particularly with a view of still further testing its power of arresting the progress and process of the disease by preventing and arresting secondary deposits and recurrence.

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[2] Medical Record, June 15th, 1887, p. 254.

The following is a summary of the cases treated, with results and some observations upon the same. The majority of cases of malignant disease in which I have used eucalyptus oil ("mulyptol") internally and externally were cancer of the breast and uterus. The whole of the 55 cases previously referred to were treated by this means only, operative treatment having been refused. In the majority of breast cases the tumour varied in size from that of a hen's egg to that of a goose's egg. All were in a state of proliferation and degeneration, showing more or less general œdema of the cellular tissue over the breast. In most of the cases there was superficial ulceration, the skin being adherent to the subjacent tumour, and with the exception of five cases the mass was not moveable at the commencement of treatment. In all cases the glands along the pectoral muscles and in the axilla were enlarged, most cases showing swellings in the neck along the anterior border of the trapezius muscle. With the exception of eight cases the arm corresponding to the breast in which the cancer developed was painful, tense, œdematous, and swollen almost down to the wrist. In 11 cases the nipple was flattened and in the remainder there was more or less retraction of the nipple. Emaciation was present in all cases and in 25 decided cachexia. The average time in which the disease was first noticed until treatment was begun was from three to six months. In all cases the treatment was carried out for a period of from six to 12 months under my personal supervision and directions, therefore a definite statement can be given as to the benefits derived from the treatment, and though inquiries were made for periods of from two to four years after treatment was discontinued in not one instance was recurrence reported. The following was the treatment invariably adopted. The internal treatment, which was administered simultaneously with the local treatment, consisted of the administration of mulyptol either in the form of emulsion or gelatin capsules. I generally began by giving five-minim doses every four hours after food for the first week, gradually increasing to ten-minim doses by the end of the second month. In addition to this administration the pure mulyptol was applied by means of inunction, being rubbed into the axillary and abdominal regions morning and evening, and inhalations were administered twice daily in the following form: mulyptol, 80 minims; light magnesium carbonate, 15 grains; and water to one ounce; a teaspoonful in half a pint of boiling water. In cancer of the breast the external treatment was as follows. After washing the breasts and glands with a warm emulsified solution of mulyptol, particular attention being given to the nipples, the cancer breast was vaporised for from 15 to 20 minutes, dried, and a piece of lint, which was kept soaked in a solution (1 in 4) of mulyptol and olive oil, was placed on the breast and covered with oil-silk dressing and a firm bandage applied. As soon as all crusts which were present had been removed several dressings of lint soaked in pure mulyptol were placed over the growth and usually after a week of such treatment the nipple and other ulcerated parts appeared to have taken on a raw but healthy appearance. Daily dressings of mulyptol and olive oil (1 in 2) solution were continued throughout the treatment. The breast became red and swollen for the first two weeks, due, no doubt, to a condition of leucocytosis, but from this onwards there was a subsidence in the general infiltration and by the end of the first month, under a condition of fibrosis, the growth was found to have diminished considerably in size and had become more freely moveable. Th [illegible] -lution of m [illegible] were all th [illegible] results ap [illegible] found on an average that by the end of the fourth month all signs of the growth and malignant condition had disappeared and the beneficial effects of the treatment were apparent. The enlarged axillary glands and the glands in the neck had disappeared and in most cases the adherent skin had become soft and more supple. In cases of cancer of the uterus the above internal medication was adopted; in addition to which the breaking down surface of the cervix and invaded parts was painted every alternate day with pure mulyptol, vagina packed with a long strip of mulyptol gauze. This dressing was removed in 24 hours, a warm mulyptol douche administered, and a tampon of cotton-wool soaked in a solution (1 in 2) of mulyptol and olive-oil or glycerine applied. The cervix and ulcerating parts very soon took on a healthy appearance, all fœtor and decomposition being checked, and a gradual but sure arrest of the pathological progress and process of the disease was accomplished. In addition to the above treatment in some cases daily local vaporising by means of hot mulyptol sitz baths was found to be particularly beneficial at the outset, especially in those cases where a rapid degenerating process of the disease with much hæmorrhage had been going on prior to commencing treatment. Treatment was persevered with for from three to six months after all signs of malignant disease had disappeared.

It is very important to observe the stages in the progress of the patients towards recovery by means of the foregoing treatment. During the first two weeks a leucocytosis in the local lesion is produced, and the first improvement appeared to be in the local lesion when ulcerated taking on a healthy healing surface, with signs of a subsidence in the general infiltration, and by the end of the first month a marked diminution under a condition of fibrosis in the size of the growth was noted and the glandular enlargements had considerably lessened. In the breast cases general œdema of the arm and intense pain had almost disappeared by the end of the first month and the above improvements were much more apparent. There was a more healthy appearance in the general condition of the patient with a slight increase in weight. This gradual improvement is noted throughout the treatment. I desire to state that the improvement, although marked, is slow for the first two months, after which time it becomes more rapid; of course, this is all according to the stage of the development of the disease at the time treatment is begun.

As the majority of malignant cases which I have treated have been disease of the breast and uterus I would suggest a trial of the aforesaid internal treatment for all cases of malignant diseases. The local treatment, of course, would be varied according to the locality and nature of the lesion. Thus, in cheek, tongue, throat, and nose cases daily atomising and vaporising should be persevered with, together with daily applications of pure mulyptol itself to the local lesion and also with daily inunctions with the oil. I may here state that I am at present treating several cases of cancer of the cheek and tongue with mulyptol and its various medicinal preparations and dressings with very gratifying results, and of these I intend giving full details at a later date. For malignant disease of the rectum, rectal injections of half-drachm doses in solution (1 in 4) of olive oil or in the form of suppositories may be added to the treatment. I have also found that hypodermic injections of mulyptol in from five to ten minim doses in liquid paraffin were very efficacious in many instances. Hypodermic treatment should be confined to the abdomen, the oil being rapidly absorbed into the system. I frequently begin treatment by hypodermic injection into the growth when hard and deep seated. For internal or inaccessible malignant diseases the internal treatment must be suited to the particular case and locality of the disease. Capsules or emulsion, rectal injections and inunction, together with daily inhalations are suggested. In hospital treatment the wards should be daily washed with mulyptol disinfectant solution and oil sprinkled about the beds. Mulyptol and its preparations might supplant all other antiseptics in malignant surgical treatment, being non-irritant, non-poisonous, and fulfilling all the needs of a general antiseptic.

Before concluding, it is necessary to consider the mode of action of eucalyptus oil when given internally. It acts as an antiseptic. Cases are recorded of tuberculous bacilli having disappeared under its treatment. Numerous cases of diphtheria and typhoid fever have been rapidly cured under its internal administration, from which results it would appear that it possessed a specific action either directly on the bacilli or by rendering inert their toxins. In malignant disease there is every evidence of its having a specific action on the local lesion itself. It acts in removing and relieving co[illegible] by promoting rapid absorption. [illegible] are already well known, the [illegible] r, according to Kesteven[3] a[illegible] in 14 days.

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[3] Eucalyptus in Typhoid Fever, Practitioner, Ap[illegible]

on the general nutrition of the body, evidence of which is given by the increase of weight. This is probably due to the fact that it possesses a power of raising the nutritive force, thereby increasing the vitality of the tissues to resist the action of any specific toxins which may be present. The chief interest, however, lies in its internal administration, as no other antiseptic or drug possessing germicidal properties can be given in such large doses continuously and for such a length of time as eucalyptus oil. Dr. Voight in fever cases administers drachm doses by rectal injections (1 in 4) of warm olive oil, repeated at frequent intervals when the temperature is high. He finds its antiseptic action very beneficial in cutting short an attack of influenza and in preventing the general breakdown and nervous phenomena usually following this disease. Its non-irritating and non-poisonous properties render it particularly serviceable for inhalation purposes. Dr. A. Irsai of Budapest by his laboratory research on the inhalations of various substances shows that eucalyptus globulus oil can be inhaled into the lungs and finest air passages without any fear of irritation. He found that oleum juniperi, oleum terebinthinæ, and oleum pini sylvestris irritated the lungs by setting up a condition of spasmodic contraction of the pulmonary vessels, the oleum pini sylvestris doing so especially. On the other hand, he found that *guaiacol and creasote set up rapid relaxation of* the vessels and great hyperæmia of the lungs, and he stated that it was needful to exercise due vigilance in employing these where there was any tendency to hæmorrhage.

As it has been proved that any prolonged irritation is liable to set up malignant disease it is evident that such treatment as the x rays, Finsen's light, and applications of irritating drugs and caustics is strongly contra-indicated, for even should the primary lesion be temporarily improved thereby the continuous irritation on the surrounding tissues is almost sure to favour extension or secondary lesions. Far better is early and prompt removal, or if this is not permissible then local treatment should be decidedly of a non-irritating and non-poisonous nature. This I claim for the treatment suggested in this article, used either internally or externally, and I can confidently recommend it to the profession with every prospect of success in the arrest of malignant disease.

Summary —The positive conclusions at which I have arrived as the result of this investigation are as follows: (1) that cancer is not due to a bacterial or parasitic origin; (2) that cancer is a constitutional disease due to a specific or malignant virus originating in the blood and chiefly manifesting itself after 35 years of age and at its greatest virulence between 50 and 70 years of age; (3) that malignant disease may be congenital and certain forms acquired by infection or contagion; (4) that the principal factor in the cause is hereditary tendency; (5) that the principal exciting factor is prolonged local irritation acting on a constitution suffering from an inherited tendency or which has been debilitated through want of treatment of one or other of the following diseases in their order of frequency: syphilis, alcoholism, obesity, rheumatism, gout, or tuberculous disease; (6) that the principal dietetic factors in the cause are sugar, beer, and alcohol; (7) that the principal hygienic factors in the cause are woods and forests whose dropping foliage decomposing causes stagnation of water; also badly formed streets and defective drainage in cities, and the overcrowding, badly housed and fed population of cities; (8) that cancer is a preventable disease and the absolute cure is only to be found in the means for preventing its exciting causes and completely removing the same; (9) that the sanitary indigenous foliage of the following natural orders—(*a*) myrtaceæ, (*b*) lauraceæ, and (*c*) coniferæ—appears to exert a specific influence in rendering the native born population of the countries where they grow almost immune from malignant diseases other than might be caused by prolonged local irritation (the Australian eucalypts belonging to the myrtaceæ exert the greatest influence in this direction); (10) that a eucalyptus oil obtained by means of a scientific preparation from various species grown in Australia possesses a specific action in arresting the pathological progress and process of malignant disease; and (11) that all internal and local treatment of a poisonous or irritating nature should be absolutely avoided, more particularly such local treatment as the x rays and Finsen's light, as they are likely to set up secondary conditions around the site of lesion. Far better is early and prompt removal when the malignant growth is accessible. My object in writing this article is to throw some further light on the cause of malignant disease and to bring more prominently before the notice of the profession a remedy which, though known in some degree, is in my experience insufficiently known and certainly insufficiently appreciated. And whilst strongly advocating its more general use in the treatment of wounds and specific fevers, &c., it is in relation to its specific effect as applied to the disease of cancer that I would urge the profession to give it a fair trial.

Welbeck-street, W.

CÆCAL CONCRETIONS.

BY ALEXANDER FORSYTH, M.D. GLASG.

ON Jan. 20th, 1903, Lord Lister wrote to me: "I trust you will not long delay the publication of your experience with the concretions and their relations to appendicitis." The subject was not in his line when he was in practice but he showed great interest in my views and in a typical case of cæcal concretions. The subject has grown since then till it far exceeds the limits that the Editors of THE LANCET can deal with. I therefore on their advice propose to lay my position before my fellow practitioners and to ask them to give their personal experience on the subject and to put my practice to the test.

My first and fundamental proposition is that the cæcum contains about two pounds of concretions. I have recognised these concretions since 1886. Before that I had occasionally met them and wondered where these decomposing masses had been hidden after all the other decomposing matter had been got rid of and the patient was now passing healthy motions, but could not answer satisfactorily. In 1886, however, I was called to see a widow, aged 33 years, whose sister was alarmed at her "wandering in her mind." She had delusions and illusions, thought that she had been visited by friends but had not, asked me why I had not called on her yesterday which I had done, and saw rats running over her bed and picked at insects, &c., on the counterpane when there were none. A clear mouth-*to*-anus passage was obtained after a long course of enemata, &c., but no improvement followed. Then her sister showed me a large "peculiar" fœtid motion which she had washed out, consisting of hardened but not quite dry concretions packed together with suggestions of the shape of their receptacle. The only place which they could have come *from* was the cul-de-sac of the cæcum, below the ileo-cæcal valve, through which fresh fæces had passed *over* it. From the very day they were voided the mental symptoms ceased and convalescence set in. The contents in this one case seemed wholly injurious and some active process of sulphuretted hydrogen formation was indicated.

I followed up the lesson I learnt then and proved its use in numerous cases since. Under the name of "loaded cæcum" I recognised a pre-typhlitic stage and treated it successfully in every case—that is, I avoided the later and more dangerous conditions from the appendix complications. The general types of my cases may be given as follows.

The first type are women who live a quiet and uneventful life. They bear the marks of sorrow and anxiety in their faces and deportment. They are distinctly melancholy but cannot be described as hypochondriacal. Emaciation of the body is distinct. They have no life, no jollity at all, though their years may not be great or their social condition unsatisfactory in any respect. They are aged before their time and look gloomily on everything and everybody. A widow, aged 69 years, who was seen in 1892, was one of this type who seemed to have her life brightened and prolonged by clearing out the cæcal concretions. After six weeks' persevering work the apparently interminable "bilious stools" were followed by well-digested "baby motions," the cæcal concretions were got at and cleared out, and her mental and physical oppression disappeared. The deep furrows in her face and forehead cleared away, her cheeks filled up, and she threw ten years off her shoulders.

The second type is fully represented by a class of young, healthy men who very unwillingly give way to sickness but who have quite their share of illness from loaded cæcum. Under the name of "constipation" and the temporary relief afforded by aperients they keep about their work with the same saddened, anxious faces and malnutrition of the body that are present in the other sex. In them also clearing away a couple of pounds of cæcal concretions changes the men in spirits and health permanently. I refer to police officers whose tours of duty are one month day work and next month night work.

In one case in point the following record was given. On July 10th, 1897, he was attacked with "appendicitis" which lasted for 26 days. On Dec. 22nd of the same year he was seized with "abdominal pains," being ill for 20 days. On Nov. 2nd, 1898, "dyspepsia" came on and lasted for 18 days. In 1899 he suffered from "constipation" for 19 days. On July 11th, 1899, he was again attacked with "appendicitis" which lasted for 91 days. This long list means that the man was not cured till the last occasion. The shorter treatment permits only of clearing out the colon and removes one of the two conditions necessary to so-called appendicitis. The patient is *therefore safe for the present. But the cæcal concretions* remain, the colon gets blocked again, with a return to the sick list. He called on me in February, 1903, and his account of himself is worth recording.

On the first occasion (July, 1897) he went to St. Thomas's Hospital, where he "lay in bed for a week and had milk and castor-oil only." The last time (July, 1899) he was under my care as his divisional surgeon. "I was in a terribly weak state and walked about in misery always. I was always tired and wanted to lie down; always in very low spirits. I felt regularly weak; knocked up. I could not eat or drink anything; if I did I brought it up. I don't want to have a bout like that again." Persistent enemata with large doses of olive oil taken internally two or three times daily constituted the treatment. The concretions began to come away in about six weeks. I continue his narrative. "The stones came away nearly white, about the size of a pea, and a lot of phlegm-stuff with them; a good many of them at different times, loose in the injections, always floated, soft looking" (the effect of the oil); "I never touched any food till they came away. They were coming away for a week or a fortnight. I should think quite a couple of pounds. I never felt ill since and had no return of the stones (i.e., over three years). I am quite different. I can eat and drink anything and enjoy a good dinner and do a bit of gardening." He looks plump and cheerful and he still retains his vermiform appendix.

A third type is constantly obtruding itself on the general practitioner and calling for his help. It includes the large class suffering from "windy spasms." It might be called the "borborygmous type." The following is a case in point.

The patient, a married woman, aged 38 years, was a strong, active, well-nourished person engaged in a very trying business. Her abdominal girth was so great that she had not been able to stoop. It was so obtrusive and obstructive that [illegible] be carried on at a con- [illegible] s also were coarse and [illegible] from wind, pain in the descending colon and above it, constipation, frequent faintness, palpitation, bre [illegible] fear of impending death), [illegible] great as to drive her [illegible] stimulants. Two years ago I told her that she could be cured only by submitting to a six weeks' course of treatment to empty her cæcum. But this did not commend itself to her. She had only palliatives and temporary relief from aperients from many sources. At last, on March 21st, 1903, she was so very unwell and low-spirited from her continual ill-health that she asked me to undertake what I had so often recommended, hoping that I might not require six weeks. I told her the probability now was that a longer time would be required to finish the work, more likely three months, but in any event she was to permit me to finish it and then I promised she would be free from her constant illness.

The case is of great interest in many ways and I kept an account of my daily work but will here give only a few extracts. The colon was choked from beginning to end with a large cushion of sulphuretted hydrogen saturated, hard, fusiform fæces. On April 22nd, after a month, she could feel the warm enema trickling up and across and, when she turned on her right side, down the colon to the cæcum. A few whitish specks like "curdled milk" (mucin) appeared floating on the surface of the returned enema. She had observed it two or three times already. I promised her a closer and larger knowledge of them before long. On the 25th she had a clear, free drain-pipe (the colon) that would carry off any amount of gas (34 days). On the 27th I was greeted with the following: "I had such a lot of very funny stuff come away after you left on Saturday (25th), a lot of white jelly stuff, clear, and the pieces as big as the top of that bottle (two inches in diameter). I never had such stuff come from me and such a lot of it." I reminded her of my promise of the 22nd that she would see much more of the jelly. My previous case had drawn my attention to this jelly where the surface of the water had been covered with a layer of pieces like "curdled milk," which pieces the microscope showed to be mucin with its numerous variously shaped "goblet cells." Occurring again here and seeking for its meaning I could only think that the jelly had stood between me and the concretions, forming a pellicle over them which the stream of water had broken up and washed away, then only allowing me to act on the old, hard, dry concretions. When I had entirely got rid of these (in 37 days) on May 26th my opinion was strengthened by a similar pellicle coming away whole and *with a tail hanging from it in the shape and* position of an appendix. On the 26th the following note was made: "Enema brings away an empty bag in the shape of the end of the cæcum with a prolongation like an appendix but much larger." There was no sign of abscess or inflammation in all this and the pyogenic-looking membrane was a tough protecting layer with probably a physiological function rendering these old concretions harmless. The membrane was accompanied by some dozen or less small typical concretions, *fresh* for the first time. (65 days passed before the appearance of fresh concretions.) The cæcal contents had been open to attack from the time the large jelly stool appeared on April 19th, 27 days after commencement of treatment. Therefore the actual washing away of the cæcal contents required 37 days.

As the case progressed the patient's facial lines became *finer, her protuberant abdomen receded, and she could stoop* when she was reduced to 52 inches, about half way through the treatment. On May 27th the following note was recorded: "A special interest in this case was the persistent hardness and dryness of the cæcal concretions, never to the end coming away in masses like most others." On June 20th the bowels had acted two or three times every day without aperient—"a baby's really." The patient felt better, could talk better, think better, and for the first time acknowledged the complete benefit which she had derived from this long anxious work. She said that her husband also saw it as did all her friends.

There is a class of cases, the largest of all, from which I expect the most striking evidence of benefit from this treatment. I have not had the opportunity of putting my practice to the test in this field, but as a district medical officer since 1868 I have had *only too ample means of forming an opinion* and that is one of dissatisfaction with the constant march of so many, young and old, to lunatic asylums. I know the profound effect on the mind produced by a loaded cæcum and the return to mental health when it is emptied. I have seen [illegible] by it only and stopped by the [illegible] on also seems to be the only [illegible] in puerperal eclampsia and I recall cases of lunacy where now I would adopt this treatment before filling up the certificate. May not some, many of the thousands of patients in these asylums, be benefited by this treatment? The delusions in the first case would have warranted a certificate: emptying the cæcum dissipated them. The medical officers of asylums have an ample choice before them; I ask them to help on the inquiry. It is worth while emptying the cæcum.

NOTES ON THE ETIOLOGY OF LUPUS AND ON CASES TREATED BY THE X RAYS AND FINSEN LIGHT.

BY FRANK H. JACOB, M.D., M.R.C.P. LOND.,
PHYSICIAN TO OUT-PATIENTS AND TO THE ELECTRICAL TREATMENT DEPARTMENT, NOTTINGHAM GENERAL HOSPITAL.

I HAVE attempted to work out the personal susceptibility and also the actual source of infection in 30 cases of lupus under my care with the following results. In 22 of the cases there was a history of phthisis in near relatives, while in eight no such history could be obtained. In three cases the lupus appeared while the patient was actually nursing a case of phthisis and in one while nursing a [illegible] of hip with a discharging sinus. In three cases lupus appeared in an infant whose parent was suffering from phthisis and in one case the father had died a year previously from phthisis. One patient habitually used the same towel as her sister who was suffering from lupus. In two cases the disease arose on the wrist of a patient suffering from phthisis. In one case it arose from the margin of a wound left after excision of glands in the neck and in two cases it arose from the margin of a chronic abscess in the neck. In one case it occurred in the wound caused by a blow over the tibia. Thus in 15 cases the origin could be traced with tolerable certainty. In addition I may mention that six cases presented blocking of a nasal duct previously to the appearance of lupus of which cases four were probed prior to the onset of this disease.

Treatment of the cases of lupus.—The treatment which I now believe to be the most efficacious is as follows. For extensive cases the x rays should be applied as a routine treatment for ten minutes three times a week. I aim always at producing a mild reaction, as in my experience a reaction leads to a more rapid result. For special cases modifications are necessary. For example, I have one patient the whole of whose face (except the forehead), left arm, left foot (except the sole) and leg up to the knee were affected with rapidly spreading active lupus; that on the face was of the superficial plaque variety; on the arm and leg it was likewise of the plaque variety but deeper. the dorsum of the fingers showed a markedly verrucose condition, the leg was very much thickened, and the dorsum of the foot was ulcerated. The face, arm, and leg were each treated twice a week with 20 minutes' exposure on each occasion. Now, after two years' treatment I can only find on the face two small areas close to the ear of about the size of a threepenny-piece, on the arm no lupus at all, on the leg a few small areas close to the knee, the thickening is markedly less, and the ulcer has long ago healed. These few peripheral portions are now receiving special attention and will soon be cured. Another patient lives a long distance away and is moreover very poor, consequently she is only able to attend at intervals varying from four to eight weeks; she then stops a week-end with relatives in the town and has 20 minutes' exposure on Saturday, Monday, and Tuesday. This causes a distinct reaction. She had originally a very thick patch on the left cheek of ten years' duration, about two by one and a half inches in diameter. After 18 months' treatment she is now almost cured, there being just a little very thin lupus at the upper margin.

For ulcerated septic cases the x rays have proved most admirable, cleaning and healing being completely established in from four to eight weeks; the subsequent curing of the lupus of course takes very much longer.

Deep nodules formerly gave me considerable trouble as they were apt to persist when the more superficial portions had entirely disappeared. In my cases the deepest nodules have been situated in the centre of the cheek and in the cartilaginous portion of the nose. I now treat them as follows. With a wooden match I place a small drop of pure phenol on the top of the nodule; when the surface is thoroughly anæsthetic I penetrate the nodule with a pointed match dipped in pure carbolic acid and when the deeper portion is also anæsthetic I thoroughly rub the carbolic acid into the nodule, then while the part is still white from the carbolic acid I apply the Finsen lamp (London model), limiting its action to the area required in order that I may induce a somewhat severe reaction without unduly punishing the patient. This repeated some three or four times is usually sufficient to establish a cure. The disadvantage of this treatment is that it is liable to leave small pits.

I treat *small limited areas* in the same manner as the deep nodules, in some cases producing a reaction with the x rays instead of the Finsen lamp The result is very satisfactory and the most rapid with which I am acquainted.

Rodent ulcer.—It is an advantage of life in a small town that one is able to trace the after-history of cases with more readiness than is possible in London. This after-history shows recurrence to be extremely frequent; this is, I believe, due in a great majority of the cases to insufficient treatment. Inasmuch as the disease is not the ulcer but the new growth it is obviously necessary to continue treatment until every suspicion of new growth has disappeared and if this be rigorously carried out I believe that recurrence will become as rare as it is now common. There is, however, another cause of recurrence—viz., that the ulcer is due to a true carcinoma of the skin and is not a rodent ulcer. I have one such case with deep excavation and very thick hard margins, which though once healed by the x rays recurred and has progressed rapidly in spite of treatment.

Eczema.—Two cases of eczema of the palm have been treated by the x rays; they both presented great thickening of the horny layer of the epidermis, which was traversed by deep bleeding cracks; for eight years one, and for seven years the other, had been unable to perform even light household duties such as dusting. The first case after six months' treatment was completely cured and now remains after three months without a relapse, though she does her own scrubbing. The second case was cured by one month's treatment, the diminished length of treatment being due to my experience of the first case having taught me that the necessary factor in the treatment was to produce sufficient dermatitis to cause active desquamation.

Ringworm.—It was in July I first treated ringworm by depilation by means of the rays; since then my aim has been to reduce the number of exposures necessary to obtain depilation to the minimum and to produce it without any reaction, for my experience with lupus in hairy parts taught me that no trace of reaction is necessary for this purpose. With my apparatus I can accomplish this by two applications of half an hour each at intervals of a fortnight. I am now aiming at depilating only the affected hairs and in one case I have, I believe, effected this.

Lupus erythematosus.—I have only completed treatment in one case and that a chronic patch of the sebaceous type of eight years' duration occurring on the nose. This has now been completely cured for four months and shows no indication of relapsing.

With respect to apparatus, the essential point is to know your own plant, more especially your tubes, and when in doubt to try them on yourself, so that you may be certain of either not producing a reaction or inducing that degree of dermatitis which you may desire without risk of producing a serious burn.

Nottingham.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Prœmium.

UNIVERSITY COLLEGE HOSPITAL.

A CASE OF LONGITUDINAL FRACTURE OF THE TIBIA.

(Under the care of Mr. RICKMAN J GODLEE)

FOR the notes of the case we are indebted to Mr. J. B. Burt, late house surgeon.

A man, aged 46 years, was admitted into University College Hospital on Nov 21st, 1903. Whilst getting off an omnibus he struck his left knee forcibly against the mudguard behind the wheel He was able to stand after the accident but on attempting to walk fell down. On admission to the hospital the injured leg was so painful that any accurate examination was impossible. The leg was swollen and the knee joint was distended; it was evident that there was some severe injury about the joint but its exact nature could not be made out without an anæsthetic.

Under chloroform the physical signs were as follows: 1. Genu valgum—this deformity could be reduced by extension applied to the foot. 2 Undue lateral mobility of the tibia on the femur but no increased antero posterior mobility. 3 An increase of the width of the upper end of the tibia; measured with callipers the greatest width of the upper end of the right tibia equalled three and a half inches and the greatest width on the left side was four inches. Perhaps some slight allowance should be made for the œdema in the latter case. 4 An undue projection outwards of the external tuberosity of the tibia without an equal displacement of the internal tuberosity. 5 No evidence of a transverse solution of continuity of the femur or the tibia. 6. When the upper end of the tibia was compressed laterally a clicking sensation was felt. There was also some coarse, soft grating when the knee was flexed. 7 Distension of the knee joint. Under the anæsthetic the genu valgum was reduced by extension and a Croft's plaster splint was applied. A skiagram showed a longitudinal fissure beginning at the articular surface of the tibia just external to the middle line and extending downwards for two inches On the inner side a small, oblique fracture between the internal tuberosity of the tibia and the shaft could be seen. Ten days after the splint was applied massage and passive movement were employed. The swelling of the leg was still considerable. Ten days later the patient got about on crutches, the injured limb being still fixed in the Croft's splint. When the patient left the hospital the width of the tibia was markedly greater than that of the other side. He could bend the knee through an angle of 30° only. *Attempts at forcible bending of the knee apparently caused* much pain. He attended at the hospital to be seen two months after the accident. Movement was still impaired; he could now move his knee through an angle of 60°.

Remark by Mr. GODLEE.—*The rarity of the accident* and the very imperfect accounts of it which are to be found in the text-books make it worth while to put this case on record, especially as the exact nature of the injury is now ascertainable by means of a skiagram.

LINCOLN COUNTY HOSPITAL.

A CASE OF TOTAL PARAPLEGIA DUE TO CARIES OF THE MIDDLE DORSAL VERTEBRÆ; COSTO TRANSVERSECTOMY; COMPLETE RECOVERY.

(Under the care of Dr. W. H. B. BROOK.)

A YOUTH, aged 17 years, was admitted to the Lincoln County Hospital on Sept. 22nd, 1902, complaining of loss of power in the legs of four weeks' duration. In November, 1901, he noticed a lump on his spine in the mid-dorsal region which was very painful but the pain disappeared after two weeks' rest in bed. He was able to resume work till May, 1902, when he had to give up. He wore a plaster jacket from March to May, 1902, since which time he had been confined to his bed. During the last four weeks he had lost the use of his legs and had had incontinence of urine. There was no family history of phthisis or any form of tuberculosis.

On admission there was an angular curvature of the spine in the mid-dorsal region, the sixth and seventh spinous processes being very prominent. Percussion caused no pain and there were no signs of the pointing of any collection of pus. There was a girdle sensation at the level of the epigastrium Sensation in the legs was much impaired but not entirely lost. The patient could move the legs but not well. The legs were spastic but there was no muscular atrophy. The knee jerks were exaggerated but the Babinski reflex was absent. There was difficulty in retaining the urine which was acid, containing phosphates but no albumin or sugar. The heart and lungs appeared to be healthy. A seven-pound extension was applied to each leg, the foot of the bed being raised, and the patient was ordered compound syrup of phosphate of iron with cod-liver oil and malt. On Nov. 7th, during the six weeks that had elapsed since his admission, the patient had become steadily worse He had now complete paraplegia; sensation was totally lost in the right leg and almost so in the left. The knee-jerks were much exaggerated and ankle clonus was violent Babinski's phenomenon was present in both feet Urine and fæces were passed unconsciously. There was a girdle sensation at the level of the seventh rib but no pain over the prominent spinous processes. In spite of the most careful nursing there were sores on both heels. The temperature was from 98·4° to 98 8° F. A skiagram was taken which showed blurring in the region of the seventh and eighth dorsal vertebræ From this it was considered that tuberculous matter was present and was pressing upon the cord and it was decided to attempt to relieve this pressure by operation

On Nov. 8th, under chloroform, a transverse incision three inches long was made commencing at the right of the sixth dorsal spinous process, slanting slightly downwards and extending to the right. The muscles exposed were cut through until the right transverse process of the eighth vertebra was laid bare; this was cut through at its base and removed. The periosteum of the eighth rib was incised from the head to the tuberosity and carefully stripped from the rib which was divided and its head and neck were removed. Whilst this was being done thick curdy pus welled up and it was found that the head of the rib was carious and detached from the body of the eighth vertebra, which was practically destroyed. A sharp spoon was introduced and all the soft bone was carefully scraped away as far as possible, care being taken not to wound the dura mater or the pleura. A drainage-tube was inserted and iodoform emulsion containing 1 in 40 carbolic acid was injected and the cavity was lightly packed with iodoform gauze. The patient was placed on a mattress made in sections to facilitate dressing and a seven-pound extension was applied to each leg. On the day following there was a slight return of sensation in the right foot and on the third day there was voluntary movement in the great toe of each foot. On the 29th there had been steady improvement from day to day, sensation *was perfect and the legs could be moved freely, but there* was still incontinence of urine and fæces. On Dec. 27th the improvement had continued. He could now lift each leg easily from the bed and there was control over the *bladder and rectum. The sores on the heels* had rapidly healed. The girdle pain had disappeared. On Jan. 8th, 1903, the drainage-tube was discontinued; since the operation the wound had been dressed every other day and the emulsion injected. On the 28th the wound was quite healed. On Feb 4th the patient was fitted with a steel spinal support consisting of a pelvic band and two dorsal rods an inch apart, with shoulder straps and plates so arranged as to support the spine where it was defective. On the 15th he was allowed to sit up for an hour daily, wearing the apparatus. The Babinski phenomenon had disappeared. On March 13th he was able to walk well.

Remarks by Dr. BROOK.—On first seeing the case it was difficult to decide whether the paraplegia was due to compression of the spinal cord or to pachymeningitis, as there was no sign of any collection of pus. The fact that there was no tenderness over the prominent spinous processes excluded meningitis, and the skiagram, which showed a blurring at the site of the disease, was suggestive of the presence of caseous deposit and inclined me to think that I had to deal with a case of pressure paraplegia due to tuberculous matter outside the dura mater. It was suggested that laminectomy might give relief; this, however, would have deprived the spinal column of the support of the only part which at the level of the disease was still sound. I therefore tried what could be done by rest and extension but without any benefit, and I then decided to endeavour to reach the disease from the side. There was no great difficulty about the operation which was rendered all the easier by the head of the rib being detached from the vertebra. Care had to be taken not to damage the spinal cord on the one hand or the pleura on the other. It is interesting to note that although sensation began to return within 24 hours and the ability to move within 48 hours it was not until six weeks had elapsed that power over the bladder and rectum was regained. The disappearance *of the Babinski phenomenon is also of* interest. I have to thank Dr. P. Kinmont and Mr. J. T. Crowe, the house surgeons, for their care and interest in the case and my partner, Dr. A. Stanley Green, for the very excellent skiagrams which he obtained.

BRISTOL ROYAL INFIRMARY.

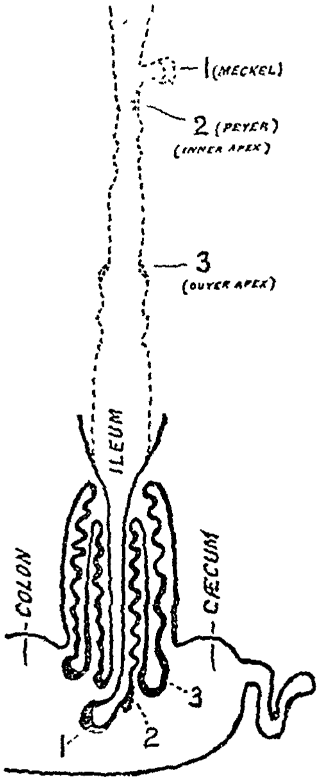
A CASE OF TRIPLE TELESCOPIC INTUSSUSCEPTION ORIGINATING IN MECKEL'S DIVERTICULUM.

(Under the care of Mr T. CARWARDINE.)

A VERY collapsed child, aged 14 months, was admitted under the care of Mr. Carwardine in February, 1903, for intussusception of two days' duration although no tumour could be felt on abdominal examination. A rapid operation was performed and the small gut was eventrated. An intussusception of the lower ileum was found which had just entered the colon. This was reduced with some slight difficulty and then another invagination was found within the first and on reducing the latter an inverted Meckel's diverticulum finally appeared, dark and swollen, and was reduced. There were thus three invaginations, one within the other, like a telescope when closed. The bowel was emptied and nutriment was injected but the child never recovered from the collapse

Necropsy.—At the post-mortem examination a thickened dark Meckel's diverticulum was seen about 15 inches from the ileo-cæcal valve and a gangrenous Peyer's patch half an inch lower down. Still lower was a large patch of early gangrene.

Remarks by MR. CARWARDINE.—As the condition must be extremely rare the illustration may be of service to elucidate



Diagrammatic representation of intussusception.

what may be termed a "telescopic" invagination. The dotted lines represent the parts when reduced and the numerals refer to corresponding points.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Discussion on Arterial Sclerosis.

A MEETING of this society was held on Feb. 16th, Dr. F. W. PAVY, Vice-President, being in the chair.

Dr. T. D. SAVILL opened the discussion on Arterial Sclerosis by reading a paper on Arterial Hypermyotrophy and other Morbid Changes which occur in the Muscular Tunic of the Arteries. He said that arterial sclerosis might be defined as a chronic, generalised thickening, condensation, or degeneration of the arterial walls, in which the walls were hard or less elastic than normal and the lumen remained unduly patent after death. Three kinds were recognised—intimal, medial, and adventitial sclerosis—and these should be studied separately. Adventitial and intimal sclerosis were, in Dr. Savill's view, very often secondary to disease of the muscular coat. Atheroma (a patchy fibro-cellular infiltration of the intima) must be regarded as totally distinct from intimal sclerosis. A large number of cases had been examined at the Paddington Infirmary and clinical and pathological details of 30 cases were submitted which presented circulatory symptoms during life and in which the arterial system was carefully studied, with the naked eye and microscopically, after death. The methods adopted were described. Measurements were made with a micrometer eye-piece. The paper dealt almost exclusively with the changes which took place in the muscular tunic. The importance of the muscular coat was first emphasised on histological, physiological, and pathological grounds. The muscular tissue of the arteries constituted the parenchyma or proper tissue of the arterial system, and on its performing its correct function the healthy action of the cardio-vascular and many other systems depended. In relation to the pathological importance of the muscular coat the case of a woman who died at the age of 100 years was described and sections of her arteries and organs were exhibited in illustration of the following conclusions at which Dr. Savill had arrived after examining the bodies of upwards of 400 persons who died at 60 years of age and upwards: (1) that extensive patchy atheroma was consistent with extreme longevity and with the total absence of symptoms or vascular complications; and (2) that the same remark applied to marked generalised intimal and adventitial sclerosis, provided (*a*) that the tunica media was relatively free from hypertrophy or disease and (*b*) that the balance between the heart and arteries was not materially disturbed. On the other hand, moderate disease of the muscular tunic was a serious potential evil. Morbid changes in the muscular tunic of the arteries might be grouped as follows:—1. Atrophy was not common but had been found in some wasting diseases. 2. Hypertrophy was more frequent and was not uncommon after middle life, though the measurements were so refined that it was difficult to be positive. 3 Cloudy swelling in the muscular fibres was a change which could not always be revealed by the stains in ordinary use, but with acid orcein the slightest degree might be demonstrated. Acid orcein was a most valuable stain; by its proclivity for elastic tissue it also defined both the internal and the external boundaries of the tunica media in complex specimens. 4. Granular degeneration was frequently associated with cloudy swelling. All these four changes had a generalised distribution in the arterial system, though often more marked in one area (in the lower extremities, for example) than another. (5) Necrosis and (6) calcification both occurred as spots or foci of various sizes. Calcification might take the form of plates or of transverse spicules. Transformation of the tunica media into fibrous tissue was never met with in specimens adequately prepared and stained. Arterial hypermyotrophy was a term used by Dr. Savill in 1891 and again in 1897 to describe a generalised increased thickness of the muscular tunic of the arteries due to an increased volume, with or without numerical increase, of the individual muscular fibres. It was to be regarded as primarily a genuine muscular hypertrophy, just as an increased thickness in the cardiac wall in like circumstances was so regarded. The fact of degeneration having commenced by the time a case reached the post-mortem room did not negative the existence of hypertrophy. It was very often antecedent to medial degeneration. Clinically arterial hypermyotrophy constituted a distinct pathological condition of prolonged course, capable of recognition during life by careful investigation sometimes but not necessarily associated with chronic renal disease and constituting in itself one of the main pathological conditions on which cerebral and other hæmorrhages depended. The 30 cases which form the chief basis of this communication were divided into two groups. In Group A (17 cases) arterial hypermyotrophy was relatively uncomplicated by other arterial disease and these represented some of the earlier phases of the disorder. Group B (13 cases) were more or less complicated with intimal and adventitial sclerosis and degenerations; these probably represented the final stage. Microscopical sections of the arteries and arterioles were examined, measured, and compared with normal specimens. Typical cases were described. One case was met with while searching for a normal standard. Another was that of a man, aged 56 years, who exhibited numerous circulatory symptoms during life and who died from cerebral hæmorrhage. The urine, kidneys, and other organs were normal, but the heart and arteries presented hypermyotrophy. The average increase of the tunica media amounted to $\frac{5\cdot}{2\cdot5}$ of normal in the lower extremities, $\frac{\cdot1}{2\cdot5}$ of normal in the abdomen and upper extremities, and $\frac{2\cdot6}{2\cdot5}$ of normal in the cerebral arteries. The tunica intima was practically normal. The tunica adventitia was very slightly increased. In the 17 cases in Group A the media measurements showed an average increase in the media amounting to about 50 per cent., the greatest being $\frac{4}{5}$ and the smallest $\frac{1}{8}$. Among the causes of arterial hypermyotrophy, its relationship to chronic renal disease was first discussed. That it resulted from chronic renal disease was admitted. But that it might also occur independently of renal disease was evidenced by the fact that of 30 cases submitted chronic renal disease existed in only four of Group A and in five of Group B; the remaining 21 presented no urinary changes during life or evidence of renal disease after death. Objection was taken to the term "chronic Bright's disease" being applied to a generalised condition, consisting [illegible]

[illegible] suggested that such a generalised condition was in reality a condition described clinically as senile hyperpiesis by Professor Clifford Allbutt, or anatomically as arterial hypermyotrophy, with their concomitant circulatory and nutritional defects. 2. Hypertrophy of the heart existed in all of the 17 cases in Group A and in all but two of the 13 cases in Group B. The average weight of the heart in Group A was 13·9 ounces and in Group B 12·5 ounces. It might be regarded either as a cause or as a result of arterial hypermyotrophy, or as a product of a cause common to both. 3 High blood pressure was observed in all cases of arterial hypermyotrophy seen during life before a final stage supervened. The causes of high arterial tension could generally be revealed in their history and evidently played a leading rôle in the causation of arterial hypermyotrophy. Heredity, age, and other causes were also discussed. The consequences of arterial hyper- [illegible] Among [illegible] occurred [illegible] occurred [illegible] A table of the causes of death was submitted.

Professor **CLIFFORD ALLBUTT**, after alluding to the discussion which had occurred on arterio-sclerosis between Gull and Sutton on the one hand and George Johnson on the other, said that from clinical observation he recognised three forms of arterio sclerosis, which might be superficially alike but were very different in nature and causation. These three forms were: (1) toxic, that was the effect of lead and certain of the infectious diseases, such as syphilis, and of diabetes; (2) involutionary, that was senile decay, a change which might appear before the age of 70 years; and (3) secondary, the effect of arterial hyperpiesis, the form in which the muscular coat of the artery was hypertrophied. The forms 1 and 2 were not necessarily attended by a rise of arterial pressure, but form 3 essentially depended on hyperpiesis for its initiation. The forms 2 and 3 might concur in the same patient, but this was not the rule. In the "involutionary" form calcification was more prone to occur and the disease was more disposed to attack all the coats of an artery than in hyperpiesis. In form 2 the heart was not hypertrophied or dilated, or only in the slighter degrees; it was often in fairly good working order and death did not depend upon strain of the heart. It was on group 3 that the discussion mainly turned and he stated that he was of opinion that the first apparent factor was a rise of arterial pressure and that the arterial disease was a mechanical consequence of the sustained hyperpiesis instead of the converse as was generally believed. This factor probably depended in its turn upon some alteration of the blood and the alteration of the blood again upon some more or less specific perversion of metabolism. The chemistry of the body was perverted, the blood was altered, and whether by this alteration the fluid became more viscous and so traversed its channels more reluctantly or received some quality irritating to the vessels which by their responsive contraction hindered its flow was doubtful. From this abnormal resistance in the periphery the pressure rose, the vessels became dilated, and the dilatation was counteracted by hypertrophy. By this means a balance was brought about and circulation was carried on though with excessive expenditure in labour. He had noticed that even in old people arterial hyperpiesis might establish itself and yet be permanently reduced by appropriate means. The production of the condition depended upon a sedentary life and high feeding, but, on the other hand, it occurred in patients who were perfectly temperate. He believed, however, that replétion, relative or positive, was the cause of the majority of cases. He believed that arterial hyperpiesis had a definite train of symptoms and formed a distinct clinical type.

Dr. J. F. H. **BROADBENT** held that under the term "arterio-sclerosis" must be included degenerative lesions of the aorta comprised under "atheroma," as well as those of the smaller vessels. It was scarcely possible to consider them apart as the two conditions were etiologically and pathologically closely allied. In studying a case of vascular degeneration it was advisable to examine carefully macroscopically and microscopically the condition of the aorta, cerebral vessels, kidney, coronary arteries of the heart, and one of the vessels of the extremities—e g., the radial—as the incidence of the lesion varied greatly. On these lines he had examined the vascular changes in some 16 cases of cerebral hæmorrhage, which was one of the most common accidents associated with arterio-sclerosis. In two instances the patients were 80 years of age and the hæmorrhage was the result of senile degeneration of the vessels. Of the remaining 14 seven were associated with granular kidney, and seven with a *type of kidney in which the most* characteristic changes were thickening and hyaline degeneration of the inner coat of the vessels; the kidneys were of about normal size, the capsule stripped leaving a smooth surface, and the [illegible] In all these 14 [illegible] artery were greatly hypertrophied but the latter showed no signs of degeneration. The cerebral vessels were dilated, thin, and hyaline, or were studded with small white patches which microscopical examination showed to consist of localised thickening and degeneration of the sub endothelial tissue over which the muscular coat could be traced, though thin and atrophied in some instances. In four cases there was advanced atheroma of the aorta; in the remainder there were only slight degenerative changes immediately above the aortic valves or no appreciable naked-eye change. The condition of the coronary arteries was not investigated in all the cases, but in two there was advanced degeneration and in four they appeared healthy. The main clinical characteristics [illegible] admission, so that the clinical history was imperfect The high tension was presumably due to increased peripheral resistance from a tonic contraction of the arterioles and capillaries induced by some toxic substance in the circulation. In granular kidney the toxin was the result of imperfect elimination by the diseased organ In the second group of cases high arterial tension probably antedated by many years disease of the kidney and the toxins which induced hypertonicity of the peripheral arterioles also gave rise to the thi[illegible] the renal vessels. They [illegible] e g., lead—or they migh[illegible] due to imperfect metab[illegible] and a gouty diathesis were important factors. The increased peripheral resistance induced hypertrophy of the heart and muscular coat of the systemic arteries which was not to be regarded as a disease but as a response to increased work. The cerebral vessels, however, being poorly provided with muscular tissue became dilated *under the constant and increasing* pressure; their nutrition was interfered with, thickening and degenerative changes occurred in the sub endothelial tissue, the muscular coat became atrophied over the bulging necrotic tissue, and rupture frequently occurred. This type of degeneration, common in the aorta and cerebral vessels, was not met wit[illegible] degeneratio[illegible] ration of t[illegible] From the [illegible] induced by some prolonged toxæmia and to which hyaline degeneration was akin he thought it probable that toxic products in the circulation were the predominant factors in vascular degenerations in the kidney, while high arterial tension was mainly responsible for lesions in the cerebral vessels. In regard to degenerative changes in the aorta with which aneurysm was so frequently associated, intermittent strain associated with arduous occupations was doubtless in many instances responsible, as Professor Clifford Allbutt had originally suggested. Syphilis was, however, an important etiological factor in a large number of cases. Clinically, from the history of the case, the age and occupation of the patient, the condition of the vessels, and the presence or absence of high arterial tension, it was possible in the majority of cases to arrive at a diagnosis as to the cause of the degenerations. Post mortem it was not easy from a macroscopical examination to form any certain conclusion. Microscopically in a certain number of cases he had found endarteritis obliterans of the vasa vasorum which had caused localised areas of necrosis in the vessel wall from impaired nutrition. In two of these cases there was a definite history of syphilis and he thought that by careful microscopical examination a differential diagnosis between degenerative lesions due to syphilis and those due to strain or other causes might be made on these grounds. Dr. F. W. Mott, in his article in Allbutt's "System of Medicine," had called attention to endarteritis obliterans of the vasa vasorum in syphilis. Possibly other toxins might act in this way; it was common to find patches of degeneration in the aorta of young children who had died from an acute illness such as pneumonia or septicæmia, or from tuberculosis or diabetes, and he thought that in many instances such localised degenerations might be the origin of degenerative lesions leading to aneurysm in later life.

Dr. F. PARKES WEBER observed that admitting the justness of Dr. Savill's contention that the unstriped muscle ought to be considered the parenchymatous tissue of the arterial walls in the same sense that cardiac muscle was termed the parenchymatous tissue of the heart walls, he (Dr. Weber) thought it followed that arterial hypermyotrophy bore the same relation to arterio-sclerosis that cardiac hypermyotrophy bore to cardio-sclerosis. The discussion that evening had centred rather on arterial hypermyotrophy than on arterio-sclerosis. Dr. Weber thought that in most cases the hypertrophy in the muscular part of the arterial walls served a useful (that was a compensatory) purpose and illustrated the laws of action and reaction which governed vital phenomena in general Apparent exceptions were, however, to be found in cardiac or arterial hypermyotrophy of nervous origin, such as the cardiac hypermyotrophy sometimes met with in persistent tachycardia without valvular disease (some cases of Graves's disease) and the arterial hypermyotrophy sometimes met with in limbs affected by conditions allied to erythromelalgia and Raynaud's symptom-complex. These apparent exceptions to the general rule of vital reaction doubtless arose from portions of the nervous system (concerned in the reactions in question) themselves being abnormal. As a possible, though very rare, cause of arterial hypermyotrophy Dr. Weber instanced a condition on which Professor Osler and others had recently written, in which the blood was about twice as rich as it normally ought to be in red corpuscles. Such an extreme increase in the proportion of corpuscles must necessarily render the passage of the blood through the arterioles more difficult

Dr. PAVY said that the two important factors in the production of arterio-sclerosis were some toxic agent and renal disease. Cases did, however, occur which in their superficial aspect presented all the characters of Bright's disease, but on examination of the urine there was no albumin or cast. He mentioned the case of a woman who at first suffered from attacks of headache, vomiting, and transient aphasia from which she rapidly recovered. At this time the urine contained no albumin and no casts. Some years later the attacks of headache recurred and the arterial tension became greater, and at a later period granular casts appeared in the urine and at a still later time albumin. The cardio-vascular symptoms preceded the renal disease. It was probable that a defective metabolism gave rise to a toxic agent which produced the vascular change. He mentioned a case in illustration of the fact and said that it was of great importance to diminish the quantity of nitrogenous food in such cases.

CLINICAL SOCIETY OF LONDON.

Fibroid and Calculous Disease of the Pancreas with Jaundice and Diabetes.—Two Cases of Malignant Anæmia associated with Caries of the Teeth and Suppuration of the Upper Jaw.—Operation for Ankylosis of the Temporo-maxillary Joint —Two Cases of Tuberculous Disease of the Thyroid.

A MEETING of this society was held on Feb. 12th, Dr. FREDERICK TAYLOR, the President, being in the chair.

Dr. SIDNEY P PHILLIPS reported a case of Fibroid Disease and Calculi of the Pancreas with Jaundice and Diabetes. The patient was a married woman aged 26 years, who about Christmas time, 1901, began to suffer with epigastric pain. In February, 1902, jaundice appeared with absence of bile from the stools. There was no history of biliary colic. An exploratory operation was performed t St. Mary's Hospital by Mr. Edmund Owen[1] on April 3rd, when a great enlargement, judged to be non-cancerous. of the pancreas was found. On June 14th 8 per cent of sugar was present in the urine and six months later the jaundice entirely disappeared but the diabetic symptoms progressed. On Jan. 25th, 1903, she was attended at her home by a medical man for diabetic coma from which she died on the following day. A partial necropsy was obtained. The pancreas was much enlarged and presented a considerable degree of fibroid change throughout, with numerous small calculi of varying size, so that sections of the organ were gritty. Microscopically there were almost complete replacement of pancreatic tissue by fibrosis and destruction of the islands of Langerhans. The occurrence of the jaundice was explained by obstruction of the common opening into the duodenum of the pancreatic and bile ducts. The glycosuria was of the type usual in pancreatic diabetes. The diagnosis of pancreatic disease in this case was not assisted by the administration of salol.—Dr. NORMAN DALTON inquired whether the pancreas was smaller at the necropsy than at the time of operation and pointed out that its diminution in size was probably analogous to that of a cirrhotic liver.—Mr. LEONARD A BIDWELL remarked that the gall-bladder was generally distended in cases of chronic pancreatitis. He thought that the gall-bladder should have been explored in this case He had operated upon four cases of this affection and in none of them was glycosuria observed after the operation. The cause of the jaundice in the present case might have been due to a calculus which had been originally impacted in the ampulla of Vater —Dr. WILLIAM PASTEUR remarked on the view that was held that obstruction of the pancreatic duct led to fibrosis of the pancreas and referred to a case in illustration of occlusion of the pancreatic duct by scar tissue in the duct. All the ducts in the pancreas itself were dilated but there was no fibrosis in this instance.—Dr. PHILLIPS replied.

Dr. DALTON narrated two cases of Malignant Anæmia associated with Caries of the Teeth and Suppuration of the Upper Jaw. The first case was that of a man, aged 21 years, suffering from debility, pallor, anæmic bruits, epistaxis and other hæmorrhages, and vomiting. The disease lasted only eight months and there was no necropsy. There was no enlargement of the spleen or lymphatic glands. The interest centred in the urine, the suppurative lesions, and the blood. The urine was never high-coloured. The teeth were carious and there was an alveolar abscess which after incision left a sinus in the hard palate. Otorrhœa was also present. The blood showed progressive oligocythæmia, the red discs falling from 1,200,000 per cubic millimetre on admission to 393,720 three months later. The hæmoglobin was also diminished and there was marked leucopenia, the lymphocytes being in excess of the polynuclear cells. The second case was that of a girl, aged 17 years, who had lived in extreme poverty. She had been ailing for some time but the illness only became acute three weeks before she was admitted to King's College Hospital, where she died five days later. The urine was pale, the teeth were carious, and there was an abscess in the upper jaw from which pus was constantly oozing. The blood only contained 816,000 red cells per cubic millimetre and 17 per cent. of hæmoglobin. The leucocytes numbered 3500 per cubic millimetre. At the necropsy there were subserous and submucous hæmorrhages. There was no free iron in the liver and the red marrow was fatty. In neither case could surgical treatment be undertaken on account of the tendency to hæmorrhage. Dr. Pasteur had described an exactly similar case but there was no suppurative lesion —Dr. WILLIAM HUNTER agreed that the cases corresponded in a remarkable way to those which he had described as "septic anæmia" which had been previously included under the title of "pernicious anæmia" but were distinguished therefrom by the absence of evidence of the hæmolytic changes in the urine, the presence of a low type of pyrexia, the absence of the bone marrow changes generally seen in true Addisonian anæmia, and the grave prognosis attached thereto unless the focus of suppuration could be removed.—Dr. PASTEUR referred to the case which he had brought before the society last November in which hæmolysis was excessive but there was no suppurative lesion. He therefore concluded that for the present his case must stand alone.—Mr LEONARD S DUDGEON inquired if streptococci were present in the blood previously to the injection of antistreptococcic serum.—Dr F PARKES WEBER understood Dr. Dalton to say that something more was necessary for the production of anæmia than sepsis alone.—Dr DALTON replied that he considered that persons with carious teeth were always in danger because at any moment an unknown factor might supervene and convert a condition of simple ill-health into a malignant form of anæmia which was rapidly fatal. He thought that Dr. Hunter's phrase of "septic anæmia" was a little unfortunate as tending to cause some confusion with the true Addisonian anæmia in which a special form of sepsis occurred on the tongue.

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[1] Brit. Med. Jour., Oct. 25th, 1902.

Mr. J. JACKSON CLARKE described a case of Excision of the Neck of the Lower Jaw for Temporo-maxillary Ankylosis. The patient was a woman, aged 35 years, on whom four years ago he had performed this operation on both sides for ankylosis following a general infective arthritis, probably gonorrhœal in origin. She could now separate the edges of the incisor teeth three quarters of an inch and could masticate with comfort.—Mr. T. H. OPENSHAW referred to cases of his own in which he had resected both condyles with good results.

Mr. OPENSHAW exhibited three cases of Fracture of the Bones of the Leg treated by immobilisation in Hoefftcke's apparatus and a modified Hessing's splint case appliance.

Mr. EDRED M. CORNER read notes of two cases of Primary and Secondary Tuberculosis of the Thyroid Gland. In the first case, that of a girl, aged nine years, the condition was found during life, an abscess in the right lobe and a sinus leading to a diseased left lobe being present. The wounds refused to heal until thyroid extract was administered. The child died seven months later from general tuberculosis. The second case was discovered post mortem as a caseous mass in the right lobe of the thyroid in a woman who had died from pulmonary thrombosis and phthisis. The condition was really a clinical curiosity, as localised tuberculous deposits in the gland were extremely rare.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Functional Albuminuria.

A MEETING of this society was held on Feb. 5th, Dr SEYMOUR TAYLOR the President, being in the chair.

Dr. SAMUEL WEST read a paper on Some Points in Functional Albuminuria. Discussing the various names by which the condition had been described, he expressed preference for that of albuminuria in the apparently healthy because it represented the facts that albumin was present in the urine and that the albuminuric patient was in other respects apparently healthy. This name also suggested the practical difficulty which arose in every case—viz., the difficulty of being certain that the person was actually and not only apparently healthy. Although by delicate and repeated tests the presence of albumin might be demonstrated in the urine of practically everyone, when shown by ordinary clinical methods of examination albuminuria could never be regarded as physiological but always as evidence of some abnormal or pathological condition. Functional or physiological albuminuria might therefore be described as albuminuria for which the cause was not obvious. The diagnosis was arrived at by the method of exclusion and it was impossible to be certain that all the possible causes had been eliminated. Many of the known facts about functional albuminuria were sufficiently indicated by the various names given to it, such as occasional, intermittent, remittent, cyclical, postural dietetic, and the like The importance and significance of albuminuria varied with the age. It occurred frequently in infants and young children, in which cases it was generally of little significance, though further observation was much needed on this point. The largest number of observations was concerned with the next age group—viz., that of boys at school, in whom the average frequency seemed to be about 20 per cent. The boys forming this group fell into two classes—the one full-blooded, florid vigorous lads with good or even high pulse tension, the other pale flabby, ill conditioned, and with low pulse tension These groups probably presented differences in pathology and prognosis and demanded different treatment. In many the albuminuria completely disappeared, in others it persisted for many years without apparent loss of health, while in a few ill-health and evidence of kidney disease supervened. In young adults with albuminuria further important questions arose in connexion with life assurance and appointments in public offices or business houses. It was at present impossible to determine in any given case whether the albuminuria was transient or likely to persist with evidence of kidney lesion. If differentiation were ever possible it would be largely due to the work of the family medical adviser who had special opportunities for observation in such cases. After 30 years of age the frequency of albuminuria increased with every year of life, together with an almost *pari passu* rise in the gravity of the condition. In granular kidney all the features of functional albuminuria might be produced, but in all well marked cases other signs of the kidney lesion would be found, chief among these being arterial thickening. If in any given case there was general arterio-sclerosis the conclusion was justified that, whatever the cause of disease might be, the patient was not really healthy and could not be suffering from physiological albuminuria. The general conclusion was that albuminuria was never truly physiological at all, but always pathological, though not necessarily renal.

The PRESIDENT considered all such cases, provided that catheter specimens of the urine contained albumin, to be pathological, but urged the necessity for careful microscopical examination to supplement this evidence. The presence of tube casts, free blood, or an excess of desquamated renal epithelium rendered the diagnosis of renal disease imperative. If signs of increased tension in the renal pulse, accentuation of the aortic second sound, and displacement downwards and outwards of the heart's apex beat were present, although the albuminuria might be fugitive, all such cases must be regarded as coming under the category of Bright's disease.

Dr. G A SUTHERLAND believed the postural or orthostatic variety to be a definite form of functional albuminuria. In these cases albumin appeared in the urine soon after the patient assumed the erect position in the morning and decreased in amount as the day went on The patients were most frequently young adolescents who exhibited accompanying symptoms which were very definite, chiefly of the nature of general vaso-motor disturbance and which might be best summed up under the term "neurasthenia." There were none of the signs or symptoms of nephritic diseases in these cases. All the classical symptoms of adult neurasthenia were reproduced in these cases and he had found from experience that treatment of this underlying condition was productive of the best results.

Dr E A SAUNDERS agreed with the President as to the necessity for microscopical examination of the urine in every case. The presence of a few hyaline casts he did not consider of greater clinical significance than the occurrence of albumin itself, but if many casts were present, especially if these were of the granular variety, they might be taken as evidence of chronic kidney disease. In estimating the prognosis in cases of albuminuria in the apparently healthy he attached great importance to the age of the patient and the amount of the albumin. After 30 years of age the gravity of the condition increased with every year of life and, speaking generally, the larger the amount of albumin present the more serious the prognosis became.

HARVEIAN SOCIETY OF LONDON.—A meeting was held on Feb. 11th Dr C Theodore Williams, President, being in the chair.—Mr. Edmund Owen read a paper on Appendix Abscess in the Recto-Vesical Pouch He advocated treatment by abdominal section in preference to drainage by the rectum or vagina, as by the latter method he feared fistula would be a very probable sequela and the duration of recovery would be tedious Mention was made of vesical symptoms—frequency of [illegible] the course of a case whic [illegible] Owen preferred drainage [illegible] arnard said that Mr Owen's objections to drainage of pelvic appendix abscess by the rectum or the vagina were theoretical In more than ten cases so drained Mr. Barnard could state that none of those ill-effects which Mr Owen referred to had followed The drainage of pyosalpinx through the vagina was not a true analogy, as experience also proved. Indeed, Mr. Barnard still maintained that when an abscess was strictly localised in the pelvis it should be opened by the rectum or the vagina. The surgeon could tell that it was so restricted by feeling a tense round mass covered by the œdematous mucous membrane of the anterior rectal wall together with absence of fulness or tenderness in the iliac fossa.—Mr. G Lenthal Cheatle stated that he had seen three cases of abscess in connexion with appendicitis in which the pus had extended to the upper part of the recto-vesical pouch and had given rise to pain with frequency and difficulty of micturition. In another case in which there was too much abdominal distension to feel anything in the right iliac fossa, but the patient had vesical symptoms, he diagnosed a similar condition, and he now looked upon this set of symptoms as indicating immediate operation in cases of spread towards the recto-vesical pouch. He had only once felt the swelling per rectum and then the abscess was very large He considered abdominal section the better treatment.—Mr. W. McAdam Eccles said he was accustomed to make a distinction in the question of treatment of localised pelvic abscess in the two sexes. In males he attacked them suprapubically; in females he cleared up the diagnosis by median incision, dealt with the affected organ, and drained per vaginam, frequently closing the anterior abdominal wound.—Mr W. Spencer believed the best time to remove an appendix was in the first 24 hours and advocated drainage by gauze in preference to tubes; he considered it wise always to remove the appendix in cases of suppuration as relapse or trouble frequently followed its omission He hoped drainage by the rectum or vagina would not be followed.—Mr. F. Jaffrey entirely concurred with Mr. Owen as to the inadvisability of draining by the rectum or vagina.—Mr. Owen replied.—Mr. E. W. Roughton read a paper on a case of Intestinal Obstruction with Gangrene of the Cæcum. An umbilical hernia existed but was soft, painless, and gave an impulse; it was therefore not the source of the symptoms. A median incision was made and an enormously distended cæcum was seen. During manipulation the cæcum burst and flooded the operation area with fæces, but the peritoneum was protected by gauze packing and a Paul's tube was tied in. Later Mr. Legg removed a cancerous growth from the sigmoid flexure, the portion removed including four inches of the gut and a wedge of the mesentery. End-to-end suture was employed, the first layer through all the coats and the second through the seromuscular coats, and the parietal wound was closed. The colotomy wound was plugged with a sponge and the skin was sutured closely over it during the operation. The patient did well.—Mr. E. P. Paton discussed two cases of partial hernia which he had recently treated, in one of which, although a small portion of the gut was tightly constricted and was sloughing through, the symptoms were purely local; in another case the hernia was associated with local symptoms which rather resembled those of perforated gastric ulcer, thus showing how sloughing of the gut often gave rise to anomalous symptoms.—Mr. Roughton replied.

Dermatological Society of London.—A meeting of this society was held on Feb. 10th, Mr. Malcolm A. Morris being in the chair.—Dr. S. E. Dore showed: 1. A woman, aged 30 years, who had suffered from an Annular and Gyrate Erythematous Eruption coming out in the winter and lasting for about six months for the last seven years. The eruption when shown consisted of some small patches of about the size of a sixpence and larger rings with hard œdematous edges. The history was that the individual lesions had been present for about three months. 2. A man, aged 65 years, with a Symmetrical Curtain-like Eruption affecting the face and chin and similar patches on the extensor surfaces of the elbows and scalp. The eruption consisted of a very superficial infiltration of the skin with granulomatous tissue and was generally considered to be an unusual case of lupus vulgaris.—Dr. H. G. Adamson showed a little girl, aged seven years, in whom had appeared seven patches of Disseminated Lupus scattered over the face, trunk, and extremities. The eruption occurred after an attack of measles.—Dr. T. Colcott Fox showed a man, aged 30 years, suffering from a crop of Scattered Papules over the Face. The lesions had been present for four months and individually resembled lupus nodules. He believed them to be instances of the acneiform tuberculide.—Dr. E. G. Graham Little showed: 1. A case of Lupus, which had been treated without very great success by means of the light treatment and had since undergone a course of the tuberculin R. The disease showed a very marked improvement as the result, many of the nodules having quite disappeared. 2. A case of Obstinate Sycosis of several years' duration which had been treated with antistaphylococcic injections by means of Wright's method. Although the case had only had four injections the result was already a great improvement.—Dr. W. T. Freeman showed a man, aged 42 years, who had had some large Infiltrated Patches on the Scrotum for fifteen years and many Large Papules distributed over the forehead, cheeks, chin, and scalp for five years. The nodules were as large as peas and extremely like syphilis in appearance but the peculiar history threw doubt upon this. The case was shown for diagnosis and no very decided opinion was expressed.—Mr. Willmott H. Evans showed a case of Thickening of all the Tissues round the Eyes and Forehead in a man who had been in South Africa. The condition had been progressively extending for two years and he thought it was due to chronic streptococcic infection.—Dr. H. Radcliffe Crocker showed a case of Multiple Lupus Vulgaris in which the lesions had all come out in a week ten years ago and had since progressed to form large patches.—Dr. A. Whitfield showed a case of Herpes Gestationis of two months' duration in a woman who was three months pregnant for the first time.

Royal Medical Society of Edinburgh.—A meeting of this society was held on Feb. 5th, Dr. H. D. Shepherd being in the chair.—Dr. D. M. Callender described the case of a soldier who had died in hospital a few hours after a Fall from a Height of about 50 feet. During life the bony lesions discoverable were a compound fracture of the lower jaw and a dislocation of the os magnum of the left carpus. The patient suffered from hæmaturia but no fracture of the pelvic girdle could be made out. A Sprengel pump was used and at first only drew off blood but later clear urine was drawn off. At the post-mortem examination, from which Dr. Callender showed specimens, a fracture of the horizontal ramus of the left pubic bone was found. This had given rise to a rupture of the bladder.—Dr. L. C. Peel Ritchie read a paper on the Bioskowski Joseph Bacillus of Syphilis. The bacillus, of which specimens were shown under the microscope, was cultivated on placental tissue. Dr. Ritchie described its characters and the appearances presented by cultures on various media.—A dissertation on the Relation of the Thyroid Gland to Connective Tissue by Dr. C. J. Shaw was read in his absence by Dr. T. B. Hamilton. Dr. Shaw described the conditions found in cretinism, myxœdema, exophthalmic goitre, and after excision of the thyroid, and discussed the theory of Dr. D. Berry Hart that improper development of the thyroid in the fœtus was the cause of hydatid mole.——A meeting of the society was held on Feb. 12th, Dr. Shepherd being in the chair.—Dr. C. M. Campbell read notes of a case of Paralysis Agitans in a patient aged 35 years. The mask-like character of the face was pronounced. A peculiarity of the case was that the symptoms still remained unilateral, although the condition had been present for over three years. Dr. Campbell also described the case of a girl, aged 18 years, who had had a series of fits culminating in left-sided hemiplegia. Optic neuritis was also present. Under the diagnosis of cerebral tumour craniotomy was performed. No tumour was found but the operation relieved intracranial tension and the patient's symptoms improved. There was a large hernia cerebri through the opening made in the skull and from this a leakage of cerebro spinal fluid went on for several months. Any attempt to reduce the protrusion caused a recurrence of the patient's symptoms. Lumbar puncture had been tried on three occasions. This caused considerable diminution in the protruding mass but the improvement was only temporary.—Dr. Macrae Aitken read a dissertation on the Treatment of Spastic Paralysis of Infants. If the paralysed muscles were stretched, the limb put up in splints in the relaxed condition, and treated by massage for three months considerable power of movement might be recovered. The muscles must then be educated to perform various movements. Operative interference by tenotomy or tendon transplantation was often of value.—Dr. W. C. Morton read notes of cases of Sarcoma of the Femur and Appendicitis.

Laryngological Society of London.—A meeting of this society was held on Feb. 5th, Mr. Charters J. Symonds, Vice-President, being in the chair.—Dr. E. S Yonge showed Professor Meyer's Apparatus for demonstrating the Laryngeal Image and Intra-laryngeal Manipulations. The apparatus was examined by most of the members of the society and proved to be extremely suitable for the purposes mentioned.—Dr. Yonge also showed Microscopical Sections of Bone and Soft Tissues from a case of early polypus. The sections showed that the subjacent bone was perfectly healthy and that there were no signs of either caries or necrosis.—Dr. H. L. Lack showed: (1) A case of Malignant Disease of the Tonsils in which he had operated with good results; (2) a Microscopical Section of Endothelial Maxillary Antrum; (3) a Microscopical Section and patient showing Endothelial Larynx; and (4) a specimen of Large Osteoma of the Ethmoid with Nasal Polypi.—Dr. E. F. Potter showed a case of Recurrent Papilloma of the Larynx.—Dr. A. Thorne showed: (1) A case of Immobile Left Vocal Cord in a man, aged 35 years; (2) a man, aged 35 years, with Severe Paroxysmal Pain starting in the Larynx; and (3) a Tumour of the Right Side of the Larynx in a woman, aged 45 years. This latter case gave rise to a fair amount of discussion, the general opinion of the society being that the tumour was of tuberculous origin.—Mr. H. W. Carson showed a case of Laryngeal Ulceration in a phthisical patient for diagnosis.—Mr. R Lake exhibited a case of Subglottic Thickening.—Dr. J. Donelan showed a youth with [illegible] improved by opera- [illegible] showed: 1. A case [illegible] pain in swallowing in a female patient, aged 45 years. The question was whether it was tuberculous perichondritis. 2. A case of Chronic Œdema of the Larynx which had been shown before to the society in a middle aged female, probably tertiary specific infiltration, and greatly improved under mercurial inunction. 3. A case of Ulceration of the Pharynx af[illegible] the larynx [illegible] in a middle [illegible] from a man, aged 48 years, showing a Pin which had been in the larynx for four and a half years and which had been removed subsequently by lateral laryngotomy.

SOUTH-WEST LONDON MEDICAL SOCIETY.—A meeting of this society was held on Feb. 10th at Bolingbroke Hospital, Mr. E. F. White, the President, being in the chair.—Sir Felix Semon addressed the meeting on Some Desultory Remarks on Topics of Professional Interest. He reviewed the course of medical education as conducted in this country and contrasted it with conditions existing in Germany. He observed that in educational matters generally the Germans were more thorough and more in earnest. The German boy worked from morning to night from about the age of eight years till he was 19 years of age, but it was at the expense of his individuality. The love of sport largely contributed to make the English boy what he was, but it would take some generations to infuse this into the German boy. In the medical curriculum Sir Felix Semon strongly advocated that there should be more time allotted to clinical education. There was in this country too little time spent in clinical work as compared with theoretical subjects. He suggested doing away with the theoretical departments attached to each London hospital and substituting one an[illegible] ment for the whole of Lon[illegible] advantages in possessing [illegible] Every student should po[illegible] methods of precision, such as the use of the ophthalmoscope, laryngoscope, rhinoscope, and bacteriology. Sir Felix Semon criticised the manner in which medical examinations were conducted in England. He considered the tests insufficient —there was too large an element of chance by which the best [illegible] a number of portals to the medical profession as existed in England. All men should be put on the same footing and every [illegible] the maintenance of h[illegible] opinion that the day [illegible] to be put on the rates. He concluded his remarks by some observations on the relation of the consultant to the general practitioner.—After the address an animated discussion took place, much diversity of opinion being expressed upon the subjects brought forward.—The meeting closed with a hearty vote of thanks to Sir Felix Semon.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held at the Royal Kent Dispensary, Greenwich, on Feb. 5th, Dr. R E Scholefield, the President, being in the chair.—Mr. Charles Ryall read a paper on the Surgical Treatment of Appendicitis. He first drew attention to the necessity of anatomical knowledge of the part and also of the pathological changes that do, or are likely to, take place. Attaching too much importance to tenderness at McBurney's point sometimes led to errors of diagnosis, as frequently the appendix was both unduly long and moveable, and therefore the site of tenderness depended on the position of the organ at the time of the attack. Death was usually caused by too late an operation and therefore it was of primary importance to watch carefully for any signs of complications and not to wait until diffuse peritonitis had a chance of developing. In fact, it was better to operate when in doubt than to delay until more definite symptoms of complications had developed. Most cases rapidly improved eight hours after the onset and any failure of this to take place usually indicated some complication necessitating operation. The pulse was the chief sign by which to be guided and should this remain high or show signs of increasing it was to be regarded as a danger signal. Recurrence or persistence of vomiting, increase of pain, or tenderness and extension of abdominal rigidity all called for operation Prolonged tenderness after subsidence of attack denoted imperfect recovery and such cases should be operated on. Many cases operated on in the quiescent period and even at a considerable time after the attack revealed the presence of such lesions as kinking, stricture, ulcerations, or concretions, and yet these lesions might not cause any tenderness or give evidence of their presence, although at the same time they were a grave source of danger. They had no means of detecting the presence of these lesions or how long many of them might persist, and therefore he considered the only way to insure the future safety of patients was to have the appendix removed after a first attack and this he maintained was the proper treatment.—The President, Dr. J. H. Bryant, Mr. J. P. Purvis, and Dr. J. H. Keay discussed the paper and a vote of thanks was passed to Mr. Ryall.

FORFARSHIRE MEDICAL ASSOCIATION.—A meeting of this society was held in University College, Dundee, on Feb. 5th, Dr. A. J. Duncan being in the chair.—Before the ordinary business was proceeded with sympathetic reference was made from the chair to the death since the last meeting of a former president, Dr. Samuel Lawrence of Montrose.—Professor J. A. C. Kynoch showed a mother and her child after Cæsarean Section and read notes on the case. The operation was performed before the onset of labour for pelvic contraction. The pelvis was of the small flat rickety type; its conjugate was estimated to be about three inches. The patient was sterilised by ligature and division of the Fallopian tubes. Beyond a rise of temperature to 101° F. on the second day the convalescence was absolutely satisfactory. The child was put to the breast on the sixth day and nursing was continued throughout the period of convalescence.—Mr. D. M. Greig read a paper on the Surgical Treatment of Empyema, giving the results of 84 consecutive cases of his own, 21 of which ended fatally and the remainder successfully. The operation performed must aim at safety, evacuation of the empyema, and the early closing of the cavity. The technique of the operation which he was accustomed to perform was given and in this connexion he emphasised the importance of getting rid of the fibrinous exudation at the operation. It was immaterial whether the incision was in the anterior, middle, or post-axillary line if sufficient room was obtained for evacuation of the fluid and removal of the amount of ribs required. If it were in the posterior line the difficulty arose that the patient had to be raised slightly. He usually adopted the incision in the mid-axillary line. The fluid ought to be examined microscopically, as pneumoco[illegible] healed more quickly than the [illegible] tion alone. He would operat[illegible] the physicians desired it but [illegible] He had not found any danger [illegible] fluid.—Mr. George H[illegible] operation in adults [illegible] the same extent in [illegible] of portions of two rib[illegible] was necessary for free drainage. In his opinion the drainage tube was then quite useful.—*Professor* A. M. Stalker and Dr. J. S. Y. Rogers also took part in the discussion.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—A meeting of this society was held on Feb. 8th, Dr. A. E. Maylard, the President, being in the chair.—Dr. J. M. Munro Kerr showed a Uterus which he had removed on account of malignant disease complicating a pregnancy of about eight months. The tumour was excised per vaginam in order to avoid the possibility of septic infection of the peritoneum; the uterine arteries were secured; Cæsarean section was then performed, delivering a living child; and [illegible] the whole uterus was extirpated through the abdominal wound.—Mr. J. Grant Andrew showed a large Single Hydronephrotic Kidney which during life gave rise to symptoms simulating those of appendicitis. The illness started somewhat suddenly with pain in the right iliac region and constipation. Fulness and tenderness in that region and the occurrence of rigor suggested abscess. At the operation, after about three weeks, it was discovered that the swelling was a hydronephrotic kidney the contents of which were somewhat purulent; it was simply drained. Acute suppression of urine followed and the patient died two days later. At the necropsy it was found that there was only one kidney which was of a large size and of a shape suggesting fusion of the two kidneys. The patient had contracted gonorrhœa a week before the onset of the illness; this was regarded as the source of infection which converted a hydronephrosis, which had previously given rise to no symptoms, into a pyonephrosis which simulated an abscess of the appendix vermiformis. Gonococci were not found in the contents of the kidney.—Dr. John Anderson showed specimens of the Prostate Gland extirpated by Mr. R. H. Parry in accordance with Freyer's method. In three specimens which were entire a portion of the membranous urethra was present and quite out to the surface of the removed masses prostatic tissue could be recognised.—Dr. Napier showed a patient suffering from Cerebral Tubercle who improved greatly after treatment by repeated lumbar puncture; he also read notes of other cases treated in a similar way.

LIVERPOOL MEDICAL INSTITUTION.—A pathological meeting of this society was held on Feb. 11th, Dr. James Barr, the President, being in the chair.—Dr. K. A. Grossmann exhibited a Congenital Subconjunctival Lipoma removed from a child, aged eight months.—Mr. W. Thelwall Thomas showed a Squamous-cell Carcinoma of the Gall-bladder and commented on its great rarity.—Dr. Nathan Raw exhibited the Kidneys of two cases showing Cystin Calculi *in situ*.—Dr. W. Carter exhibited microscopical specimens of the Crystals of Cystine.—Specimens were also shown by Dr. Hubert Armstrong.—Sir William M. Banks exhibited a Pigmented Carcinoma of the Vagina, secondary to a mammary growth removed ten years previously.—Mr. Keith W. Monsarrat read a note on the Definition of the Term "Carcinoma" in which he briefly traced the sense in which the word had been used from the earliest times and endeavoured to give a precise meaning to the word as now used.—Dr A. S. F. Grünbaum read a note on the Germinal Theory of Cancer in which he alluded to recent work on this subject. Some excellent photographs were shown of karyokinetic division.—Dr. Grünbaum also exhibited a series of microscopical preparations illustrating New Growths in Animals.—Mr. E. M. Stockdale, Mr. Thomas, Mr. Monsarrat, Sir William Banks, Dr. Buchanan, and Dr. Wigglesworth joined in the discussion.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Feb. 10th, Dr. E. S Reynolds, the President, being in the chair.—Mr. A. J. Rodocanachi mentioned a case of death from Thyroid Intoxication after Removal of a Goitre and showed the specimen.—Dr. Archibald Donald made a communication on the Pathology of so-called "Idiopathic Endometritis"—In the absence of Dr. Julius Dreschfeld Dr. Charles H. Melland gave an account of a case of Leucocythæmia which showed several unusual features. The case was one of the splenomedullary type and the character of the blood as well as the patient's general condition was profoundly modified by active treatment with large doses of arsenic. On one occasion within three weeks the number of leucocytes fell from 253 000 in the cubic millimetre to 16,000, and a month later, after 15 minims of liquor arsenicalis had been taken three times a day for three weeks, the leucocyte count actually fell to 800 in the cubic millimetre, and at the same time the patient's general health was better than it had been for years. At a later stage he developed tuberculosis. Specimens of the blood at various stages and sections of the various organs affected with tubercle were exhibited as card specimens.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 10th, Mr. J. Paul Bush being in the chair.—Dr. H. Waldo showed a recent specimen of a Lung from a boy who had died from hæmoptysis, a caseating gland having ulcerated into both œsophagus and trachea.—Dr. J. Michell Clarke showed a patient with a Lesion of the Cauda Equina and another with a Lesion of the Lumbar Cord.—Dr. F. H. Edgeworth showed a case of Cretinism that was improving under thyroid treatment.—Dr. Walter C. Swayne showed a Calcareous Mass removed from the Broad Ligament.—Mr. G. Munro Smith showed a specimen of Scrotal Tumour with microscopic section, also a skiagraph showing numerous Foreign Bodies in the Hand.—Mr. A. W. Prichard read notes of three cases of Vesical Calculus that he had had within as many weeks and showed the stones removed.—Mr. J. Dacre related two unusual cases of Pneumothorax.—The cases, specimens, and papers were discussed by the members present.

Reviews and Notices of Books.

Infection and Immunity, with special reference to the Prevention of Infectious Diseases. By GEORGE M. STERNBERG, M D., LL.D., Surgeon-General United States Army (retired). London: John Murray. 1903. Pp. 293. Price 6*s.* net.

THIS work forms one of the Progressive Science Series edited by Mr. F. E. Beddard, F.R S. The series is intended for the general reader and not for the specialist. It is well to remember this as otherwise the title of the work, in conjunction with the name of the author, may prove somewhat misleading. The object of the book is "to state the main facts, so far as they have been established, with reference to infection and immunity, with the practical object in view of indicating the measures necessary for the prevention of infectious diseases." We find, therefore, the subject of disinfection treated somewhat at length and no attempt is made to discuss the theories of immunity or to give any account of the results of recent investigations with regard to antitoxins, agglutinins, precipitins, and other lately discovered bodies of this type.

The book is divided into two parts. The first part treats generally of infection and disinfection and, very briefly, of natural and acquired immunity. The second part occupies more than two-thirds of the book and treats the principal infectious diseases individually. Each chapter gives, for the size of the work, a somewhat detailed historic account of successive epidemics of the disease dealt with, followed by a short account of the micro-organism associated with the malady. It is, however, to the epidemic spread of the disease and to the methods employed in checking its ravages that attention is chiefly directed. Throughout the book the information with regard to prevention is definite and practical and use is made of the reports drawn up by various sanitary authorities dealing with tuberculosis, diphtheria, and yellow fever. As might be expected from one so long associated with preventive medicine, there is a strong personal note permeating the work. Two interesting claims to priority are made. The author suggests that he ennunciated the theory of phagocytosis in 1881, three years before Metchnikoff's first paper on the subject, while to Dr. W. F. A. King of Washington is attributed the theory of malarial infection by mosquito bites.

The book is well printed on good paper and includes a small number of illustrations. The work will certainly be valuable in that it gives non-medical readers accurate information both as to the means by which infectious diseases are spread and the methods which may best be adopted to prevent them from becoming epidemic.

Asthma in Relation to the Nose, with Notes of 403 Cases. By ALEXANDER FRANCIS, M.B , B.C Cantab. London: Adlard and Son. 1903. Pp. 136 Price 5*s.* net.

THIS book is apparently an expansion of a paper read before the Clinical Society in 1902 and is intended as a contribution towards the investigation of a connexion between asthma and the nose. Dr. Francis hopes to demonstrate that the connexion is something more subtle and important than a "mere causal relationship." He believes that there is a morbid connexion between the nose and the respiratory centre, which maintains the centre in such an unstable condition as to allow peripheral irritation to provoke an asthmatic reflex. On this assumption he believes that dyspnœa can be profoundly affected by intranasal treatment, even though the originating irritation of an asthmatic attack be gastric, cardiac, bronchial, renal, or nasal, or arise in any other sensory organ. The special part of the nasal mucous membrane which has this controlling influence upon the respiratory centre is, he considers, "an area situated on the septum nasi." Dr. Francis writes as an enthusiast, hence it is not surprising to find occasional inconsistencies. Thus on p. 35 he regards the remark "all my trouble comes from my digestion" as one of the most hopeful signs in forming a prognosis, while a few pages further on he says he has found that "no class of case gives better results" than "bronchial." He is not sanguine about the permanency of the relief obtainable by the removal of mucous polypi, though he acknowledges that there is "no class of cases where relief of all asthmatic symptoms can be, in some instances, more speedily and completely obtained." The treatment he advocates consists in drawing a line with a galvano-cautery point from a spot opposite to the middle turbinated body forwards and slightly downwards for a distance of rather less than half an inch. This is repeated in a week on the other side and afterwards on alternate sides at intervals of ten days or a fortnight. In his chapter on treatment he speaks well of "antimony" and of "ammonium." Presumably he means some particular compounds and it would have been more satisfactory not to leave the choice to the reader. Of the notes of the 402 cases and of the summary of an additional number of 93 cases which are quoted to support the author's view of the efficacy of his treatment it is somewhat difficult to speak. The 402 cases were all seen and treated between November, 1896, and March, 1902; the 93 cases were seen by a colleague during the author's absence from Brisbane. Asthma must be curiously prevalent in Queensland to afford such frequent opportunities for observation or else there must be some local peculiarities of nomenclature of disease.

Squint occurring in Children: an Essay. By EDGAR A. BROWNE, F.R.C.S. Edin., Lecturer on Ophthalmology, University of Liverpool; assisted by EDGAR STEVENSON, M.D. Aberd., Demonstrator of Ophthalmology, University of Liverpool. London: Baillière, Tindall, and Cox. 1904. Small 8vo. Pp. 74. Price 2*s.* 6*d.*

THIS little brochure contains the matured views of Mr. Browne and Dr. Stevenson on the etiology and treatment of squint. The authors do not pretend to describe all the varieties of this affection but limit themselves to a consideration of the ordinary concomitant convergent squint of childhood, believing that a thorough appreciation of the phenomena of this form of squint both in regard to the order of their occurrence and the concomitant conditions which are conducive to the development of the symptoms will prove more serviceable to the learner than a multitude of statistics. It is pointed out that hypermetropia is of common occurrence in very young children and that they consequently habitually exercise their accommodation which has a tendency to strengthen the internal recti, so that when they begin to examine near objects closely an inversion of one eye or a periodic squint is observed and this passes easily into a fixed habit and becomes a permanent squint. Under appropriate treatment with glasses a secondary periodic squint may be re-established which ends in recovery. The authors are strongly disposed to believe that amblyopia is very frequently associated with squint. And there can be no doubt that defective vision of the squinting eye is of common occurrence. The natural conclusion is that the cause of the defective vision should be carefully investigated, however young the child may be, and any error of refraction that may be present should receive immediate and careful attention. By the prescription of lenses correcting the defect recovery may in many cases be effected and the performance of the various operations that have been devised, whether of the nature of tenotomy of the overacting muscle or advancement of the opposite muscle, be avoided. The difficulties attendant upon determining the appropriate glasses in very young children, it is shown by the authors, may be overcome with patience and the employment of retinoscopy. Astigmatism is often present in the faulty eye.

In an appendix the authors recommend the abolition of the slate and school-book and the replacement of these instruments of education by the black board and are of opinion that the practice of bimanual exercises should be adopted. The after-histories of several cases of squint treated without operation are given by Dr. Stevenson. The book is sensibly written.

LIBRARY TABLE.

Bulletin of the Ayer Clinical Laboratory of the Pennsylvania Hospital.—No. I., issued 1903. Philadelphia. Pp. 88.—In a preface we are informed that "this publication is the result of a deep interest taken in the promotion of the laboratory by the late Dr. J. G. Morton and the kindness of Mr. Frederick Fanning Ayer, who generously provided the funds for its maintenance." The "Bulletin" will be used as a means of publishing the results of investigations which have been carried out in the laboratory in connexion with the Pennsylvania Hospital and will be issued at such intervals as are thought necessary. It is further announced that a copy of the "Bulletin" will be sent "to those interested in its contents who will make a request for it." The formation of such an institution as the "Ayer Clinical Laboratory" is indeed a matter of congratulation for the Pennsylvania Hospital. If private munificence were more frequently devoted to such excellent purposes medical science would be greatly benefited. The volume now before us contains an elaborate essay on the Pathological Histology of Hodgkin's Disease, with a report of a series of cases, by Dr. W. T. Longcope, resident pathologist of the Pennsylvania Hospital, which shows evidence of arduous and painstaking work. Dr. Louis M. Warfield contributes two short articles entitled "The Report of a series of Blood Cultures in Typhoid Fever" and "A Mild Case of Acute Dysentery yielding Bacillus Dysenteriæ (Shiga) in Large Numbers," and a third in conjunction with Dr. J. K. Walker on Acute Ulcerative Endocarditis caused by the Meningococcus (Weichselbaum).

Practical Physiological Chemistry. By J. A. MILROY, M.A., M.D. Edin., Demonstrator of Physiology, Queen's College, Belfast; and T. H. MILROY, M.D., B.Sc. Edin., F.R.S. Edin., Professor of Physiology, Queen's College, Belfast. Edinburgh and London: William Green and Sons. 1904. Pp. 201.—This book does not pretend to be anything more than a practical work although the authors have very properly entered into short theoretical explanations where such seemed to be essential for the proper understanding of a practical experiment. There are four sections, the first two dealing with qualitative and quantitative examinations respectively, while the third section is an appendix containing a table of reagents, of wave lengths and other physical constants, and the fourth section deals exclusively with schemes for the detection of an unknown substance. We regard these schemes as an important feature of the work as applied to the search in an unknown solid, or mixture of solids of physiological importance, for proteids, carbohydrates, and other substances. In the list of precipitants of proteids we find that neither bromine nor chlorine is mentioned. We note also that in the description of the Pettenkofer's test for bile salts cane sugar is directed to be used. Glucose is much better as it has scarcely any tendency to char with the sulphuric acid and thus to obscure the reddish-violet tint which is formed with such a mixture in the presence of bile salts. The authors point out in the chapter on the estimation of sugar in urine that various attempts have been made to render the determination of the complete reduction of the copper solution easier of observation. In this connexion we may refer them to the simple expedient suggested by Mr. S. A. Vasey in a note in The Lancet of June 20th, 1903. It consists in adding a white inert powder, such as chalk, to the Fehling mixture. In this way the chalk carries the fine separated cuprous oxide rapidly to the bottom of the hot fluid so that the precise point at which the blue colour disappears can be determined. The book forms an excellent basis of a practical physiological course and the illustrations are beautifully executed.

The Sale of Food and Drugs Acts with Notes and Cases. By Sir William J. Bell LL.D., H. S. Scrivener, M.A., and C. F. Lloyd. Fourth edition. London: Butterworth and Co. 1903. Pp. 276.—The issuing of several new orders and regulations under the Sale of Food and Drugs Acts by the Local Government Board and the Board of Agriculture, as well as the fact that some fresh cases of importance have been decided, have rendered the publication of a fourth edition of this useful work necessary. The present edition has been thus brought completely up to date and we find that it contains notes on some recent cases presenting special points of interest. In summarising the recommendations of the Departmental Committee on Food Preservatives, the authors remark that "up to the present time (October, 1903) none of these recommendations have been carried into effect." We have before pointed out that there can be no justification for delay in the matter of embodying these recommendations in the statute. This book is an excellent legal guide to the public analyst and affords much useful information on analytical and chemical points to the legal profession.

The Cornish Riviera.—An illustrated pamphlet urging the claims of Cornwall upon those who desire to enjoy a mild climate in winter and to avoid extreme heat in summer has been issued by the Great Western Railway Company and contains an appendix with particulars of the trains and motor-car service by which various points can most easily be reached. The portion of the letterpress devoted to the advantages of the climate mentions as a work extolling it the "Guide to Mount's Bay and the Land's End," written by Dr. John Ayrton Paris in the year of the battle of Waterloo. Dr. Paris at that time practised at Penzance, where he was the first secretary of the Royal Geological Society of Cornwall and whence he returned in 1817 to London to become in 1844 the President of the Royal College of Physicians of London. He wrote in the days when it took nearly 60 hours of coach travel to reach Penzance from London and to him and to other medical men of more modern date Cornwall has owed many of its numerous visitors. The climate of South and West Cornwall, even in years like the present one, is delightful on account of the warmth and geniality of the days which are fine, but even in Cornwall no one can expect to be free from winter's storms. It must be remembered, however, that the varieties of narcissus and other spring flowers already coming to the London market are being grown in West Cornwall and the Scilly Islands in the open air and that flowering shrubs not often seen further north bloom there throughout the winter. For those who desire a mild climate but at the same time are able to enjoy out-door amusements Falmouth's harbour and bay afford ample scope for safe sailing throughout the winter, except, of course, in very stormy weather, and among the many golf-links those at Lelant, accessible from St. Ives or from Penzance, may be mentioned as situated upon raised sandy ground. Cornish dairy produce is famous and the county is one where many cottagers still bake their own wholesome bread, usually in an open pan upon the hearth.

The Englishwoman's Year Book, 1904. Edited by Emily Janes. London: Adam and Charles Black. Pp. 352. Price 2s. 6*d.* net.—This volume is a worthy companion to "Who's Who?" and contains a vast amount of information upon every subject connected with the employment of women, whether as regards philanthropy, science, professions, business, or amusement. It has an admirable index and we are glad to see that the advertisements are as carefully edited as the rest of the book, with the exception of one dealing with magazines and the like edited by a lady who is neither more nor less than a quack practitioner.

JOURNALS AND MAGAZINES.

The British Journal of Psychology. February, 1904.—The first number of this new periodical has reached us and serves to remind us how modern, at any rate in this country, the systematic study of psychology is. It is only quite recently that it has attained to the position of a positive science. But within the last 15 years, say in their foreword Professor James Ward and Dr. W. H. R. Rivers, the joint editors of the new venture, 40 psychological laboratories have come into existence, lectureships on the subject have been founded, societies have been instituted, while seven serial publications devoted entirely to psychology have appeared in other countries. The new magazine has therefore been started with the full belief that it is required. Professor Ward's opening paper on the Definition of Psychology is an admirable introduction to a science which in an exact sense is most difficult to appreciate, even though everybody can tell in a general way what psychology is about. An interesting paper follows by Professor Sherrington upon "Binocular Flicker." This is a record of experiments inquiring into the influence exerted on the reactions of "retinal point" by certain forms of activity at the corresponding point of the other retina. (By "retinal point" is understood the retino-cerebral apparatus engaged in elaborating a sensation in response to excitation of a unit of retinal area.) Dr. J. Lewis McIntyre, lecturer on comparative psychology in the University of Aberdeen, contributes to the history of psychology a study of the sixteenth century Italian philosopher Telesio. The volume terminates with a paper by Mr. W. McDougall, reader in experimental psychology in University College, London, upon the Sensations excited by a Single Momentary Stimulation of the Eye.

The Practitioner in its February issue continues Dr. A. E. Wright's very complete and instructive article upon anti-typhoid inoculation. In the present contribution he shows how the vaccinating elements in the typhoid culture are maintained intact after exposure to a temperature of 60° C. The efficacy of the elements in the red corpuscles which induce an elaboration of hæmolytic antitropins in the organism is somewhat diminished by exposure to this temperature; and exposure to a temperature of 72° C. completely abolishes the immunising properties of the red blood corpuscles. Dr. Arthur Whitfield contributes the first of two lectures on eczema and gives details of one or two remarkable instances of idiosyncrasy in the matter of hypersensitiveness of the skin. The nervous origin of some cases of eczema is alluded to in another article entitled "Hypnotism" in which a cure of such a case by this means is mentioned. This article on hypnotism deals mainly with Dr. J. Milne Bramwell's recent work on the subject.

New Inventions.

APPARATUS FOR MAINTAINING ARTIFICIAL RESPIRATION.

THE appliance represented in the accompanying illustrations is intended principally for keeping up artificial respiration and has been devised by Dr. Rudolf Eisenmenger of Piski in Hungary. It consists essentially of a relatively high rigid dome of such a length as to extend from the upper part of the sternum to nearly the pubic region. It is attached to the patient by straps which completely encircle the body, and in order that the junction may be air-tight it has indiarubber packing along the lower side of the margin and, moreover, has flexible lateral flaps which reach almost to the patient's spine. In Fig. 1 the dome and the indiarubber packing are shown in section, while the straps and the borders of the flaps are marked by dotted lines. On the summit of the dome there is a short tube giving access to the interior and connected to a long flexible tube which leads to a pair of bellows lying on the floor, as shown in Fig. 2. When the air within the dome is exhausted by the bellows the abdominal wall rises and air is drawn into the lungs; on the other hand, the forcing of air into the dome by the bellows causes the lungs to be emptied. Evidently an effect will also be produced on the flow of blood to or from the heart. Dr. Eisenmenger says that the apparatus can be used not only for the treatment of persons suffering from asphyxia but also for the performance of abdominal massage. It is easily applied and is portable enough to be carried in a hand-bag, the total weight being from 20 to 30 pounds.

FIG. 1.

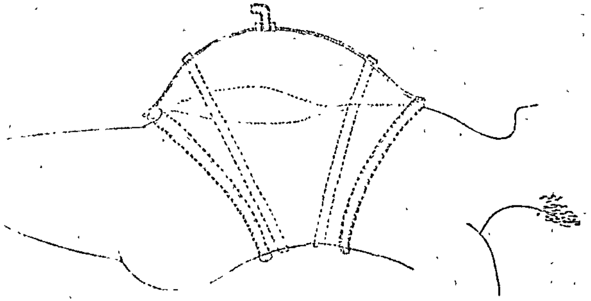
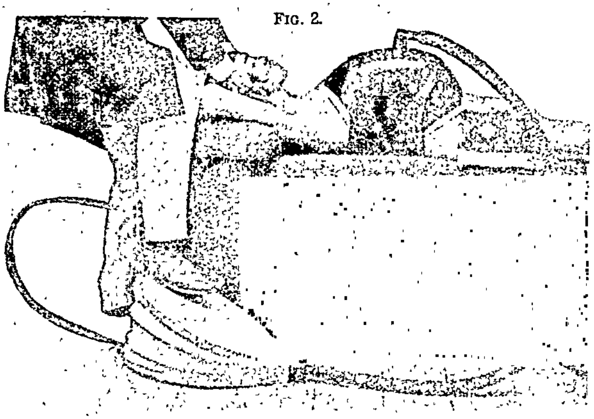
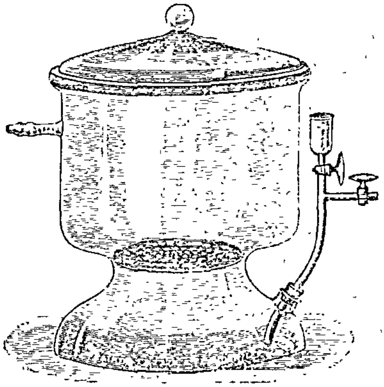


FIG. 2.



A NEW ANAEROBIC APPARATUS.

THE following is a short description of a new anaerobic apparatus which I had designed and which is giving excellent results It consists of a large, strong glass jar having a constriction near its base and a ground closely fitting lid on top, the sides of the jar projecting above the height of the lid for half an inch. Two lateral openings are let into the vessel. The first, situated one inch below the lid, has a short strong tube fused in, which has a short piece of pressure tubing firmly attached and furnished with a Hofman's pinchcock, and this is when required attached to an exhaust pump. The second opening situated below the constriction of the vessel, has a perforated, tight fitting rubber cork through which passes a bent glass tube reaching to within a quarter of an inch of the floor of the jar. The other end has two arms, one of which is a reservoir for caustic potash solution, the other leading to the hydrogen supply. Both arms are furnished with stopcocks. To work the apparatus, a sufficiency of pyrogallic acid is first put into the reservoir at the foot of the vessel, the perforated porcelain rest is placed on the constriction, and the plates or tubes to be cultivated are placed upon this rest; the glass lid is well smeared with vaseline and replaced and pressed firmly down. Into the ledge left between the top of the lid and the top of the vessel wall is placed soft paraffin soap which almost covers the whole surface of the lid. Now connexions are made with the exhaust pump and hydrogen apparatus and it is seen that the stopcocks of the hydrogen supply tube and the potash supply tube are both closed. The pinchcock of the exhaust tube is opened and all air exhausted, the pinchcock is shut and the hydrogen stopcock is opened to admit hydrogen, this process being repeated six times to insure a complete hydrogen atmosphere; then, closing the hydrogen stopcock, a little of the hydrogen is exhausted by means of the exhaust pump, just enough so as to have a slight negative pressure within the vessel. Now the reservoir is filled with potash solution and the stopcock is opened to allow the solution to flow gradually into the vessel. Enough is run in so that the end of the tube will be below the resulting mixture and so act as a seal to it. It is best to run in a little water after the potash solution so as to clean the tube and obviate the effects which it is likely to have on the glass.



The apparatus has been made and is supplied by Messrs. Baird and Tatlock, 14, Cross-street, Hatton-garden, London.

A. R. LAING, M.B.Aberd.

Bacteriological Laboratory, University of Aberdeen.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 20, 1904.

The Rainfall and Mortality of 1903.

ALTHOUGH, taking England and Wales as a whole, the rainfall of 1903 was exceeded by that of 1852 and 1872 the downpour of the year recently ended was sufficiently unusual to justify us in inquiring how far and in what direction it may have influenced the mortality statistics. The inquiry is more particularly called for seeing that the rainfall of 1903 came after 15 years of remarkably low rainfall and that it exceeded the average of the previous 15 years by at least 35 per cent.,[1] a fact which increases the value of a comparison of the statistics of 1903 with the average of the previous ten years. In endeavouring to gauge the effects of the rainfall of 1903 it is well to bear in mind the fact that in some parts of England, such as the Cumberland hills, the annual rainfall may amount to as much as 150 inches, while in the hills to the north of Bengal no less than 600 inches have been recorded. The statistics of Bengal do not suffice to enable an examination to be made of the disease values of this rainfall and the question therefore arises whether in our own country, where the records both as regards rainfall and deaths are at least as trustworthy as in any other nation, it is possible, with only the data at present available, to determine even approximately the effect upon the death-rate of the wet year 1903.

Let us consider what are the physical consequences of rainfall and what are the results which may be expected to accrue from them. In the first place, as is well illustrated by the remarkable clearness of the atmosphere after rain, the falling water washes from the air and from surfaces upon which it impinges the dust and micro-organisms which accumulate therein and thereon in consequence of the operations of man and animals and of atmospheric currents. This being so, it is reasonable to anticipate that, *ceteris paribus*, rainfall tends to reduce the prevalence of, and hence probably the mortality from, certain air-borne diseases. But against this consideration has to be placed the fact that protracted bad weather tends to keep people indoors and thereby to enhance the opportunities of contracting air-borne infection. Again, rainfall in proportion to its degree maintains in a condition of moisture collections of dust and refuse from which particles in a dry state are easily detached and carried by the wind. In this fashion rainfall may be considered to reduce the chances of the infection of food by pathogenic organisms, while, further, in a somewhat similar manner it diminishes the prevalence of dust-carriers, such as the common house flies and other insects. This reduction of dust-carrying agencies might be expected to be reflected in the death returns in a diminution of that disease which is so intimately associated with polluted milk and other foods—i.e., diarrhœa—and probably the enteric fever rates might be expected to be influenced favourably, at least in some degree, by the same agencies. On the other side has to be placed the influence of rain both in the direction of the flushing of sewers, the discharge from storm overflows, and the washing of manurial surfaces into rivers and into reservoirs fed by pastured or cultivated catchment areas, agencies which might be expected to carry pathogenic organisms and much mineral detritus into water-supplies. The turbidity of drinking water after periods of heavy rain is a matter of common observation and such turbidity has, as our readers are aware, not infrequently been associated with outbreaks of enteric fever and diarrhœa. Finally the rise in the level of the subsoil water and the general increase of surface moisture might augment the death-rate from diseases such as diphtheria, pulmonary tuberculosis and other bronchial complaints, as also from chronic rheumatism and—according to some authors—from measles and whooping-cough.

The official statistics are not yet available to enable all these diseases to be examined but the recent issue of the Registrar-General's last quarterly return renders it possible to show in what manner certain diseases have behaved in the several quarters of 1903. It is, of course, important to remember that the rainfall of one quarter may influence the vital statistics of the following quarter and that the rainfall of the whole year 1903 may not be without its effect upon the statistics of 1904. If we take a general view of the figures for 1903 as a whole the interesting fact stands out that the general death-rate was the lowest on record—i.e., 15·4 per 1000—and compared with the average rate in the ten years 1893–1902 it shows a decrease of 2·2 per 1000. The inference which may be drawn from this fact is that the wetness of 1903 did not exert an unfavourable influence upon the general death-rate of the year. It is, however, desirable to look into the figures a little more in detail but unfortunately this is not yet possible save in regard to certain diseases. With a view of showing at a glance in what manner the death-rate for the several quarters of 1903 compares with the rates for the ten previous corresponding quarters we have constructed a table relative to (1) the general death-rate, (2) "fever," (3) diarrhœa, and (4) diphtheria. In the first column of each group are the quarterly rates for 1903 and in the second column there are figures showing to what extent the rates for 1903 were above or below the average for the ten preceding quarters. The rates in all cases are rates per 1000.

Quarters.	General death-rate		"Fever."		Diarrhœa.		Diphtheria.	
	1903.	+ or − average.	1903.	+ or − average.	1903.	+ or − average.	1903.	+ or − average.
1	16·8	−2·9	0·09	−0·05	0·17	= average	0·23	− 0·06
2	14·9	−1·7	0·08	−0·03	0·17	− 0·06	0·16	− 0·06
3	13·9	−3·0	0·10	−0·09	1·16	− 1·10	0·15	− 0·09
4	16·2	−1·1	0·14	−0·11	0·49	+ 0·08	0·17	− 0·13

From this table it would appear that almost without exception the quarterly rates show a very material reduction on the averages for the corresponding quarters of preceding years, and although we cannot spare space to reproduce the tables which we have drawn up relative to infantile mortality, whooping-cough, measles, and scarlet fever, we may add that, as with the figures in the above table, there was almost invariably a fall in the average rates. Whether these general reductions are in point of fact ascribable in large measure to the excessive rainfall alone is a matter upon which we shall express no definite opinion. Rainfall is but one of the several meteorological factors which may either promote or retard the vital processes of micro organisms. The figures, so far as they go, do not support a view that a wet year promotes the spread of any of the diseases to which reference has been made. When, however, the *Registrar-General's annual report for 1903* is issued it will be possible to take a more detailed view as regards the death-rates and the rainfall in certain specified parts of the country.

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[1] See article in the *Times* of Jan. 11th, 1904, by Dr. Hugh Robert Mill on the Rainfall of 1903.

The Administration of Opium in Pneumonia.

The influence of waves of thought upon prevailing practice is demonstrated more fully with pneumonia than with any other disease. The range of surgery has been incalculably extended of late and physicians owe much of their conceptions of the processes of disease to researches which primarily lead to results in the domain of surgery. With ever increasing knowledge of the etiology of pathological conditions it is natural that greater precision of treatment should be required. Every fresh discovery which throws light upon the causation of disease must necessarily be followed by further thoughtful investigation of the adequacy and suitability of the methods of treatment which have hitherto been generally adopted. Treatment is always an indication of current conceptions of morbid processes. Every advance probably induces momentary scepticism of the value of routine treatment which has been adopted as the outcome of experience, and this scepticism is an aid to progress when it leads to the correction of error and to the discontinuance of antiquated methods, but it is a hindrance when, in the desire to seek novelty, it hastily discards all treatment before what threatens to become a new formula—namely, the proclamation that a self-limited systemic infection must come to a natural ending and therefore needs no treatment.

When pneumonia was regarded as an acute inflammatory affection due to cold it was treated vigorously by bleeding and by purgatives, which without doubt relieved pain and diminished arterial tension. On account of the dry burning heat of the skin diaphoretics were sometimes employed, the most important being tartar emetic. Then followed the group of stimulant expectorants to facilitate the removal of the exudation. But it was soon realised that drugs were scarcely required. Indeed, the extravagant claims put forward for homœopathy paved the way for the recognition of a normal definite crisis in pneumonia independently of active interference, and this in turn was a step towards the subsequent discovery of the presence of micro-organisms and to the numerous attempts which have been made to utilise this knowledge. For the present most clinical observers are convinced that with our known resources it is impossible to curtail the duration of the fever which is, indeed, regarded in some quarters as a natural effort to limit and to control the development of micro-organisms. Accordingly, while some, on the self-limited systemic infection theory, think there is nothing to be done, others turn more hopefully to symptomatic treatment. Of late years there have been many indications of uneasiness concerning symptomatic treatment in pneumonia, and more than one observer has declared his conviction that it cannot safely be pursued on ordinary lines. Many maintain that several distressing symptoms are really conservative in their origin and that any interference with these may be followed by dangerous results. The pyrexia *and the dyspnœa of pneumonia would under such reasoning* be regarded like the diarrhœa of typhoid fever as being beneficial within reasonable limits, and therefore to be checked only when they appear to be excessive. In nearly every case of pneumonia, if symptomatic treatment is to be adopted, there are probably numerous temptations to employ opium or morphine. The severity of the pleuritic pain at the outset seems to demand the adoption of measures calculated to afford relief, and since opium is ordinarily the drug which is relied upon for this purpose it is probably the one to which thoughts will first turn. It is, moreover, the drug which is definitely recommended in many text books and works of reference. One favourite text book distinctly advocates the hypodermic injection of morphine for the relief of the stitch in the side at the onset of pneumonia and further recommends that when the disease is fairly established Dover's powder should be given to check cough and so to alleviate pain.

Nearly two years ago[1] we had occasion to refer to Sir William T. Gairdner's view of the extreme danger of opium in pneumonia. In a paper published in the *Glasgow Medical Journal* for April, 1902, he maintained that the safety of the patient depends upon the respiratory nerve centres being kept, as it were, "wide awake." His views, with which we then expressed our concurrence, have recently received confirmation from Dr. Stephen Smith Burt[2] who discusses the purposes for which opium has frequently been administered in pneumonia and gives his reasons for regarding it as a dangerous drug in this disease. He mentions its employment to relieve pleuritic pain, but for this purpose strongly advocates the local application of an ice-bag, or a hot poultice, or strapping the affected side of the chest, or if these fail he recommends dry-cupping, using a large common tumbler. With regard to the administration of opium to allay cough he pertinently remarks that the average cough of pneumonia with expectoration for obvious reasons should be rather promoted than suppressed. Similarly he contends that when given in this disease to quiet restlessness opium is prejudicial, since under these conditions restlessness is preferable to somnolence. Dr. Burt reminds us that opium, except in doses that are infinitesimal, depresses and finally paralyses the centres of respiration and that it checks every secretion save that of the integument. He holds that in pneumonia the existence of the patient depends upon a maintenance of the integrity of the respiratory centres, together with the powers of elimination. Sir WILLIAM GAIRDNER in the paper above referred to said that he had repeatedly seen toxic symptoms from very moderate doses of opium in certain stages of pneumonia and that, especially towards the crisis, he had learned to dread it more than almost any other drug. In view of this experience it is interesting to note that the fatality mentioned by Dr. BURT resulted from the hypodermic injection of morphine when the patient was apparently on the road to recovery—that is, presumably, just before the crisis. The facts and arguments against the employment of opium at this stage seem so strong that they demand thoughtful revision of the recommendations at present to be found in text-books; greater emphasis should be placed upon the risks incurred, except possibly at the onset of the disease, and greater stress might well be laid upon the amount of relief which is then frequently afforded by the local application of ice or by the abstraction of blood by leeches. The immediate ease which results from the use of morphine for pleuritic pain in pneumonia should not entail disregard of warnings against its employment based on experience and on reason.

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[1] The Lancet, April 26th, 1902, p 1200

[2] The Post Graduate, New York City, January, 1904.

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The Future Position of the Dental Profession.

IN the issue of THE LANCET of May 23rd, 1903, p. 1456, reference was made to the question of a dental degree in the University of London. In that article the view was expressed that if a degree in dentistry were instituted it should only be in conjunction with the M.B. and B.S. Quite recently—namely, on Jan. 23rd—an extraordinary general meeting of the British Dental Association was held to consider the expediency of degrees in dentistry and after lengthy discussion it was decided by a majority of two to one that such degrees were undesirable. It is held by the advocates of such degrees that the decision arrived at will not influence in any way the various universities in forming their opinions. If such is really their view it is somewhat difficult to understand their position in endeavouring to induce the British Dental Association to memorialise the Senate of the University of London to grant degrees in dentistry. We consider that the view expressed by the majority of the meeting should have some influence with the University of London and other universities and we cannot help feeling that the various institutions will be guided by the opinion held by those best qualified to discuss this problem. They can hardly force degrees upon an unwilling profession, especially as such a course would probably lead to a serious breach in what is now a united profession. In endeavouring to arrive at a wise decision on this subject, which apparently is causing quite a storm in the dental world, it would be well for those engaged in the contest to keep clearly in view the relation of dental surgery to medicine. Regarded from a broad point of view the whole matter resolves itself into the question whether the practice of dental surgery is to retain its position as a part of medicine or is to be relegated to the position of an isolated profession. That the latter condition is the distinct and avowed wish of some of the supporters of the dental degree is undoubted but this view is diametrically opposed to the opinions held by the most competent teachers in this country. It is only natural with two such schools of thought that the ideas of training the student should also be widely different. The former school insists that the training should be in the main mechanical and views the need of a good medical training as apparently quite secondary. The latter school takes a broader view of dentistry and naturally considers it of the greatest importance that those dealing with the diseases of any part of the body should possess a thorough knowledge of general pathology and have a firm foundation on which to practise their specialty. It is not difficult to see how this diversity of opinion has been brought about if we consider the position of dentistry in the middle of the last century. Then dentistry consisted almost entirely of extraction and the substitution of artificial dentures. It was a trade and the mechanical element was writ large because the only dental practice known was mechanical. Increased knowledge of caries, of the diseases of periodontal membranes, of the relationship of dental disease to general systemic conditions, and of oral deformities to nasal affections has all tended to broaden the scope of dental surgery and so has introduced into its therapeutics means of treatment which are not solely mechanical. A point also to be considered in dealing with this magnification of mechanical ability as the main idea in training is the influence which rational therapeutics must exert in the development of the future treatment of the teeth. The student educated with higher ideals than heretofore will endeavour to carry into his work that highest ideal of all—viz., "prevention." That should be his watch-word and the effect of prophylaxis in dentistry will be the simplification in a marked degree of the operations which he is called upon to perform. His work will be of a far more simple character than heretofore and the elaborate technique called for in the operations of the present day will not be required to anything like the same extent. It may be argued that such a state of affairs is far away. Even if that be so, its realisation will be quicker the broader the views of treatment given to the future dental surgeon and the greater the impression on his mind that mechanical operations are not the sole agents of treatment.

The broader the foundation of education the less we shall hear of dentistry as a separate profession and the more it will be apparent to the intelligent that its correct place is in the fold of medicine. Another reason why in the minds of some the medical training is quite secondary to the more purely technical training is due in a large measure to the extraordinary immunity of the oral tissues to infection. The removal of a tooth, which is a minor surgical operation, is in a great measure free from all those complications likely to follow any other operations. It is this condition which blurs the visions of those who fail to see that the practice of dental surgery is but part of the practice of general medicine. If tooth extraction and other dental operations were more liable to be followed by complications we should hear but little about the secondary importance of the medical training. It is hardly necessary to repeat here the arguments we have so often advanced to show that dentistry is but a specialty of medicine and can best be rationally practised by those possessing a thorough knowledge of disease in general.

Holding this view we fail to see that any advantages can possibly be gained by the institution of dental degrees unless granted to holders of medical qualifications. It is admitted, even by the advocates of the dental degree pure and simple, that the present qualifying examinations are sufficient for the average practitioner and the principal argument advanced is that dental degrees would be the means of stimulating research, which is to be done by requiring a higher standard of technique and a broad acquaintance with pathology and the principles of surgery. The idea of stimulating research by instituting a dental degree is hardly worthy of consideration. The desire to do research work is not the product of examination. Still further, increased technique in dental operations will not tend to foster research but it will tend to make the possessor of the dental degree regard himself as being on a higher plane than the licentiate in dental surgery. It is argued, too, that the degree would be of a higher educational value than the ordinary qualifying examination. That may possibly be the case at the University of London but there is no proof that other universities, which would follow suit, would insist on even such a high standard as that required by the Royal College of Surgeons of England. The institution of dental degrees will certainly not be for the welfare of the public. At the present time the public are beginning to recognise that the diploma indicated by the letters L.D.S. is the hall-mark of a dentist and so far the quacks and charlatans have been unable to turn these letters to their own use. Let the universities grant degrees and the public will be bewildered with innumerable letters; it will be excessively difficult for them to discriminate between genuine and spurious appellations. Still further, the possibility of one of the universities granting a doctorate in dental surgery must not be lost sight of and the institution of such a degree would do endless harm and would lead the already too gullible public to believe that the holder of such a degree was a medical man. If the universities are anxious to grant qualifications they can grant diplomas similar to the licence in dental surgery and we must not forget that under the Dentists Act this licence is the only diploma registrable in this country. In order to overcome this difficulty it has even been suggested that at the conferment of the degree a licence in dental surgery should be presented. This, surely, can be looked upon in no other light but as an evasion of the Dentists Act and we feel that no university would be guilty of such an action. The conferment of degrees in dentistry on those not holding medical qualifications would tend to separate dentistry from medicine rather than to increase the bond of union.

Let us for a moment glance at the position of other specialties. In public health a diploma is given by several examining bodies but only to those holding medical qualifications. Quite recently the University of Cambridge has decided to institute a degree in tropical medicine but naturally only to the medical practitioner. If degrees were granted in such specialties as diseases of the eye, throat, and nose they would only be to medical practitioners. Dentistry, then, is to stand alone as not requiring any medical qualification. To those advocating the degree this would probably be acceptable but to the large body of dental practitioners and in the interests of dental science the step would be disastrous. It is therefore of great importance that the dental profession should place before the university authorities the many objections to such degrees in order that the question may receive the attention that it deserves.

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London Thoroughfares.

THE last sessional meeting of the Sanitary Institute of Great Britain was usefully devoted to papers and discussions upon the state of streets and thoroughfares in relation to public health, and hence to an endeavour, on the part of several competent authorities, to recall town councillors from the contemplation of vast schemes of municipal trading or manufacture, and to direct their attention to the comparatively humble duty of effective scavenging. Perhaps the most important contribution laid before the meeting was contained in a paper by Dr. LOUIS C. PARKES, the medical officer of health of Chelsea, who dwelt emphatically upon the disease producing properties inherent in the peculiar compound which, according to the state of the weather, may be described either as London mud or as London dust and which, in the former condition, clings lovingly to the lower portions of female apparel, while in the latter it is plentifully inhaled by both sexes alike, and is carried by currents of air into larders and other receptacles of food, in such a manner that the bronchial mucous membranes of urban dwellers have no unfair advantage over the gastric and the intestinal. The methods and circumstances of the distribution are of such a kind as to render it extremely difficult to trace any single case of disease either to the inhalation or to the swallowing of the abundantly diffused material, but the nature of this material forbids us to doubt its capability of doing harm whenever opportunity is afforded. The open dust carts and the excreta of dogs and cats, to which Sir HENRY THOMPSON has called attention, supply an abundance of the bacteria of putrefaction and of the ova of intestinal parasites, while the bacteria of specific infectious diseases can seldom be entirely absent from the general *olla podrida*. When clouds of visible coarse powder, interspersed with fragments of paper or of cabbage leaf, are blown into our faces from a passing dust cart we are apt to forget the state of fine division which the constituent particles of these clouds will presently assume, and in which they are probably more likely to be hurtful than even in their original condition. Many attempts have been made, with very partial success, to exclude dust from the cases containing the more valuable books in the library of the British Museum, and that which finds entrance and can be collected in impalpable powder from the surfaces of the leaves always exhibits under the microscope evidences of its sources in Bloomsbury in the shape of fragments of horse droppings, of iron, and of granite. Other treasures would, no doubt, occasionally reward a complete examination, and among these would almost certainly be various bacteria in a condition to multiply as soon as external circumstances became favourable to them. Dr. PARKES drew a lesson from the comparative healthiness of 1903, stating that the continued wet, and especially the character of the frequent very heavy rains, had washed away from the metropolis a large proportion of the dirt which is usually inhaled and swallowed by the inhabitants; and he thence inferred that macadamised roadways should, as soon as possible, be superseded by wood or by asphalt and that these should be effectively cleansed by daily washing. This course is already pursued within the boundaries of the City.

With regard to town dogs Dr. PARKES is even more emphatic than Sir HENRY THOMPSON, for he describes them as "an unmitigated nuisance." He further declares that the present state of the footpaths, in relation to canine excreta, is largely due to the disappearance of an industry by which these excreta were formerly collected for use in tanneries and which has now been superseded by the products of an artificial or laboratory dog made in Germany. The chief blame must, however, be laid upon the local authorities who, as a rule, totally neglect that duty of cleansing footpaths which the law clearly imposes upon them. The real grievance in the matter is that the individual householder has no easy remedy against the local authority and that any proceedings taken against this authority would be defended at the cost of the rates. No single amendment of the law would be so valuable, in relation to the health of towns, as a power given to any householder to apply to a magistrate for an order directing negligent authorities to do their duty and throwing the cost of the proceeding upon the shoulders of the negligent persons whoever they might be. Dr. PARKES further advocates, what the *Times* had suggested a month before, the imposition of a municipal tax upon dogs, in addition to the national tax, and as a means of meeting the expenditure rendered necessary by their presence in towns. The ownership of a dog has a remarkable tendency to convert even a philosopher into an unreasoning being and the proverb, "Love me love my dog," has its foundation in one of the deepest principles of human nature. But an urban dog-owner may perhaps be expected to acknowledge liability to pay for the cleansing rendered necessary by the habits of the favourite. A correspondent of the *Times* suggests that dogs may "easily be taught" to resort to the carriage way, instead of remaining upon the footpath. There are not many dog-owners, however, who possess the knack and the patience necessary for such education; and, even supposing it to be completed, an unfortunate constipated dog in a carriage way, endeavouring to detach an adherent foot or two of tapeworm from its person, would be an easy and certain prey to the swift butcher's cart or the passing automobile. There would soon be an outcry from urban dog-owners for the prohibition of wheeled vehicles. In the meanwhile, however, the tendency for reform seems to be in the opposite direction, for Dr. PARKES looks forward to the disappearance of horse-drawn conveyances as to the beginning of a new sanitary era. It is at least certain that the contributions of our equine friends towards the general defilement of town thoroughfares are very considerable, and that the withdrawal of these contributions would be an important step towards the simplification of the general problem. There would still remain the dogs, the cats, the garbage, the vegetable refuse, and the dust-cart. Worse than all, there would still remain the average town councillor, built upon the model of JOHNNY HEAD-IN-THE-AIR in Struwwelpeter, with his thoughts divided between schemes of electric lighting and a contemplation of his own importance, and so occupied by higher things as to have no consciousness of canine excreta until the happy day when he chanced to walk unwarily, and thus to introduce into the sanctuary of his own dwelling the nuisance which he had previously been content to ignore.

Annotations.

"Ne quid nimis."

THE PRACTICAL TEACHING OF MIDWIFERY IN AMERICA.

IN the *Journal of the American Medical Association* of Oct. 3rd, 1903, are published the results of 1000 cases of labour attended in the extern maternity department of the University College of Medicine, Virginia. The account is of considerable interest in that this is the first attempt to institute a system of free service for lying-in women in their own homes in the Southern States of America. It is also noteworthy for the very excellent results which have been obtained; the mortality rate is only 0·5 per cent., while only four cases of sepsis occurred. As the writer points out, such a mortality and morbidity rate contrast very favourably indeed with the results of both the intern and extern departments of some of the best known foreign maternities. They show what can be done even in the most unfavourable circumstances, many of these patients, including coloured as well as white women, being attended amidst surroundings of the utmost poverty, conditions even worse than those not uncommonly occurring in the extern maternity work of some of the London hospitals. Dr. J. F. Winn is to be congratulated on the results of his organisation and of his teaching. His aim has been to impress the students with the danger of infection and without using any great array of aseptic paraphernalia to reduce the system of disinfection to as simple a one as possible. Great care is taken in making vaginal examinations but the ante-partum vaginal douche is not employed. Special attention is devoted to keeping the hands and especially the examining hand sterile, and the disinfection of both the external genitalia and the hands is repeated before each examination. Vaseline is not employed as a lubricant. Reliance is placed upon the thorough scrubbing of the hands and forearms in soap and water, followed by their immersion in perchloride of mercury, 1 in 1000, for not less than five minutes and then in a solution of lysol of the strength of one drachm to the pint. Great stress is laid upon the proper management of the third stage of labour. The perusal of this report reminds us of the deficiencies in the practical training in midwifery of medical students in London. At the present time when the registration and training of the midwife are occupying the professional mind to such an extent the imperfect clinical training which medical students receive in this subject is in danger of being forgotten. The standard of the clinical teaching in midwifery, with the exception of that given in such an institution as the Rotunda Hospital in Dublin, is far below that received by the student in both medicine and surgery. The want of properly equipped lying-in hospitals throughout the country, the reluctance of women to enter such institutions, and the fact that most of the work must therefore be done in the homes of the poor render proper systematic clinical teaching almost an impossibility; indeed, in London midwives are better provided for in this respect than are medical students. It is almost impossible for the student who comes to London for the purpose of taking out special courses of study to obtain any opportunities of doing practical work in either midwifery or gynæcology. Even the amount of knowledge required of a student before taking duty in the extern maternity department of his own hospital is, we fear, in only too many instances very deficient. In most maternity departments the obstetric assistant is required to go with him to his first case of labour, but when, as not infrequently happens, this officer is engaged with some abnormal case the student often proceeds to his first case either alone or in the company of some friend who has completed his term of duty. It is true that the interests of the patient are safeguarded by his being required to send for assistance in all cases where he is in the least difficulty or doubt, but how much advantage can the student obtain from his term of office, completed as it so often is without his receiving any clinical instruction at all on the normal cases which he attends? Even if he meets with some abnormal case the teaching that he receives in the case is probably given to him by the obstetric assistant, often no doubt a very good man, but who is of the same standing as a house surgeon or house physician and whose teaching cannot for a moment be compared with the bedside teaching received by the student from the members of the hospital staff on medical and surgical cases. A system by which the student is dependent upon such casual and imperfect teaching in a subject of such practical importance as midwifery is obviously a wrong one. We fear, however, that no improvement will follow in this respect until the matter is taken in hand by the examining boards. It is one the importance of which is recognised by every obstetric teacher in the metropolis and it constitutes a grave defect in the training of the student which urgently demands a remedy. It is little wonder that foreign and colonial students express surprise when they are told that if they want systematic clinical teaching in midwifery they must go not to a hospital in London but to one in Dublin.

WATER-CRESS AS A SPECIFIC FOR BERI-BERI.

WE have received from the Foreign Office a copy of a despatch from Mr. John G. Haggard, His Majesty's Consul at Noumea, New Caledonia, relating to beri-beri, and a note on this despatch by Sir Patrick Manson, medical adviser to the department. The purport of Mr. Haggard's despatch is to report to the Foreign Office a circumstance respecting beri-beri which, to quote the guarded official language, "may or may not be of some importance in view of His Majesty's West African possessions." Beri-beri is very prevalent on the island of Noumea amongst the natives of all nationalities working at the mines and, says Mr. Haggard, "it seems to have been found out quite accidentally that watercress is an almost certain cure. Consequently all the mining companies are cultivating it largely." The despatch was submitted to Sir Patrick Manson who suggested, in reply, that the statement that water cress had been found to be a cure for beri-beri should be sent to THE LANCET, the *British Medical Journal*, and the *Journal of Tropical Medicine*, with an intimation as to its source. "I would point out," continues Sir Patrick Manson, "that similar statements as regards the influence of various kinds of food on beri-beri have frequently been brought forward on inadequate experience. It would seem that in the endemic areas many kinds of malnutrition predispose to the disease. It may be that there has been a deficiency of vegetables in the dietary at the mines in New Caledonia predisposing to beri-beri and that this deficiency has been made good by water-cress. That this vegetable has a specific action on the germ of the disease I question. However, it is an experience worth following up. The publicity given by the medical press will insure this." Sir Patrick Manson's inference as to the subordinate part that has been played by water-cress as a remedy for beri-beri is almost certainly right. On the other hand, it is conceivable that water-cress may have some specific action and we have certainly no right to exclude on *a priori* grounds such possibilities as these. The publicity given in our columns and in those of our contemporaries to Mr. Haggard's despatch will doubtless lead to a wide trial of the virtues of water-cress, so that in a short time we should have much recorded experience to guide us to a decision in the matter.

THE MENTAL AND MORAL EFFECTS OF THE SOUTH AFRICAN WAR ON THE BRITISH PEOPLE.

THE widespread and varied impression created on the people of Great Britain by the late war with the Boers of South Africa is a matter of common knowledge. In the *Journal of Mental Science* for January Dr. R. S. Stewart of the Glamorgan County Asylum makes an attempt to arrive at an exact idea of its effects on national character and conduct. "There is abundant evidence," says Dr. Stewart, "to show that it produced an immediate and very profound, though unlasting, modification of national character." The early period of the campaign, which comprised the last few months of 1899, was that of Britain's greatest stress. The events of that period included the siege of Kimberley, Mafeking, and Ladysmith, and the reverses sustained at Nicholson's Nek, Stormberg, Magersfontein, Colenso, and Spion Kop. The feelings engendered by the events of this period were those of painful anxiety, but a spirit of determination was aroused in the nation that at all hazards the enemy must be overcome and that no sacrifice should be felt to be too great for the purpose. During the last quarter, and especially in the last month, of the year 1899 there was a marked diminution of serious or indictable offences, but this improvement in the *morale* of the nation was not sustained, for in the following year the criminal tendency steadily rose to normal levels and in the last quarter of 1900 it showed an increase of 8·1 per cent. above that of average years for England. In Wales and Ireland similar phenomena were noticed. As regards offences against property a temporary subsidence of crime in this respect during the last quarter of 1899 was followed by a rise in the percentage of such offences during the first three quarters of 1900, while the increase in the last quarter was 9·7 per cent above the average. Similar conditions prevailed in Scotland and Wales. Crimes of impulse and passion, which had diminished appreciably in the last quarter of 1899, increased during the next year. "The year 1900," adds Dr. Stewart, "witnessed a gradual but steady weakening of the influences exerted by the events of the preceding quarter. The number of murders in England also increased slightly during 1900, the murders of newly born children, a peculiarly female crime, showing an increase of 6·1 per cent." As regards crime of a sexual nature a decrease in 1899 was followed by a return to normal levels before the closing of 1900 until in December, 1900, a great increase above normal limits was reached in all three divisions of the United Kingdom—viz., 28·9 per cent. in England, 60 per cent. in Ireland, and 61·1 per cent. in Scotland. Suicides and [illegible] to normal levels in 1900 and in December of that year an increase of suicides by 50 per cent. was noted in England. Combining the homicidal, suicidal, and sexual offences under one head as crimes of impulse and evil passion, says Dr. Stewart, the restraint produced in the last quarter of 1899 soon wore off and the percentage of crimes rose to considerable heights at the close of 1900. "The records relating to minor non-indictable offences indicated the same moralising effects as in the case of serious crimes [in 1899], an effect gradually but surely disappearing as time progressed, in 1900." The proportion of insanity has shown a grave tendency to increase, especially in the years 1901 and 1902, as regards "first admissions" to asylums of the United Kingdom. The marriage-rate showed a decrease during 1900 while illegitimate births showed a corresponding increase throughout the kingdom. There was thus for the time being, concludes Dr. Stewart, an improvement in the whole national *morale* during its period of trial—the last quarter of 1899 and the early days of 1900, a change the cause of which may be attributed to the circumstances of the time which were of such a nature as to arouse concern and even anxiety for the safety and success of the United Kingdom. Gradually, however, with the advent of success to the British arms in 1900, the effect produced by these events passed away until by the end of 1900 it had vanished and there was a return to something even worse than previously prevailing conditions. "We were rudely and painfully aroused out of our moral trypanosomiasis," concludes Dr. Stewart, "but to all appearance the danger being overpast, the reaction has proved, and is likely to prove in the future, productive of the gravest results."

PRESCRIPTION AND ADVICE.

THE relative values of a medical man's advice and of his prescription are very different in the public and in the professional eye. The public pin their faith to "medicine," the instructed know how often advice is the more valuable portion of a medical man's services. At the present time when controversy is raging round the advisability of precluding medical men from dispensing their own prescriptions it is interesting to notice how completely in older days the value of medicine outweighed the value of the medical adviser's attention in his patient's estimation. By the kindness of Dr. R. P. Smallwood of Little Waltham we have before us a "doctor's bill" of the year 1697. In this foot-and-a-half-long document no mention is made of any visit or consultation. All the fees demanded are for draughts and applications supplied to the patient. The prices for these appear to be high and it may be presumed that the discrepancy between the market value of the drugs and the amounts charged for them is balanced by the uncharged-for visits in connexion with the illness for which the prescriptions were written. Some of the items afford quaint reading by reason of the candid description of their powers contained in the titles of several of the favourite prescriptions in vogue at that date. "Purging potions" and "expulsive powders" figure largely in the list and whilst the nature of these is fairly indicated in their name we are less certain of the direction in which "elixir proprietatis" was intended to work. Apparently the patient of the seventeenth century was content to know the aims of his medicine, though he remained in ignorance of its ingredients. To-day the sophisticated invalid is satisfied with the exact names of the drugs employed, though in complete ignorance of their therapeutical action. His faith is pinned, so to speak, to the blessed word "Mesopotamia"; if he recognises in the prescription the name of the fashionable drug of the hour his confidence in the treatment prescribed is satisfactory. The account of which we are speaking amounted to £38 and our readers will be interested to hear that the patien objected that this was excessive. In the enlightened tim of to-day such objections, of course, never arise.

THE AMBIDEXTRAL CULTURE SOCIETY.

THE syllabus of the subjects to be brought before th Ambidextral Culture Society during the current sessio seems to give promise of some interesting papers and di cussions. On Feb. 10th the honorary secretary read paper on the Aims and Methods of the Society. The nex three announcements are: Ambidexterity in the Infan School, by Miss Margaret McMillan, on March 2nd Physiology of Simultaneous Ambidextral Work, by th honorary secretary, on March 16th; and two papers o Ambidexterity in Angling, by Captain Hart-Davis an Mr. R. B. Marston, on April 6th. On May 18 Dr. James Shaw will discourse on Ambidexterity fro the Medical Point of View. The meetings will b held at the rooms of the Medical Society, 11, Chando street, Cavendish-square, London, W., at 5 P.M. each day The lists of vice-presidents and committee contain numero names, including those of Lady Florence Dixie, Sir Jam Sawyer, Mr. E. Noble Smith, and the professors of natur history at the Universities of Edinburgh and St. Andrew The annual subscription seems to be very moderat The honorary secretary is Mr. John Jackson, F.E.I.S St. Dunstan's House, Fetter-lane, E.C. Our readers ma recollect that in the Huxley Memorial Lecture delivered the Anthropological Institute on Oct. 21st, 1902, Profess D. J. Cunningham, speaking on the subject of Righ Handedness and Left-Brainedness, said that man as far ba as we can trace was preferentially right-handed. A numb of letters on various aspects of the question subsequent appeared in our columns.

INTERNATIONAL CONGRESS ON TUBERCULOSI

BY a committee of organisation appointed for the purp it has been resolved to organise an international congre which is described as follows: "American Internation Congress on Tuberculosis, to be held October 3rd, 4th, an 5th, 1904, under the auspices of the Universal Expositio St. Louis, 1904, and of the American Congress on Tuberc losis." The present officers of the American Congress o Tuberculosis were, with few changes and exception elected to the corresponding offices in the American Inte national Congress. It was further resolved that the congre should be open to the legal, medical, and all other pr fessions, judges, philanthropists, men of science, statesme legislators, and all citizens interested in averting the ravag of the disease, and that they should be invited to coöpera and to become members of the body. Whilst wishing success to the proposed congress and fully acknowledgi the utility of the interchange of ideas between medical m of all nationalities, we are inclined to doubt the wisdom encouraging a lay element in discussions which parta purely of a technical character. The question of the pr vention of pulmonary tuberculosis is a vast one and membe of the medical profession are by no means unanimous as the manner in which prophylactic measures should be carri out. On the other hand, we have frequently laid stress on t importance of instructing the community at large as to th chief means by which infection may be reduced to minimum. We would venture, therefore, to suggest th there might be two classes of discussions, one purely tec nical to which only medical practitioners should be invite and the other of a more general character in which the la element might with advantage be encouraged. No goo could come of individuals joining in, or even listening t a discussion on vexed questions in connexion with th etiology of tuberculosis but misconceptions might very like arise. Whatever steps may ultimately be decided upon in the "fight against consumption," we strongly insist that the opinion of medical men must be paramount and that suggestions arising from those not trained in medical knowledge can only be considered of secondary importance.

THE AUTO-CAR AS AN AMBULANCE.

IN the opinion of Regimental Surgeon Prévost (*Archives Médicales Belges*) the ambulance of the future will be an auto-car. Over ordinary horse-drawn wagons these cars possess many and great advantages. In the first place, the length of a sick convoy will be diminished by a third, if not a half, and it will travel at a considerably greater speed. Secondly, the occupants of an auto-car ambulance will be spared the jolting and shaking inseparable from horse- or mule drawn vehicles when starting or halting, as well as those due to restive animals. Thirdly, the provision and carriage of bulky forage will be dispensed with. Against the auto-car can only be urged its cost and liability to go out of order. In a short time both these defects will, it is confidently anticipated, be reduced to a minimum. Another advantage in addition to those enumerated above would consist in the greater cleanliness of the auto car. The dejections of horses and other animals are a fruitful source of complaint if not of disease. It has been calculated by Surgeon Prévost that if auto-car ambulances were to be used exclusively for military hospitals it would be possible to economise 193 men per army corps.

THE CAMBRIDGE DIPLOMA IN TROPICAL MEDICINE.

IN November of last year the special board for medicine of the University of Cambridge presented a report to the Senate upon a proposal, which had been for some months under consideration, to establish in the University an examination and diploma in tropical medicine and hygiene. The report emphasised the need of greater facilities for the study of tropical diseases and their prevention and the desirability of encouraging practitioners who propose to practise abroad to give special attention to the study—a desirability already recognised in other countries. "In Germany and France," says the report, "military, naval, and colonial physicians are now required to attend courses in tropical medicine before taking up the duties to which they are assigned. There are also indications that similar requirements may ere long be enforced as regards medical men desiring to enter the British service abroad. At the present time candidates possessing the diploma in public health are preferred for appointments under the Colonial Office and efforts are being made by the army authorities to insure that military medical officers may be able to acquire the special knowledge and skill implied by the possession of this diploma. Similar considerations apply also to the case of duly qualified medical men who desire to engage in missionary work or to accompany exploring expeditions abroad. The course of study, however, which is appropriate for medical officers of health is far from including all that is necessary for a practitioner in the tropics, while it naturally includes much that has no special relevance to the duties and needs of the latter. In a recent Colonial Office circular it is accordingly proposed that all medical men whose fees are paid by Colonial Governments shall, before proceeding to their appointments, be required to pass an examination or to obtain a certificate of proficiency in tropical medicine. It therefore seems likely that an examination specially designed to meet the new requirements would not only obtain speedy recognition but would also prove of service to students of the subject by establishing a satisfactory standard of attainments and by marking out the proper lines of study. The University already provides facilities for the study of various branches of the subject and these facilities could without much difficulty be extended." The special board for medicine having addressed Mr. Chamberlain and Mr. Brodrick, received from both gentlemen direct encouragement of the idea that the University of Cambridge should institute a test in the knowledge of tropical diseases and hygiene and accordingly came to the conclusion that the University would be performing a public service by adopting the proposal under consideration. The board conferred with the State medicine syndicate and ascertained that that body approved the proposal and was prepared to undertake the management of the scheme and the conduct of the examination and its report was approved by the Senate on Jan. 28th last. The regulations for the examination in tropical medicine and hygiene are very simple. The examination will be held once in the year and any person whose name is on the Medical Register will be admissible as a candidate if a period of not less than 12 months has elapsed between his attainment of a registrable qualification and his admission to the examination. The subjects of the examination will be the nature, incidence, prevention, and treatment of epidemic and other diseases prevalent in tropical countries, and as evidence of study and attainments a candidate may present any record of work done in the field indicated and any diploma of public health or sanitary science Such evidence will be considered by the State medicine syndicate as a qualification for admission to the examination and will also count in the examination. *The examination will comprise the following* subjects .—

[illegible] thological and bacteriological investigation.
[illegible] nd life-
[illegible] emical
[illegible]
[illegible] ntion,
[illegible] c, and
[illegible] kwater
fever. trypanosomiasis; relapsing fever; dengue; yellow fever; plague;
[illegible]
animals and by poisoned weapons; sunstroke.

3 The general effects on health in the tropics of seasons and climate. soil, water, and food. Personal hygiene, acclimatisation. *Principles* of general hygiene, with special reference to food- and water supplies, sites, dwellings, drainage, and the disposal of refuse. The sanitation of native quarters, camps, plantations. factories, hospitals, asylums, jails, pilgrim and coolie ships. Principles and methods of disinfection

Every candidate will be required to pay a fee of six guineas before admission or readmission to the examination. We regard the innovation of the University of Cambridge as one of the highest importance.

THE REVACCINATION BILL, 1904.

THE Revaccination Bill is down for discussion in the House of Commons on April 26th. It is of importance that everyone who wishes to rid the country of small-pox epidemics should do his best at this moment to strengthen public opinion in support of systematic revaccination at school age. The Imperial Vaccination League is distributing copies of a manifesto in favour of revaccination and it is hoped that it will be signed by a very large number of leaders of thought and of social and industrial influence. Medical practitioners will do most useful public work if they will bring this manifesto (of which copies can be had gratis on application to the Secretary, Imperial Vaccination League, 53, Berners-street, London, W.) under the notice of the municipal authorities in their own locality, of ministers of all denominations, of manufacturers, hotel-keepers, tradesmen, and all large employers of labour and will ask them to sign it. The economic loss which results from every epidemic of small-pox is enormous, as is also the cost of keeping up immense small-pox hospitals. Everyone pays rates and all the expenditure on small-pox comes eventually out of the rates. It is therefore everyone's interest to put an end to epidemics of small-pox. The manifesto, which has already several hundreds of important signatures, runs thus :—

> Believing that in vaccination and revaccination we possess the best protection against epidemic small pox, I should heartily welcome legislation making revaccination at school age obligatory on all but the children of conscientious objectors or those who may be for a time excused on the ground of ill-health.

THE HEALTH OF SIR SAMUEL WILKS.

The many friends of Sir Samuel Wilks will be glad to hear that he is progressing favourably towards recovery from an acute attack of appendicitis which developed on Feb. 5th. Within seven days his condition became so critical that Mr. C. J. Symonds was called in to operate. He opened an abscess and removed the appendix which contained a large concretion and was gangrenous for the space of one inch from its distal extremity. At the commencement of the attack Sir Samuel Wilks was seen by Mr. W. Boulting who summoned Dr. P. H. Pye-Smith. The initial symptoms of the case might have been considered due to renal colic but the appearance in the right iliac region of a tumour which began to get bigger at an appreciable rate cleared up the diagnosis. We are glad to announce that Sir Samuel Wilks is now progressing satisfactorily and it is considered that all danger is over, one feature in the state of the patient especially pointing to a favourable issue being the steady improvement in his general condition for the last four days.

THE TRAINING OF MIDWIFERY NURSES IN IRELAND AND THE REGULATIONS OF THE CENTRAL MIDWIVES BOARD.

In an annotation last week (p. 449) we referred to a correspondence between Mr. E. H. Tweedy (Master of the Rotunda Hospital, Dublin) and the secretary of the Central Midwives Board in reference to the two regulations that candidates "must have attended and watched the progress of not less than 20 labours and personally delivered the patient, and, further, must have nursed 20 lying-in women during the ten days following labour." Owing to these two rules nurses trained at the Rotunda Hospital, Dublin, are precluded from qualifying for admission as candidates to the examinations of the Board. We understand that at the request of his colleagues Dr. J. W. Byers, professor of midwifery, Queen's College, Belfast, wrote to the chairman of the Central Midwives Board pointing out that these two regulations would also disqualify midwives trained in the Maternity Hospital, Belfast (where the nurses reside for a period of six months and where they have a similar course of instruction to that of the Rotunda Hospital and are granted a certificate on passing an examination at the end of their training). A reply has been sent to Professor Byers of the same import as that received by the Master of the Rotunda Hospital, that "they [the Central Midwives Board] regret that the suggested alternatives were not brought to their notice before the rules were sent to the Privy Council, as having been now approved by that body it is impossible for the Board to alter them." As a result of these regulations a permanent disqualification is made of midwifery nurses trained not only in Dublin but in Belfast and the rest of Ireland. According to the rules of the Central Midwives Board the certificates as to personal conduction of 20 labour cases and the attendance of a ten days' puerperium are to be signed by a registered medical practitioner or by the chief midwife or matron of an institution recognised by the Board, or in the case of a Poor-law institution by the matron, being a midwife certified under the Midwives Act, or a superintendent nurse certified in like manner and appointed under the Nursing in Workhouses Order, 1897, and attached to such an institution, or by a midwife certified under the Midwives Act and approved by the Board for the purpose. Surely the certificate of the Rotunda Hospital, Dublin, or of the Maternity Hospital, Belfast, is equal to any of these. Further, as everyone knows, it is a common occurrence for a run of 20 normal midwifery cases to occur in succession and so a midwife might actually be able to fulfil the conditions necessary for going on to the examination of the Central Midwives Board and never have been brought in contact with, or recognised, or seen properly managed, such a complication of labour as hæmorrhage or eclampsia. A woman who has resided six months in an Irish maternity hospital would never be in such a position of ignorance. No body has done more to raise the standard of obstetric medicine than the Royal University of Ireland and here is the regulation of the Senate for students on the question of practical midwifery :—

> Attendance for a period of six months at a recognised midwifery hospital, containing not less than 15 beds in regular occupation where clinical instruction in midwifery and diseases of women and children is given, or for six months at a midwifery dispensary recognised by the Senate, where similar clinical instruction is given. During this period the candidate is required to attend at least *twenty* labours, of *ten* of which at least he must have had personal charge.

Nothing is here said as to length of attendance during the puerperium and only *ten* cases of *personal* conduction are required, but, on the other hand, a six months' course is specified either at a lying-in hospital or at a midwifery dispensary. Why should the Central Midwives Board adopt a different course in reference to its requirements from pupil midwives? Is what is required from students not enough for midwives? The answer of the Central Midwives Board to those who have protested against these regulations as unfair and as really not giving a guarantee that those fulfilling them have necessarily received a requisite training is, in fact, no reply at all. It simply begs the question and it also (by regretting that the suggested alterations were not brought to its notice before the rules were sent to the Privy Council) admits the justice and fairness of these objections to its rules. To say that it is impossible to alter rules approved by the Privy Council is no argument; the Board might surely ask the Privy Council to change regulations which further experience has shown to be inexpedient.

YOGA AND HYPNOTISM.

The practice of yoga, or mystical self-discipline, is common all over India and is undisguisedly advocated by American occultists and, more mysteriously, by their English imitators. From the point of view of scientific psychology the practice is simply a quaint means of inducing the hypnotic state and as such deserves the study of all those medical men who number among their patients hysterical believers in the doctrines of the late Madame Blavatsky. The effect of practising yoga must be at least bad for the nerves and injurious to the still unborn descendants of its practitioners. As described in the Brahmavâdin it consists at present of four species—Mantra-, Laya-, Râja-, and Hatha-yoga. A pious person, possibly an Eddyite, follows Mantra-yoga by repeatedly pronouncing some word and concentrating all his mind upon it. In Laya-yoga all the thoughts are concentrated on one thing or the idea of it, so that we become mystically one with it. Râja-yoga consists in holding the breath and consequently, as the Hindu yogis believe, in controlling the mind. Hatha-yoga is even more frankly hypnotic and its object—concentration—is obtained by sitting for hours in a cramped attitude or simply by squinting. The cramped attitudes of Indian yogis, which are maintained by some during a lifetime, have become proverbial. In a different spirit and in a more graceful manner artists' models may be described as unconscious followers of Hatha-yoga. Trilby was such and her creator, Du Maurier, had much to say on the subject of mesmerism as induced by posing in one attitude in an artist's studio. Squinting with determination at the tip of the nose is a method much recommended by the yogis who doubtless see nothing comic in the act. But they practise other similar contrivances. The great aim is to hypnotise. Thus English followers of neo-Buddhism have told us that they are in the habit of clearing the mind as far as possible of all ideas or thoughts. Among beginners this is attempted on a fasting stomach for about five minutes before breakfast. It must be an easier process for adepts than for the laity who at most, unlike the little girl in *Punch*, usually think not so much of "nothing" as of "things to think about."

COMPLIMENTARY DINNER TO MR. TIMOTHY HOLMES.

THE dinner to commemorate Mr. Holmes's retirement after a long period of service as surgeon, and later as treasurer, to St. George's Hospital was attended by a large number of his former colleagues and pupils. Among other distinguished friends besides the staff of the hospital were present the Regius Professor of Medicine at Cambridge (Dr. T. Clifford Allbutt), the Regius Professor of Surgery at Cambridge (Mr. Howard Marsh), and Sir Thomas Smith. The Earl of Cork and Orrery, who presided, proposed Mr. Holmes's health in a speech which recounted the many valuable efforts that he had made in behalf of surgery generally and of St. George's Hospital in particular. Dr. W. Howship Dickinson and Mr. J. Warrington Haward followed with excellent laudatory speeches and Mr. West, deputy treasurer to the hospital, read a long list of those who had sent letters of regret at their inability to be present. Mr. Holmes made a sincere and eloquent reply and after the presentation of an album containing the signatures of all the diners the evening, which had been enlivened also by some capital singing, terminated with a vote of thanks to the chairman.

THE TRIUMPHS OF SYNTHESIS.

ONE by one certain valuable commercial products are yielding to the analytical observations of the chemist and some day, perhaps, the world may be independent of nature's slow synthetic processes. Not a few people, however, confess to a prejudice in regard to synthetic products and to a preference for the natural article. There would appear to be either some quality missing in the synthetic preparation or else an additional quality which is undesirable; somehow or other it is not exactly the same in its effects it may be or in its appearance or properties. Perhaps there is an element of suggestion or fancy in this matter but for choice we are certain that many would decide in favour of natural indigo for dyeing purposes rather than the synthetic substance, and would prefer the real natural perfume of the flower rather than the synthetic oil, chemically and physically identical though they may be. Certainly in the case of a few substances possessing æsthetic qualities the synthetic product does not appear to give the same gratification. Man may discover how to build the molecular structure but all the same there would appear to be missing something in the architectural *tout ensemble* as nature presents it to us. The natural product may not be so pure but in this very possibility may rest the dignity, beauty, and completeness of the natural structure. Æsthetic qualities, however, do not count for much in the case of more or less coarse goods which answer broadly the purpose of the natural article. Thus could indiarubber be synthesised so successfully as to have the properties of natural rubber no one would doubt that a very useful addition to the necessities of modern life would be made. Indeed, the synthesis of rubber would count amongst the greatest triumphs of chemical science in its application to the elaboration of substances which hitherto have been nature's exclusive production. Amongst the latest synthetic achievements of moment is that of camphor which, it is announced, is now being produced on a commercial scale by a comparatively simple process from turpentine. Turpentine oil is heated with oxalic acid, an oxalate being formed with pinene, the principal constituent of turpentine oil. The oxalic acid effects a further change with the production of a formate which when heated with alkalies yields camphor and carbon monoxide and water. The camphor so made is afterwards sublimed and it condenses in the form of snow-white crystals. It will be interesting to see what effect this synthetic process will have upon the supply of the natural camphor from Japan and, further, whether it will compensate for the reduced output which the war between that nation and Russia must inevitably occasion. Science seems to have anticipated this contingency.

THE HÆMOSTATIC CONSTITUENT OF THE SUPRARENAL GLAND.

AT a meeting of the Chemical Society held on Feb. 4th Dr. H. A. D. Jowett brought forward the results of his investigations on the chemical nature of the hæmostatic constituent of the suprarenal gland. The work of inquiry was conducted in the Wellcome chemical research laboratories. Previous investigators, and notably the Japanese chemist Takamine, had been able to prepare a crystalline substance from these glands which produced an enormous rise in the blood pressure when injected intravenously. The names proposed for this substance were at first "epinephrine," then "suprarenine," and last by Takamine "adrenaline." Apparently investigations have shown that all three are more or less pure forms of the same constituent and Dr. Jowett has demonstrated that it is probably a catechol derivative with, perhaps, a pyrrol nucleus. The formula now assigned to it is $C_9H_{13}O_3N$. On fusing with potash a substance was obtained giving the protocatechuic acid reaction. Further, it yields trimethylamine and veratric acid when completely methylated and the resulting product oxidised. According to the constitution ascribed to epinephrine it would seem to show an analogy with muscarine and it is significant that amanitine, a fungoid base related to neurine, yields muscarine on decomposition with nitric acid and evolves trimethylamine on heating, which is also yielded by epinephrine, and the constitution altogether is not widely different from the suprarenal principle, assuming Dr. Jowett's view of it to be correct.

THE GEOGRAPHICAL DISTRIBUTION OF INSANITY IN THE UNITED STATES OF AMERICA.

AN interesting report recently issued by Dr. W. O. White of the Government Hospital for the Insane at Washington, D C., gives a lengthy account of the geographical distribution of insanity in the United States and its significance. He finds that the proportion of insanity "is highest where there is greatest congestion of population and therefore where the stresses incident to active competition are most severe." This view is generally accepted by alienists in America. While hereditary predisposition is recognised as a leading cause of insanity he believes that a quiet life is a guarantee against mental breakdown as regards some of its forms. On the other hand, the stresses of excessive study, business anxiety, loss of property, domestic calamity, excitement in love, and politics are found to be definite exciting causes of insanity. The tendency to insanity is strong in those who from constitutional predisposition indulge in alcohol for long periods of time. Alcoholic insanity prevails most frequently in crowded industrial centres of population "where the struggle for income is bitterest." Regarding ethnical conditions the interesting fact is recorded that among the North American Indians insanity is of rare occurrence. This is not because these tribes are exempt from the diseases or the vices of civilisation but because they live an easy-going outdoor life free from care and worry for the future and therefore free from mental overstrain. The negro, says Dr. White, remains sane despite his unhygienic surroundings so long as he remains in the country, his natural home. But when he goes into the Northern States and cities and enters into active competition with the white who is mentally his superior he soon succumbs in the struggle. Thus in Georgia, where the greatest number of negroes are found, there was a ratio of 1 insane negro to 1764 of the coloured population, while in New York the ratio was 1 to 330 or almost exactly the same as for the white population. In Alabama, Arkansas, Kentucky, Missouri, North and South Carolina, Texas, and Virginia the ratio of insanity among negroes is 1 to 1277 as compared with 1 to 450 for the white population. In the industrial States of the East insanity is very common, the ratio being, for example, 1 to 348 of the general population in Massachusetts. These facts, says Dr. White, though in the main well established, are of interest in showing the ill-effects of mental and physical stress in combination with advanced civilisation operating in great cities and centres of population. Dr. White also refers to the question of miscegenation as tending to increase the vulnerability of the coloured races to tabes dorsalis, general paralysis, and other mental and cerebral diseases, a point to which attention was recently drawn in THE LANCET.[1]

THE AUTOMOBILE SHOW AT THE CRYSTAL PALACE.

THE official show of the Society of Motor Manufacturers and Traders, which opened at the Crystal Palace on Feb. 12th, will remain open until Wednesday, the 24th, and is a remarkable tribute to the energy of the British manufacturer. It is well worthy of a visit by all who are interested in automobilism. Although the show is not confined to the productions of our own country—our foreign competitors being well represented—yet the "all-British" manufactures are assuredly seen to better advantage than on any previous occasion in the history of the motor industry. It is, perhaps, from a national point of view a little disconcerting to learn from the latest return to the Board of Trade that we imported last year no less than £2,000,000 worth of cars and parts and exported only £344,025 worth. To judge, however, from the signs of progress on the part of our home manufacturers which are everywhere in evidence at the Crystal Palace this slight to our national pride will soon be righted. The present show embraces motor vehicles of every description—from the humble motor cycle to the colossal motor omnibus and brewer's dray, with an *omnium gatherum* of the usual "runabouts," broughams, and the more or less luxurious pleasure vehicles. Certainly for the man of means there is no end to the beautifully designed and finished cars, ranging in cost from 500 to over 1000 guineas each; for the man of moderate means there is a still greater though less *recherché* choice; whilst for the man of modest means the prediction that the season of 1904 would see him well catered for is amply fulfilled. It is not within our province to suggest or to recommend individual cars or manufacturers, as obviously the circumstances of varying needs and pecuniary considerations must be important factors in guiding the choice of a vehicle. A visit to the Crystal Palace, however, before the exhibition closes will be an invaluable object-lesson to the intending motorist and also an opportunity to see under one roof what is admitted to be the finest display of automobiles yet held in this country.

MUSCLE AND NERVE RAYS.

THERE would appear to be no longer any doubt that rays are given off by active muscle and nerves, for the observations made by M. Charpentier have been completely confirmed by Dr. Hugh Walsham and Mr. Leslie Miller, who have sent us a communication upon the subject. These gentlemen point out that experiments are remarkably easy to perform and are absolutely convincing as to the actual existence of the rays. These emanations from the human body and their effect upon a fluorescent screen were first observed by M. Charpentier while studying Blondlot's rays (the so called "n" rays). When certain conditions are observed there is no difficulty in obtaining confirmation of M. Charpentier's observations and the most satisfactory procedure is as follows. The screens are prepared with hexagonal zinc blende which is placed in the form of a very thin film on thin paper, gold-beater's skin, or thin celluloid. The screen is excited by exposing it to the ultra-violet rays, sunlight, or, better still, magnesium light. The fluorescent light of the screen is then allowed to die away until it has reached the steady stage. At this point if a muscle in a state of contraction, as, for example, the contracting abductor and adductor pollicis of the thumb, be placed underneath the fluorescent screen it will be seen to brighten perceptibly. We have inspected photographic plates which demonstrate this intensifying effect of muscle and nerve rays upon the fluorescence of the screen.

BENZENE, A POISONOUS CONSTITUENT OF COAL GAS.

ALTHOUGH benzene would appear to play no part in the poisonous effects of coal gas on man, yet this substance has a very interesting physiological action which indicates the possibility of giving rise to toxic symptoms. In a paper read at a recent meeting of the Royal Society Dr. R. Staehelin presented the results of an investigation of the action of coal gas upon frogs, in which it was shown that when frogs are exposed to coal gas motor phenomena are produced which are absent if the coal gas is previously purified by passage through oil and that these phenomena can be reproduced if the purified gas is made to take up benzene vapour. The investigation had its origin in a recent paper by Vahlen in which it was maintained that a difference exists between the poisonous action of coal gas and of carbon monoxide, and, in the case of frogs at any rate, the conclusion seems now to be that the differences between the effects of carbon monoxide and of coal gas depend on the presence in the latter of benzene. Vahlen stated that warm-blooded animals and frogs die more rapidly in coal gas than would be expected from its percentage of carbon monoxide and also that frogs placed in coal gas present excitatory phenomena which are absent in pure carbon monoxide. In warm-blooded animals the conditions are quite different, experiments showing that air containing a small percentage of benzene had no effects on a guinea-pig, nor was any success obtained in producing either acute or chronic poisonous effects by administering benzene to a rabbit by inhalation It is suggested that in the case of man the minute quantities which are absorbed by the lungs are rapidly oxidised and excreted as an aromatic sulphate. According to this there would be no reason for supposing that the poisonous effect of coal gas on mammals is determined by anything except the carbon monoxide which it contains. Mr. A. Wynter Blyth, however, in his work on poisons, states that from certain sources of information it is evident that the vapour of benzene has a distinctly narcotic effect while influencing also in a marked degree the spinal cord, the characteristic symptoms being noises in the head, convulsive trembling, twitching of the muscles, and difficulty of breathing.

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[1] THE LANCET, Nov. 7th, 1903, p. 1314.

THE NETTLESHIP PRIZE FUND.

To commemorate his work in ophthalmic surgery a gold medal has been established by the friends and pupils of Mr. E. Nettleship, to be awarded periodically for work done in ophthalmology. At its last meeting the medal was handed over to the custody of the Ophthalmological Society of the United Kingdom by Sir Thomas Barlow, representing the subscribers to the fund.

THE SANDGATE SCANDAL.

THE report of the medical officer of health of Sandgate will not fail, we hope, to attract the attention of the Local Government Board. Sandgate has a population of 1955 inhabitants and consists practically of a long street built by the sea shore. It should be one of the healthiest places in England, but there were last year no less than 64 deaths The birth-rate is equal to 18·9 per 1000, there being in all 37 births. These extraordinary figures find their explanation within the walls of those so-called sanatoriums which were fully described in these columns and which are run as a money-making business by the too notorious Mr. J. J. Jones.[1] Among the general population of Sandgate the deaths amounted to only 7·1 per 1000, for no less than 50 out of the 64 deaths occurred in the institutions or convalescent homes that abound at Sandgate. Of these, 45 deaths were due to pulmonary tuberculosis, and 43 out of the 45 took place in Jones's homes or "sanitoria." At the Bevan Home 1600 patients have been received during the course of the year and only 16 of these were suffering from pulmonary tuberculosis; one died. But in the Jones's homes no less than 881 patients were suffering from this disease and, as already stated, 43 of them died. Here, then, we have a total of 897 tuberculous patients set down in the midst of a population of 1955 persons, and this in the course of a single year. It must be borne in mind, as we fully explained in our account of Jones's homes, that these are not situated in the outskirts and in the open country but in the very centre and most crowded parts of the town. Further, these patients are not placed under the care of a medical board but the sovereign master and organiser of these homes is a layman who has taken this up as a matter of business and is just as ready to contract for burying the dead as for nursing the living, so long as a profit can be made out of the transaction. Should such trading as this be allowed? Can we afford to sanction such speculation in human misery, and, if so, should it be permitted to continue in the midst of a town? Unwholesome industries are not allowed in towns. Is it a wholesome industry to receive and to crowd together and to make a profit out of 881 persons suffering from pulmonary tuberculosis?

THE medical officer of health of the Cape Colony states that for the week ending Jan. 23rd no case of plague occurred throughout the colony. Plague-infected rats were found at Port Elizabeth and East London, and "one rodent, probably plague infected," was found at Knysna. Of 369 rats examined during the week in the Cape Town and Harbour Board area none was affected with plague. As regards the Mauritius a telegram from the acting Governor, received at the Colonial Office on Feb. 12th, states that for the week ending Feb. 11th there were four cases of plague and three deaths from the disease.

THE French National Congress of Gynæcology, Obstetrics, and Pediatrics will take place at Rouen in April. The sittings will begin on Tuesday, the 5th, and terminate on Sunday, the 10th. The secretary of the Congress is Dr. Albert Martin, 6, Place de la Cathédrale, who will be glad to furnish any other information which may be desired.

A MEETING of the Faculty of Medicine of the University of London will be held at the University Buildings, South Kensington, at 5 P.M., to day (Friday), for the purpose of receiving a communication from His Majesty the King concerning the proposed Institute of Medical Sciences.

A GRAND festival dinner will be held to celebrate the centenary of the Royal London Ophthalmic Hospital (Moorfields Eye Hospital), City-road, E.C., in the Grand Hall of the Hotel Cecil on Friday, April 22nd.

"The Medical Aspect of Motoring" is the title of a paper which is to be read at a meeting of the Western Section of the Scottish Automobile Club in Glasgow on March 7th by Professor Hugh Galt, M.B., C.M. Glasg.

THE LONDON COUNTY COUNCIL: THE MIDWIVES ACT, 1902.

AT the usual weekly meeting of the London County Council held at Spring-gardens on Feb. 9th, Lord MONKSWELL, the chairman, presiding, the general purposes committee brought up a report as to the administration of the Act, the powers under which the Council in December last decided to exercise. The general purposes committee having conferred with the public health and public control committees, recommended that to the order of reference to the public health committee should be added for consideration and report all questions relating to the Act.

Mr. E. A. CORNWALL (vice-chairman of the Council and chairman of the general purposes committee) moved the reception of the report.

Mr. R. MELVILL BEACHCROFT (Paddington North) regretted that the general purposes committee had not considered one matter which was very important in connexion with the administration of the Act and that was whether or not the Council meant to exercise the power that the Act gave to add to the committee people from outside who were versed in the wants of the poorer parts of London, especially women. He doubted whether many members of the Council knew what a very important influence this action might have on future generations of Londoners. The report presented to the committee by the officials of the Council, he believed, indicated that some such action as was here hinted at should take place. He suggested the addition to the recommendation of the committee of the following words: "With instructions to report forthwith whether the Council should be advised to avail themselves of the provisions of the Act which enable them to add to the committee persons, especially women, conversant with the needs of the poor."

Sir HENRY BLISS (Holborn) seconded the amendment.

Mr. CORNWALL was sorry he was not able on behalf of the general purposes committee to accept the amendment. The committee had before it a report which set out that the Council had the power to co-opt members on a special committee for the purpose of carrying out its duties under the Midwives Act, but the public health committee and the general purposes committee after consideration came to the conclusion that it would be undesirable for the Council to adopt such a course as that. On the other hand, they were of opinion that it would be much better to place the administration of the Act, so far as the Council was concerned, in the hands of the public health committee. He did not think the Council was at all likely to agree with the idea or generally to agree with the views of Mr. Beachcroft that they strengthened a committee by adding outside representatives. They must remember that under this Act there was a Central Midwives Board and the Council had not such large and extensive duties as would necessitate the bringing in of outside people. There were councils in the different parts of the country where it might apply with some force, but in the county of London, as they had done under the Infant Life Protection Act and the Shop Hours Act, they should not depart from their settled policy.

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[1] See THE LANCET, August 22nd, 1903, p. 565.

Mr. RUSSELL SPOKES (Walworth) thought that even on the Council itself they might be greatly assisted in many portions of their work by having women members. On boards of guardians and other bodies he had seen good, useful work done by women and this was one instance where he believed it would be exceedingly advantageous if they had women members of the Council. It was not the fault of the Council that they could not have women directly elected to their body. If they could there would be a large majority of members of the Council who would willingly vote for women being enabled to sit as councillors or aldermen Under the Midwives Act they had power to appoint women and he considered that it should be left to the Council to decide and that they should not content themselves with the adoption of the report of the general purposes committee. The majority of the Council had resolved against co-opting outside and non-elected representatives on their committees, but where they had the opportunity, as under this Act, he thought they should take advantage of their powers and co-opt women exactly in the same way as they decided a few weeks ago that it would be desirable to co opt women on the Technical Education Board. He hoped the Council would not stultify itself and go back on that decision in regard to a matter which so very nearly pertained to the women of the county.

Dr. J. FLETCHER LITTLE (Marylebone East) regarded it as one of the most serious defects of the London County Council that women were excluded from membership and he supported the appointment of women on this committee. There was a great deal of work that women could do very much better than men and the question would continue to come up until it was settled that they might have women elected to the Council.

Lieutenant Colonel ROTTON (Clapham) remarked that if ever there was a committee where the desirability of co-opting women existed it was undoubtedly this one Fortunately they had a number of medical men on the Council, but the majority of the members were incapable of arriving at a satisfactory decision in regard to certain delicate points which would have to be settled by this committee. He therefore hoped that they would take advantage of the powers conferred upon them by the Act and co-opt a number of women.

Sir WILLIAM J. COLLINS (St. Pancras West) was in favour of women being eligible for election to the Council and if that measure were adopted they would naturally find their places on the appropriate committee where he was sure they would render valuable assistance to London. In regard to the particular question before them it was hardly desirable to carry the amendment in view of the fact that if the public health committee found it necessary to call women to their assistance no doubt it would bring up a recommendation to that effect at the Council. Not only would the amendment add women to the public health committee for this particular purpose but it would complicate the whole way the committees of the Council were worked. He was sure the chairman of the public health committee would be able to get any expert assistance, either male or female, to make this Act a success.

Mr. G. H. RADFORD (Islington West) said that if Mr. Beachcroft would alter his amendment so that the power of co-option should be limited to women he thought he would find a large measure of support on the Council. He desired, however, to distinguish between this Act and the Education Act because in appointing women under the Education Act they acted under *force majeure;* they were required by law to appoint them. They were not so required here but they would do wisely if they did so.

Mr. G. J. COOPER (Bermondsey) (chairman of the public health committee) said that the matter had been before his committee and they were unable to see their way to suggest that women should be added to the committee When the committee had the opportunity of considering what should be done and how the Act should be administered it was quite possible that they would bring up to the Council a motion directly dealing with the subject and this would enable Mr. Beachcroft to have a distinct vote—yea or nay. It was purely a question of administration He knew there were members of the committee who were very sympathetic, who had not the slighest hostility to women helping the administration of the Midwives Act, but how it was to be done must rest with the committee. The committee would consider it and bring up a report on the whole question which would give the Council an opportunity of coming to some definite decision upon it.

On a show of hands there voted: for the amendment, 32; against, 27; majority for the amendment, 5.

The recommendation of the committee, with the addition proposed by Mr. Beachcroft, was then put as a substantive motion and unanimously adopted.

Looking Back.

FROM

THE LANCET, *SATURDAY*, FEB. 18, 1826.

FOREIGN DEPARTMENT.

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[illegible]N examining an [illegible]on of fossil bones, the remains of an [illegible] bear, Prof. Walther's surprize was no[illegible]t this poi[illegible] the quantity which he observed to be di[illegible]for [illegible] number is,

1. A very perf[illegible]llicis of internal necrosis of the right thigh b[illegible], neck, both trochanters and articulating su[illegible] the knee are healthy, all the rest of the bone is spongy and swollen; there are three principal entrances into the cloaca, in which the sequestrum still remains firmly fixed.
2. Two dorsal vertebræ anchylosed.
3. A lumbar vertebra, affected with caries.
4. Several lower jaw bones in a state of caries.
5. A radius, covered with exostoses; in short, examples of all the ordinary forms of disease which attack bone. So that the bears, at least, of an antediluvian world, would seem to have suffered from necrosis, inflammation of the bones, toothache, ending in caries of the alveolar processes, and diseases of the joints, followed by anchylosis, and doubtless, if their bones suffered, their soft parts did not escape. Dulce est socios habuisse malorum. We suppose, at intervals, that we discover hitherto unendured maladies; but nature, even in departing from her beneficence, appears to be governed by invariable laws. Here we have evidence of the same diseases that now occur, having afflicted the beings of creation which existed many thousand years ago, which probably inhabited the earth before man had asserted his supremacy.

HOSPITAL REPORTS.

GUY'S HOSPITAL.

*Contagious nature of Erysipelas?**

A female, labouring under ascites, had been for some time under the care of Dr. Bright, in Charity Ward, when, on February 1st, the operation of paracentesis abdominis was performed; a severe attack of erysipelas ensued, which, occurring in a constitution previously broken up by disease, proved fatal on the third day. A young woman is in the same ward under the care of Mr. Bransby Cooper, with an ulcer of the leg; her general health remarkably good. Being of the same religious persuasion as the poor woman who died, (namely Catholic,) she rushed from her bed, and in her "last moments" hung over and clasped the body of the dying patient. On the same morning this young woman sickened; she [illegible] w[illegible] and nausea, and on the following [illegible] erysipelatous inflammation [illegible] on [illegible] is [illegible] extending up [illegible] have run very high, [illegible] fatal.

* [illegible] years

by [illegible] in [illegible]
Soc[illegible]

TESTS OF CERTAIN OPEN DOMESTIC GRATES.

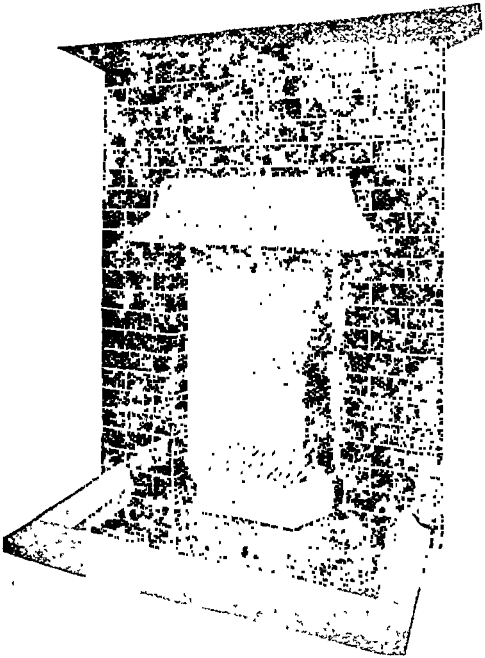
REPORT BY THE COAL SMOKE ABATEMENT SOCIETY.

IN the summer of the year 1901 a series of tests was made under the supervision of the Coal Smoke Abatement Society on six domestic open grates. The results, which were published in THE LANCET of May 10th, 1902, p. 1342, and afterwards in a special report, clearly demonstrated that there is a remarkable difference in effectiveness and economy between the numerous types of grates which are claimed to be "smokeless," "smoke consuming," or "smoke preventing." It was further shown that it is quite possible to produce a grate combining heating power and economy of fuel with a comparative freedom from emission of smoke so frequently associated with the use of ordinary household coal.

Since this series of tests was made the society has been on different occasions requested to investigate the claims of other grates, but until recently no opportunity of doing so recurred. In the winter of 1902-03, however, an exhibition of grates and other matters was held at the Crystal Palace and the society offered a prize or certificates in respect of such open grates burning ordinary bituminous coal as should in the opinion of a jury show substantial absence of smoke effectiveness of heat production and economy of fuel, in addition to the usual qualifications of a sitting-room grate.

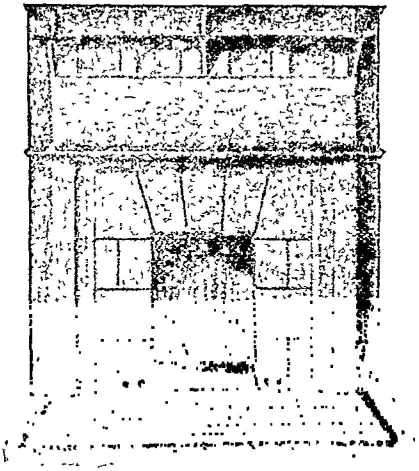
A jury was appointed by the society consisting of members of the council as well as of gentlemen possessed of technical knowledge but having no connexion whatever with the society. Rules were drawn up for the conduct of the tests. These rules were designed to secure that the tests should be exactly of the same nature for each competitor. A sitting-room on the ground floor of a building in Delahay street, Westminster, was placed at the disposal of the society by the courtesy of H.M. First Commissioner of Works and Public Buildings. The size of the room selected was 21 feet 6 inches by 14 feet 6 inches by 10 feet 6 inches, and in order to ascertain the comparative heating power of the grates it was arranged that each grate should be worked so as to maintain the temperature of the air in the room at 20° F. above that of the outside air. The two glass windows in the room were accordingly kept shut as was an ordinary door giving access to a small passage opening into the street. The street door also was, whenever possible, kept shut and as the chimney was 69 feet high an ample draught was obtainable.

FIG. 1.



Grate No. 1. The "Heaped" Fire. (Bratt, Colbran, and Co.)

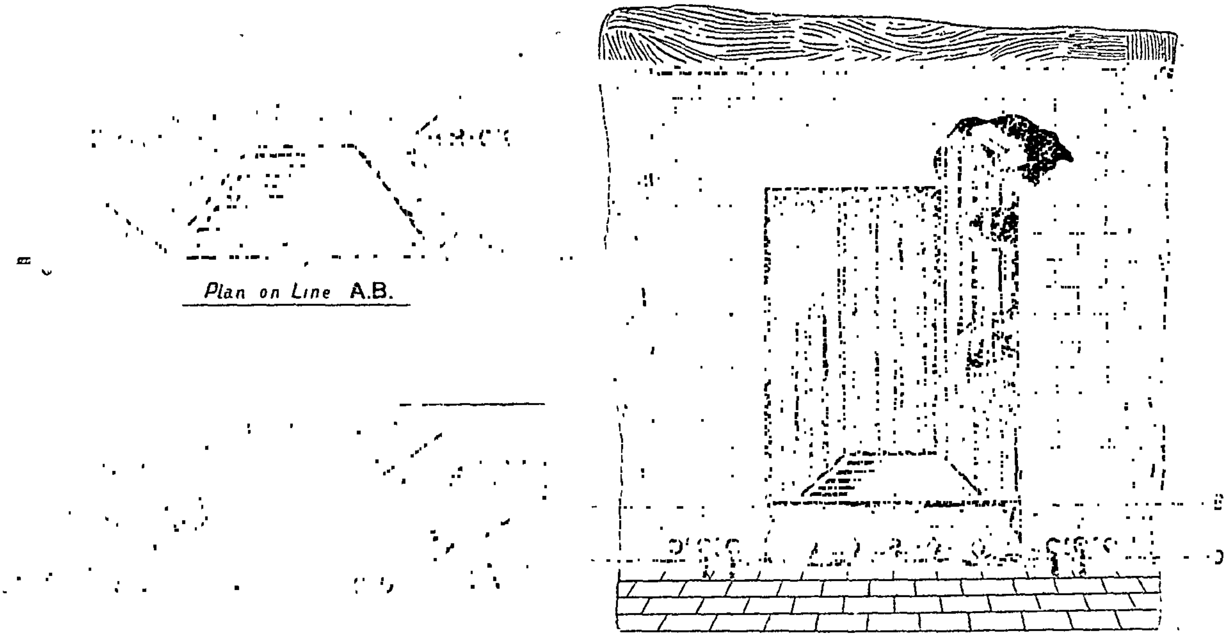
FIG. 2.



Grate No. 2. The "Tropican." (Chavasso and Kerr.)

The jury met at the Crystal Palace and selected certain stoves as appearing most likely to satisfy the conditions imposed and the grates so selected were fixed in position by the exhibitors who each gave written directions as to the manner in which the grates were to be treated but who, by arrangement, were not present during the trial. The tests of each grate were continued for a period of three days. The actual tests were carried out by an assistant acting under the direction of the jury. He was suppled with scales for weighing the coal used and thermometers for indicating the temperature of the air in the apartment and also of that in the hall outside. He was instructed to light the fires at 9 A.M. in accordance with the written directions of each competitor and to urge the fire until the thermometer, suspended in the middle of the room from the ceiling, showed a temperature of 20° F. above that of the air in the hall outside and so to regulate the fire as to keep the heat up to that point during the day. The coal and wood used were carefully weighed and the amount recorded and the time of each stoking noted. At 5 P.M. each day the fire was drawn and, when cold, the unburnt cinders were weighed and the amount deducted from that of the coal put during the day on the fire. Throughout each day another assistant in an upper room of a house on the opposite side of the street at an angle of about 30° from the top chimney and about 35 feet away, commanding a clear view of the chimney which carried the smoke of the stove under investigation, was directed to observe the intensity of the smoke. The amount of smoke emitted was carefully recorded on a chart every five minutes by means of the series of smoke tints designed by the late Mr. Bryan Donkin. There was no communication between the two assistants and members of the jury visited the respective

FIG. 3.

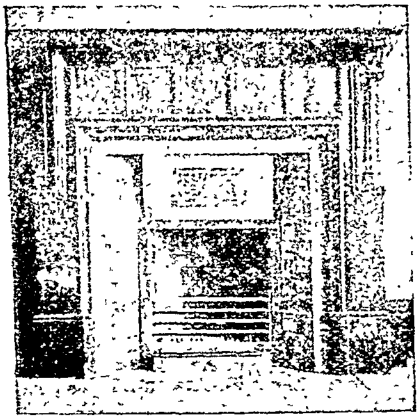


Grate No. 2. The "Tropican." (Chavasse and Kerr.)

rooms from time to time to satisfy themselves that the tests were being carefully carried on and the results correctly noted.

On the completion of the tests, which together occupied some weeks (one week being devoted to the setting, testing, and removal of each grate), the results of the observations were carefully tabulated and are now published as an appendix to this report. The amount of smoke emitted from the chimney was averaged. The amount of coal consumption in each case was also carefully averaged and the results arrived at are shown upon the plotted diagram. This diagram, therefore, shows at a glance the relative performance of each of the grates in respect of coal burnt, heat generated, and smoke consumed. Taking these three factors into account the jury had no difficulty in placing the competitive grates in the following order of merit :—

FIG. 4.

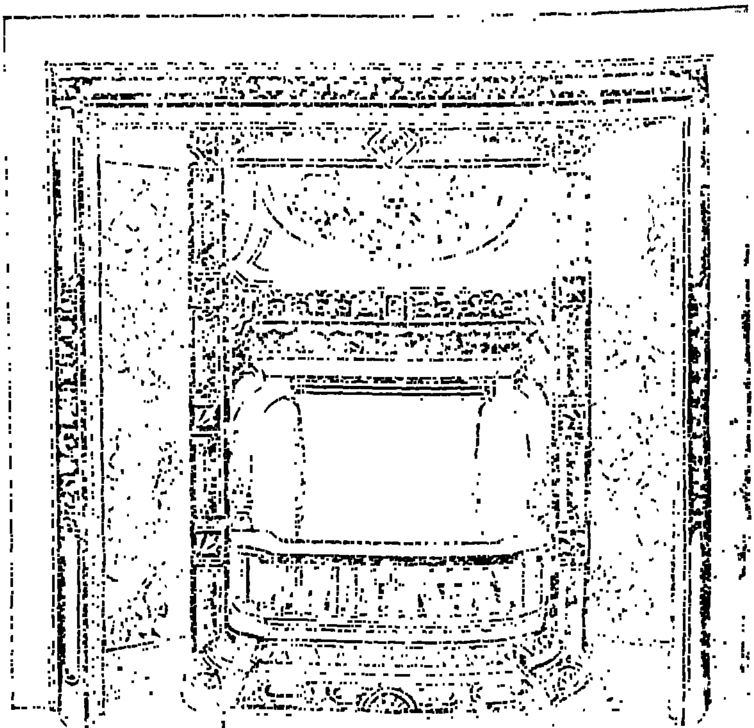


Grate No. 3. "Patent Grate." (Landers, Limited.)

1. The Tropican Grate—Messrs. Chavasse and Kerr.
2. Messrs. Landers' Grate.
3. The "Heaped" Fire—Messrs. Bratt, Colbran and Co.
4. The Francombe—Messrs. Clark, Hunt, and Co.

On the whole, it will be seen that the tests now concluded by the society show a distinct advance in the construction of grates calculated to diminish smoke. It is clear that if a market can be created for grates which will minimise the smoke nuisance such grates will be forthcoming. On the other hand, it is obvious that much of the smoke pollution caused by household fires is the result of careless or inefficient stoking. A fire is allowed to burn low and is then made up by a large amount of coal which cannot speedily ignite and which gives off quantities of smoke.

FIG. 5

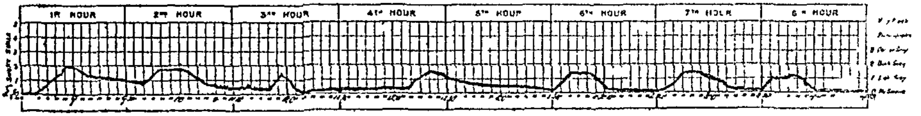


Grate No. 4. Francombe's "Warm Air" Slow Combustion. (Clark, Hunt, and Co.)

A certificate was awarded by the Coal Smoke Abatement Society to the successful competitors indicated in the foregoing list of the *order of merit*. In this certificate the society certifies that on a series of tests conducted by the society and on a comparison between the grates entered for

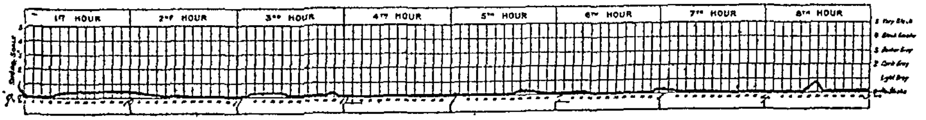
PLOTTED DIAGRAMS OR CHARTS OF DEGREES OF INTENSITY OF SMOKE ON TIME BASIS THE FIGURES BELOW SHOW THE TIME IN HOURS AND MINUTES ACCORDING TO THE SYSTEM OF THE LATE BRYAN DONKIN

CHART 1.



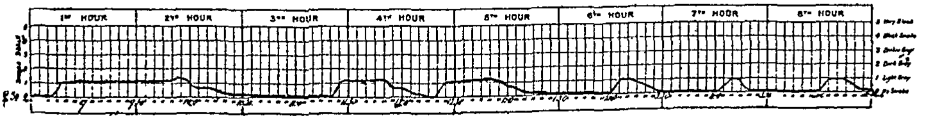
The "Heaped" Fire.

CHART 2.



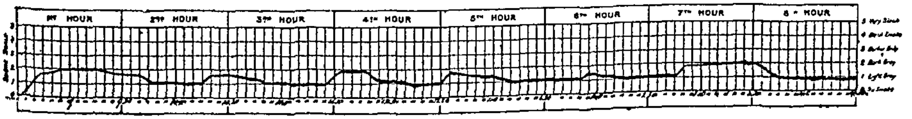
The Tropican Grate

CHART 3



Messrs Landers' Grate

CHART 4



The Francombe

competition being made it was found that the Tropican grate showed the best results in the diminution of smoke, the heating power of the grate, and the economy of fuel. This certificate is signed by W. B. Richmond, president; H. A Des Vœux, honorary treasurer; Owen B. Thomas, honorary secretary; and Lawrence W. Chubb, the secretary of the society.

In conclusion the Coal Smoke Abatement Society desires to record its indebtedness to the jurors who conducted the tests and to Mr. R. Bailey, controller of the stores at H M Office of Works and Public Buildings, whose services rendered the experiments possible, and to Sir Schomberg McDonnell, secretary to the Commissioners of H M Office of Works, for granting the society permission to conduct the tests in a building under the control of his department.

Grate No 1.[1]—The "Heaped" Fire (patent) This grate questions of Dr. Parsons and had received the reply that they could not be answered without the consent of the patient. He added, however, that Dr. Parsons, being called as a witness before the coroner at the inquest upon the body of a child, had given evidence bearing upon the subject in question. The solicitor in making his statement with regard to what had taken place appears to have laid special emphasis upon the fact that the infirmary was a rate-aided institution and the magistrate, Mr. Marsham, made reference to this in commenting upon the incident. Mr. Marsham, however, is a gentleman of considerable experience in the discharge of his duties and he carefully refrained from speaking in condemnation of one who was not before him to defend his conduct. He was content to say in general terms that in a public institution such as an infirmary he would have thought that a medical man would do his best to assist justice, and to add that, in circumstances such as the inquiry before him *indicated*, there was *something to be said* upon both sides. With his conclusion no one will disagree. The police have their duties to perform and they naturally look at them from their own point of view In cases of the class under consideration they can point to the sacrifice of infant life which members of the medical profession equally with the rest of the community deplore and desire to see abated, and they can reasonably argue that the detection and punishment of cases of concealment of birth have some influence in the prevention of similar offences and of the crimes often connected with them. This, however, does not affect the position of the medical man when information is sought from him by detectives as to the physical condition of a patient intrusted to his care, whether the patient be a rich man or woman attended in his or her private house or a poor one lying in the ward of a charitable institution. His duty is to respect the confidence of his patient and to guard the secret acquired in his professional capacity to the utmost in his power so long as to do so does not make him participator in a crime. Ethically he is under the same obligation with regard to the knowledge which he has acquired as the solicitor consulted by a client who has committed a wrongful act, or a clergyman to whom such an act has been confessed. In a court of law the solicitor has the advantage of the medical man and of the clergyman, for he cannot be compelled to state what he has learnt in the course of a consultation with his client. An attempt has been made on other occasions to trace cases of infanticide by means of the medical profession and the usefulness to the police of the informatian which might so be obtained is obvious. On the other hand, it is equally clear that if unfortunate women knew that their secret would at once be sought and obtained by the agents of the law from the medical man they would shun the infirmary and avoid the medical practitioner, however great their physical need and the danger to their lives. It would be a gross treachery for the medical practitioner to betray those who appealed to him for aid in the confident belief that their secrets were safe in his keeping and he would have no right to encourage such a belief or to permit it to exist unless it were well founded. A direct warning would, no doubt, prevent any charge of breach of faith being made, but if we imagine such a state of affairs in practice we have to picture to ourselves a notice in the entrance hall of a hospital or of a medical man's consulting room in a poor district couched in such terms as these: "All questions asked by the police with regard to patients will be promptly answered. Women recently delivered of children should note this warning" One effect of the intimation would be to destroy in the case of the hospital and of the medical practitioner that reputation of being the trusted friend of the sufferer without distinction of creed and without question as to moral conduct of which the medical profession and those responsible for the organisation of our hospitals are alike justly proud. Circumstances must govern the decision of the medical man in individual cases where he has good reason to believe that his patient has infringed the law, and the question that he must decide by the guidance of his conscience and of his sense of professional honour may be a very difficult one, but the police have no right to try to enrol him as a detective to aid in their preliminary inquiries into crime or to complain if he refuses to accede to their wishes. Still less are they justified in applying pressure upon him by holding him up to the magistrate as one who sympathises with breaches of the law. He may be said to have gained certain knowledge as a friend only, but few men of honour would betray a friend to the police unless the very strongest reasons of public duty were there to render the step necessary.

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[1] The descriptions of the grates are those supplied by the manufacturers

The Legal Test of Insanity.

At the Lancaster assizes recently in a murder case in which the defence of insanity had been suggested, Mr. Justice Jelf laid down with great emphasis the so called "legal test." He said: "To establish a defence on the ground of insanity it must be clearly proved that at the time of committing the act the party accused was labouring under such a defect of reason from disease of the mind as not to know the nature and quality of the act he was doing, or, if he did know it, that he did not know that he was doing wrong." The inadequacy of this definition has often been pointed out and many judges seem to have discarded it. Its chief weakness lies in the fact that it takes no note of that large class of cases which are grouped under the name "impulsive insanity." Mr. Justice Hawkins (now Lord Brampton), in the well-known case of the man Ware who killed a fellow patient in an asylum, said that the prisoner knew that he had killed a man because he said himself that he had, he also knew that it was wrong for he asked for a promise that he would not be punished if he gave up his weapon, yet his lordship continued: "No man in his senses would suppose that any jury would find Ware responsible for what he had done." Again, the late Mr. Justice Stephen held that the law allows that a man who by reason of mental disease is prevented from controlling his conduct is not responsible for what he does. The late Lord Chief Justice Cockburn dissented from this as an interpretation of the law as it stands but agreed that such an alteration was advisable as would cover these cases of inhibited control. It is gratifying to find so many eminent judges taking this enlightened view and it is to be hoped that before long the other occupants of the bench will see the matter from the same standpoint.

An Action for Negligence in the Application of the Roentgen Rays.

An account of an action for negligence recently tried at Dublin and arising out of injuries sustained by a child through the use of the Roentgen rays will be found in the letter of our Irish correspondents at p. 544. The defendants, it will be seen, were the president and professors of the Queen's College, Galway, a man named Haire employed in the College as mechanical assistant in the Natural Philosophy Department, and Dr. Nicholas W. Colahan, a medical man who desired to locate a needle supposed to have entered the knee of a child, his patient. The apparatus employed belonged to the College and was used as a rule for the instruction of students, but Mr. Haire was apparently permitted to make radiographs with it for the benefit of local medical men and had done so before in about 50 instances. Dr. Colahan was present when Mr. Haire used the apparatus upon the plaintiff and also on one occasion used it himself in Mr. Haire's absence. In these circumstances the first question with regard to the College authorities was whether they had undertaken any duty with regard to the plaintiff and it was abundantly clear that they had not. With regard to the two other defendants, the case against them depended upon the proof of their alleged negligence as shown by the condition of the child's leg and by the evidence of his mother and sister as to the manner in which the rays had been applied. This evidence was not only directly contradicted by two of the defendants but the account given was inconsistent with the radiographs produced before the jury, which could not have been made had the bulb been kept at the distance of two inches from the limb described by the little boy's relatives. A considerable body of expert evidence was also called and made it clear that no negligence had been proved against either Dr. Colahan or Mr. Haire. The action shows a certain lack of gratitude on the part of the parents of the child for the efforts made to assist them by all involved.

ASYLUM REPORTS.

Gartloch Asylum, Glasgow (Report for the year ending May 15th, 1903).—The average number of patients resident during the year was 613, comprising 312 males and 301 females. The admissions during the year amounted to 285—viz., 151 males and 134 females. Of these 197 were first admissions. Dr. W. A. Parker, the medical superintendent, states in his report that alcohol stands pre-eminent as the chief cause of insanity in the cases admitted. Next in importance was senile decay as a cause of insanity. A strong hereditary predisposition to insanity or nervous disease was ascertainable in one-fourth of the cases in which a family history could be obtained. The number of patients discharged as recovered during the year amounted to 114—viz., 59 males and 55 females, or 18·6 per cent. of the average number resident. The deaths during the year amounted to 70, or 11·4 per cent. as calculated on the same basis. Of the deaths four each were due to senile decay and cerebral syphilis, five to cardiac disease, six to bronchitis and broncho-pneumonia, six to pulmonary and other forms of tuberculosis, 17 to general paralysis of the insane, and the rest to other causes. A sanatorium for the treatment of tuberculous patients was opened in December, 1902, and although it is too soon, adds Dr. Parker, to attribute the low death-rate from tuberculosis during the year to the sanatorium its use must be regarded as having helped to lessen the death-rate. This building is one storey high and is situated on rising ground to the north-west of the asylum buildings. It faces due south and has been planned [illegible] There is one large [illegible]'s, with four attached [illegible]nodation of 60 beds. [illegible]t broad and gives an [illegible]ead. The wards and rooms are lighted by electricity and heated throughout by a system of hot water pipes. The sanatorium is supplied with a septic tank installation for treating its sewage, while a steam disinfector has been erected to deal with all clothes before going into the common laundry. The Commissioners in Lunacy state in their report that the condition of the patients as regards clothing and personal appearance indicated due and proper attention on the part of those in charge of them, that the old and feeble bore evidence of being kindly cared for, that the wards were bright and comfortable, that the bedding was in excellent condition, and that the medical case books were well and carefully kept. The committee of management states in its report that the 60 beds of the sanatorium are fully occupied and "have proved a great boon by removing many infectious and objectionable inmates from among the others." Additional farm land to the extent of 93 acres has been purchased to increase the supply of farm-grown meat and vegetables.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8684 births and 5396 deaths were registered during the week ending Feb. 13th. The annual rate of mortality in these towns, which had been 18·1, 19 4, and 17·2 per 1000 in the three preceding weeks, rose again last week to 18·4 per 1000. In London the death-rate was 17·7 per 1000, while it averaged 18·8 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 6·0 in Smethwick, 6·3 in Northampton, 8·4 in Aston Manor, 9 0 in Hornsey, 10·7 in East Ham, 10 9 in York, 11·0 in Hastings, and 11 2 in Walthamstow and in Wallasey; the highest rates were 23·6 in Birkenhead, 26·2 in Bootle, 26·5 in Gateshead, 27·7 in Rhondda, 27 9 in Warrington, 28·5 in Bury, 28·8 in Swansea, and 29·2 in Newport (Mon.). The 5396 deaths in these towns last week included 449 which were referred to the principal infectious diseases, against 427, 497, and 412, in the three preceding weeks; of these 449 deaths 182 resulted from whooping-cough, 93 from measles, 61 from diphtheria, 43 from diarrhœa, 32 from "fever" (principally enteric), 31 from scarlet fever, and seven from small-pox. No death from any of these diseases was registered last week in Hornsey, Tottenham, Walthamstow, Hastings, Northampton, Burton-on-Trent, King's Norton, Aston Manor, Derby, Wigan, or Barrow-in-Furness; while they c[illegible] Great Yarn[illegible] Gateshead. [illegible] measles oc[illegible] and Sunder[illegible] diphtheria in Great Yarmouth and in Bury; from whooping-cough in Leyton, Wallasey, Liverpool, Bootle, Bury, Stockton-on-Tees, West Hartlepool, Gateshead, Newport (Mon.), and Swansea; and from "fever" in Preston. Of the seven fatal cases of small-pox registered in these towns last week, four belonged to Gateshead and one each to Nottingham, Hull, and South Shields. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 24, 21, and 25 at the end of the three preceding weeks, had declined again to 24 at the end of last week; three new cases were admitted during the week, against three, four, and eight in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital on Saturday, Feb. 13th, was 1644, against 1679, 1651, and 1657 on the three preceding Saturdays; 162 new cases were admitted during the week, against 180, 168, and 169 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 353, 429, and 347 in the three preceding weeks, further declined last week to 324, but were 57 above the number in the corresponding period of last year. The causes of 55, or 1 0 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Salford, Bradford, Leeds, and in 44 other smaller towns; the largest proportions of uncertified deaths were registered in Leyton, Liverpool, St. Helens, Warrington, Sunderland, South Shields, and Rhondda.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 19·8, 18·4, and 18·5 per 1000 in the three preceding weeks, further increased to 19·2 per 1000 during the week ending Feb. 13th, and was 0·8 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 6·2 in Perth and 14·3 in Leith, to 23·0 in Paisley and 24·6 in Dundee. The 636 deaths in these towns included 24 which were referred to whooping-cough, 21 to measles, 20 to diarrhœa, three to diphtheria, two to scarlet fever, one to small-pox, and one to "fever." In all 72 deaths resulted from these principal infectious diseases last week, against 54, 62, and 44 in the three preceding weeks. These 72 deaths were equal to an annual rate of 2·2 per 1000, which was 0·7 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 11, 16, and 15 in the three preceding weeks, increased again last week to 24, of which nine were registered in Aberdeen, six in Glasgow, three in Paisley, two in Dundee, and two in Leith. The deaths from measles, which had been 19, 12, and seven in the three preceding weeks, rose again to 21 last week, and included 11 in Glasgow, five in Dundee, and four in Paisley. The fatal cases of diarrhœa, which had been 14, 17, and 11 in the three preceding weeks, rose again last week to 20, of which nine occurred in Glasgow, four in Aberdeen, two in Edinburgh, two in Dundee, and two in Greenock. The deaths from scarlet fever, which had been six and three in the two preceding weeks, further declined last week to two, both of which were recorded in Glasgow, where the fatal case of small-pox also occurred. The deaths referred to diseases of the respiratory organs in these towns, which had been 167, 128, and 129 in the three preceding weeks, declined again last week to 126, but were 14 in excess of the number in the corresponding period of last year. The causes of 21, or more than 3 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 26 0, 25 6, and 30·5 per 1000 in the three preceding weeks, declined again to 27 2 per 1000 during the week ending Feb. 13th. During the past four weeks the death-rate has averaged 27 3 per 1000, the rates during the same period being 18 0 in London and 16 5 in Edinburgh. The 198 deaths of persons belonging to Dublin registered during the week under notice were 24 below the number in the corresponding period of last year and included ten which were referred to the principal infectious diseases, against eight, 14, and 12 in the three preceding weeks; of these, six resulted from whooping-cough, two from diarrhœa, one from diphtheria, and one from "fever," but not any from small-pox, measles, or scarlet fever. These ten deaths were equal to an annual rate of 1·4 per 1000, the death-rates last week from the principal infectious diseases being 1·4 in London and 0 5 in Edinburgh. The fatal cases of whooping-cough, which had been five, 11, and nine in the three preceding weeks, further declined last week to six. The 198 deaths in Dublin last week included 36 of children under one year of age and 59 of persons aged 60 years and upwards; the deaths both among infants and among elderly persons showed a marked decline from the number in the preceding week. Three inquest cases and five deaths from violence were registered, and 67, or more than a third, of the deaths occurred in public institutions. The causes of five, or nearly 3 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon J. Bradley to the *Essex*. Staff Surgeons: E. Cooper to the *Astræa* and P. H. M. Star to the *Fire Queen* for the *Nelson*. Surgeons: E. S. Wilkinson to the *Astræa* and C. A. G. Phipps to the *Essex*.

ROYAL ARMY MEDICAL CORPS.

Major S. Macdonald proceeds to Woolwich for duty. Major R. Caldwell has left Aldershot for India. Captain E. S. Clark joins the Home District for duty from the Royal Army Medical College. Lieutenant W. F. Tyndale, C.M.G., and Major A. P. Blenkinsop have embarked for India.

Captain P. S. Lelean, from the Seconded List, to be Captain (dated Dec. 14th, 1903).

VOLUNTEER CORPS.

Rifle: 8th (Scottish) Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Captain J. C. Macalister to be Surgeon Major (dated Feb. 13th, 1904). The undermentioned Surgeon-Lieutenants to be Surgeon-Captains:—A. G. Gullan (dated Feb. 13th, 1904) and W. S. Henderson (dated Feb. 13th, 1904). 19th Middlesex (Bloomsbury): The transfer of Surgeon-Captain W. N. Evans, from 1st Volunteer Battalion the Middlesex Regiment, bears date Sept. 12th, 1903.

NATIONAL PHYSIQUE AND AN IDEAL ARMY.

We have been favoured with the reprint of an article on this subject which appeared in the *Army and Navy Gazette* of Feb. 13th. It is the purpose of Dr. Arthur H. Rideal, the author of the article in question, to set forth a scheme which he tells us he has been studying for some time and has had numerous opportunities of discussing with army men, volunteers, and civilians. So far as concerns the improvement of the physical culture, drill, and training of the youth of this country the subject is rightly regarded as one of great national importance and we concur in thinking that something on the lines of Dr. Rideal's proposals will sooner or later have to be adopted if we are to avoid the Continental system of conscription. We all know how the average schoolboy loves "to play at soldiers" and we have only to encourage and to develop this natural instinct in order to improve youths in physique and to imbue them at the same time with some idea of the importance of their duties in the future as citizens and soldiers and defenders of the empire. The work, it is contended, only requires to be undertaken and systematically carried out with the aid of properly qualified instructors belonging to the regular service and appointed for the purpose to prove successful. It is suggested that every boy who has attained the age of 12 (or 13) years—unless physically unfit or destined for the navy—should be compelled to commence a five years' course of drill and instruction calculated to fit him for a place in the ranks of the army, and the necessary organisation and way in which this might be done are set forth in the article under notice. There should be no lack of material, for "at the last census there were in the United Kingdom no less than 425 000 boys between the ages of 12 and 13. If we deduct the very high proportion of 40 per cent. as being physically unfit there still remain more than 250,000 boys each year to deal with and in eight years from the initiation of the scheme we should have over a million well-trained young men at our service in case of need, and in the course of time every able-bodied man in the kingdom would be sufficiently trained to at once take up arms in defence of the empire." With regard to those portions of Dr. Rideal's article referring to a standing army, the short-service system, the militia, and as to what would be the financial effect of his scheme we can express no opinion. We must leave these to the consideration of experts and military authorities. But as to the advantage of his scheme for the training of youth in a physical sense and as a national basis for recruiting the army we entertain little or no doubt.

WAR OFFICE CHANGES: DOING AND UNDOING.

A number of most important and radical reforms have already taken place in connexion with the recommendations of the War Office Reconstruction Committee. The Committee of Imperial Defence, under the presidency of the Prime Minister, has been reconstituted; an Army Council has been established under the Secretary of State for War and the appointments thereto have received the approval of the King and have been published in a special edition of the *London Gazette;* Earl Roberts, in consequence of the abolition of the office of Commander-in-Chief, has retired from the War Office but retains his seat on the Committee of Imperial Defence; and, last of all, the Duke of Connaught has, it is alleged, been selected by the Army Council to fill the newly created post of Inspector General of the Forces. But amid these sundry and manifold changes in the War Office world there is one thing conspicuous by its absence. All that was done after very full and deliberate consideration by the late Secretary of State for War for the direct representation of the medical service has apparently been ignored and left undone by his successor in that office. We briefly alluded to this omission last week as a matter of surprise to us but supposed that it was nevertheless intended that provision must and would be subsequently made somehow for a matter of such vital importance to the nation and the efficiency of the army. After all that has taken place and with the facts connected with the late war in South Africa still fresh in the public mind it is impossible to believe that we are to revert to the old state of things and that the medical service is not to be represented adequately and prominently in the councils of the War Office. It is a point on which we have dwelt again and again in the past and we had congratulated our readers on the fact that owing to changes introduced in Mr. Brodrick's time the head of the Army Medical Service had at last been put in a proper official position where his representations and influence would really be of use. Mr. Arnold Foster will assuredly have to see to this matter and we are glad to notice that it has not escaped the attention of the British Medical Association.

Correspondence.

"Audi alteram partem."

THE VALUE OF COD-LIVER OIL.

To the Editors of THE LANCET.

SIRS,—In the annotation on the adulteration of cod-liver oil in THE LANCET of Feb. 6th, p. 378, mention is made of a communication by my brother, Mr. E. J. Parry, calling attention to the large amount of substitution of other oils taking place during the present scarcity. Of this I have nothing to say beyond the fact that it behoves all medical men to make a point of seeing that their patients procure their oil from a trustworthy source. The point in the article to which I wish to refer is his suggestion that the value of cod-liver oil is largely traditional. With this I must, on the whole, agree. The value of cod-liver oil depends more on the ease with which it is absorbed and assimilated than on any specific virtues which it possesses. Any other fat which is equally readily absorbed and assimilated would be just as good. But I think that the fact that the accumulated experience of many generations that cod-liver oil is the best medicine for the various wasting diseases tends to show that, so far, no other fat has been discovered which is so readily absorbed by the human intestine. There are many other fats which are of great value (I am, for instance, in the habit of ordering a few teaspoonfuls of liquid bacon fat at breakfast to children who are unable to take cod-liver oil), but I believe, on the whole, that there is nothing quite equal to cod-liver oil, no fat which is so well assimilated by children, and therefore that, while undoubtedly tradition plays some part in the value attaching to this substance, so far we have no substitute of quite equal value.

I am, Sirs, yours faithfully,
L. A. PARRY, M.D. Lond., F.R.C.S. Eng.,
Hon. Assistant Surgeon, Royal Alexandra Hospital for Sick Children, Brighton.
Hove, Sussex, Feb. 12th, 1904.

CHLORETONE IN SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS,—Mr. L. E. Ellis will find, I think, that chloretone is far more successful with women than with men. I have just had a letter from a lady from Marseilles: "Thank you a thousand times for the 'cure' It is a grand success. As you know, I am not a good sailor, but I have not been sick at all and we really had a pretty bad time. Out of 43 ladies only one besides myself put in an appearance at breakfast About an hour after we left Plymouth I felt queer and took one capsule and after that one night and morning." On the other hand, I have heard of its failure with men. I believe that it is efficacious only in sea sickness of nervous origin, with cold extremities, giddiness, and horrible depression. It seems to be useless in stomach sea-sickness where the chief symptom is the vomiting of frothy mucus and where the nervous symptoms seem to be only secondary to the sickness. Men suffer much more from the latter than the former kind.

I am, Sirs, yours faithfully,
Silverton, Feb. 15th, 1904. O. CLAYTON JONES, M.B. Oxon.

THE PROPOSAL TO PROHIBIT MEDICAL PRACTITIONERS FROM DISPENSING.

To the Editors of THE LANCET.

SIRS,—One of the objections to writing prescriptions as opposed to giving medicines is that patients sometimes hand them over to friends of theirs who are supposed to be suffering from the same disease, which may be, however, an entirely different one. Even if the malady really be known to be the same, two people would probably receive from a physician at any rate not exactly the same treatment. A great many people, however, are not aware that subtle distinctions have to be made, and hence much mischief may, even with the best intentions, be produced. Sometimes, too, people who assume some of the duties of a medical man may from prescriptions gain a confidence which, though really misplaced, may yet lead them to act to the disadvantage of both the public and the medical profession in other ways. I am, Sirs, yours faithfully,
Grimsby, Feb. 10th, 1904. GEORGE GRESSWELL.

To the Editors of THE LANCET.

SIRS,—May I say in reference to the letter by "A Chemist and *Druggist*" in THE LANCET of Feb. 13th, p. 464, that, although what he says as to quack medicines is true and wise, he is altogether mistaken in supposing that "the prescribing chemist, speaking broadly, is non-existent." Let him try the experiment next time he takes a holiday of going into the nearest druggist's shop and asking for a bottle of medicine to relieve some simple symptoms. Scores of my friends have told me that they often get medicine in that way when from home, for it is cheaper and more convenient than going to a medical man, and that on no occasion have they ever been refused. I used to practise in a town of 10,000 inhabitants and there the commonest introduction to a statement of symptoms was: "I went to the chemist, but the medicine he gave me has not done much good, and I thought it better not to let it go on any longer so I have come to you." The public would be most indignant if any attempt was made to prohibit druggists from prescribing for simple ailments. A man with an attack of diarrhœa will not go to a medical man, as a rule, if he knows that from there he will have to go on to the druggist He will go to the druggist first and, if not cured, will then go to the medical man. I believe this is the rule all the country over and I am sure that it is useless to alter it by Act of Parliament It is no use legislating for an ideal social state. Human nature must be taken as it is.

I am very glad to hear from Mr. J Smith Whitaker that this dispensing clause is not the handiwork of the medico-political committee of the British Medical Association One can understand an individual member practising in the Central London division showing such a complete ignorance of the conditions of country practice. I think he would show more wisdom if he altered his suggested clause so as to make it apply only to the kind of practice he is conversant with. As it stands it would deprive thousands of hard-working medical practitioners of their means of livelihood, for it would reduce their incomes below a living wage. I hope the Central London division will understand this and at once reject the suggested clause and so set at rest the minds of so many of their anxious brethren. My experience is that the medical profession takes a higher social position in the country than it does in the town and that therefore country practitioners can be safely trusted, without compulsion, to avoid what is derogatory, wanting in tone, or even vulgar.

I am, Sirs, yours faithfully,
Feb. 15th, 1904. PAGANUS.

To the Editors of THE LANCET.

SIRS,—The thorny question of dispensing by medical men in general practice cannot, it is evident, be settled on similar lines for those in town and country and for those who do and those who do not employ an assistant. Nor can it be dealt with apart from the regulation of prescribing by druggists on stricter lines than at present. To most practitioners dispensing is not so much *infra dig.* as simply an unpleasant and time absorbing nuisance. To the younger men it is often their one way of learning to prescribe. In very many cases the patients regard the fee as paid not so much for the advice as for the physic, and therefore many medical men are compelled against their better will to give medicine when it is not strictly necessary, and yet—undignified as such procedure is—how many of those who complain that their vested interests would be endangered by the restriction of dispensing will have the courage to demand payment for skill and knowledge rather than for mere physic? It must surely have often occurred to the conscientious general practitioner that reform on concerted lines was required and that if not [illegible] nsing [illegible] In a- [illegible] It has [illegible] We are obliged in self defence or self-regard to "pile on physic" *per fas atque per nefas.*

I am, Sirs, yours faithfully,
Feb. 8th, 1904. VERITAS.

To the Editors of THE LANCET.

SIRS,—With reference to the proposed additional clause to the Medical Acts Amendment Bill to prevent medical men from dispensing their own medicines except in special circumstances, I beg to offer my views on the matter. I may say that I am a country practitioner with clubs and I dispense my own medicines. I do not think any of your correspondents have tried to get to the root of the matter and to ask themselves what there is in the present system of dispensing our own medicines which is so wrong as to make some of us consider that the only remedy is to stop the medical profession from dispensing as far as it is possible to do so. What, then, is the object of the proposal? and out of this necessarily arises a second question—What alternative system is to be proposed? The first question may be answered to the point as follows: To prevent unscrupulous men from treating their patients simply by giving a bottle of medicine without having made any attempt to form an accurate diagnosis and, moreover, charging exorbitantly for services rendered thereby. That is the evil that unquestionably exists and equally unquestionably we should attempt to drive it out of our honourable profession. The result is injurious to the public and to the profession. Who amongst us has not seen a case admitted to any of the large hospitals in a condition aggravated by the neglect of the medical attendant? And who amongst us does not see the harm that is daily being done to our profession by practitioners running cheap dispensaries which only pay by the number of bottles of medicine that are dispensed, and by the unprofessional attitude of men in the matter of clubs, which is well illustrated in your article in THE LANCET of Feb. 13th on the Battle of the Clubs at Southampton? But, it will be asked, how are you going to stop this evil, by preventing medical men from dispensing their own medicines? The probability is that you will create a worse evil by driving the patient, who at present consults you and who can only afford a small fee, to consult the druggist who has no business to try to make a diagnosis. The answer to this question is, of course, the answer to my second question as to what alternative to the present system is proposed and I am not so foolish as to think that I have got a cut-and-dried remedy. We must have the views of men conversant with the matter, as to the conditions existing in countries where medical men do not dispense, and in this respect I consider Dr. D. W Samways's communication the most valuable one THE LANCET has yet received. If this proposal, which is to raise the standard of the profession and to protect the public, is to have its effect there must be a simultaneous proposal to prevent druggists from supplying medicines without a prescription and some system of endorsement by a medical practitioner of a prescription which has been already dispensed a given number of times. The present uncontrolled sale of patent and proprietary medicines must also be stopped. The difficulties of such a system are, of course, only too obvious and the only alternative seems to be to fight with the weapons which are being used against us and to establish a trade union, or else to leave matters as they are and to trust to the moral education of the practitioner to bring about a remedy. This latter alternative, I think, is the only feasible one, and I may add with reference thereto that I consider the present tendency to minimise the value of a good general education to a medical man, as may be exemplified by the professional privileges allowed at the universities, is the root of the evil.

I am, Sirs, yours faithfully,

Feb. 13th, 1904. ARZT.

To the Editors of THE LANCET.

SIRS,—A great deal has been written and will probably be written on this most momentous question of dispensing. But so far surely all your correspondents have lost sight of a very important matter, not so much the advantages or disadvantages of dispensing as the advantages that are given to the prescribing druggist and quack. Until these two are put down, and only then, will, I think, it be possible—or shall I say fair—to stop medical men from dispensing. If dispensing practitioners are stopped now thousands of pounds will go into the pockets of these illegitimate trades and the legitimate one will perforce go to the wall, forsooth because a certain body of men think they will raise the status of the profession. Surely it is the man who makes his position; you cannot make a silk purse out of a sow's ear. Why, I ask, is it more *infra dig.* to dispense one's own medicines than for a clergyman to write his own sermons or a lawyer to write briefs for his counsel? It is part of their livelihood, so anything appertaining to medicine is part of ours. Some of your correspondents' ideas are wide of the issue, and one in particular shows a want of knowledge when he suggests that no medical man should be allowed to attend a friendly society under 5*s.* per member per annum and the society to find everything else. I believe most friendly societies pay 4*s* per member per annum, everything included. I am afraid he is wofully ignorant of the working man if he thinks he will get him to pay more and receive less than he now does. I dispense my own medicines, as do my other brother practitioners in this town, and yet every market day we are exposed to the insults of a quack who has a stand in the market and dispenses medicines without let or hindrance. Where is this noble body of men who allow this to continue openly? Their one object seems to be to enrich this class and to starve out many who have spent both time and money on their education.

I am, Sirs, yours faithfully,

Feb. 7th, 1904. IN RECTO FIDES.

LEPROSY.

To the Editors of THE LANCET.

SIRS,—I have been asked to prepare a paper for the Dermatological Congress which takes place at Berlin next September, the subject given to me being British India—the Condition of the Spread of, and Fight against, Leprosy since the First International Conference in 1897, the heads under which I am to write being the following:—

1. *Statistics*—(*a*) According to official reports (Government); and (*b*) asylums, colonies (mission). What kind of asylums—sex and age of inmates.

2 *Methods employed to fight leprosy between 1897 and 1903 (inclusive)*.—(*a*) Laws of Government; and (*b*) activity of Government or of private societies for the suppression of leprosy, municipalities or parishes, &c. (1) Number of asylums or colonies; (2) number of places; (3) how the patients get about; (4) occupation of lepers in asylums; and (5) conveying of lepers by train, steamer, &c.

3. *The condition of lepers in infirmaries and surgery wards.*

As I am anxious to have the paper as accurate as possible it will be a great favour if any of your readers who have information on the above points and for the period indicated will kindly communicate with me.

I am, Sirs, yours faithfully,

WELLESLEY C. BAILEY,
Secretary and Superintendent,
Mission to Lepers in India and the East.

17, Greenhill-place, Edinburgh, Feb. 11th, 1904.

THE METROPOLITAN ASYLUMS BOARD AND ITS ASSISTANT MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—Permit me to express my approval of the strictures you have recently passed upon the treatment which certain of the assistant medical officers of the Metropolitan Asylums Board have received. I myself have an unpleasant recollection of the cavalier methods of the Board. At a time when they (wrongly) anticipated an increase in infectious diseases I was appointed one of four assistant medical officers out of 11 selected candidates but was kept waiting six weeks before allocation to a fever hospital and then only after initiating a lengthy correspondence with the Board. I was accommodated with a box-room for a bedroom, devoid of fireplace, unhygienic, and eminently uncomfortable. A few weeks afterwards I was requested, through the medical superintendent, to take up lunacy work in one of the asylums of the Board, his inducement being "that if I considered the Board the Board would consider me." I consented to do so temporarily but heard nothing further, not even as to whether the Board approved of my decision or not.

Shortly afterwards, during the renovation of the official block, I was asked, along with other assistant medical officers, to sleep in a ward which a few weeks before had been used for the accommodation of enteric fever patients. I declined, as I much objected to sleep in any such ward whatever the method of disinfection, but was quite willing to put up with *the most primitive accommodation* anywhere in the official block. This was most ungraciously assented to and only on condition that I rose every morning at 6 30 to admit workmen to my room, but no workmen, until fully ten days had elapsed, availed themselves of the extra hours. The light in my room was cut off and no substitute was furnished. A few days later the subcommittee intimated to me that it did not find itself in the position of recommending the hospitals committee to confirm me in my appointment and the committee would be asked to terminate it *nine days after the receipt of its letter.* I, however, insisted upon giving a month's notice. The action of the Board very seriously modified my plans for the future and necessitated a most serious curtailment of research work I was engaged in during my leisure.

This bare statement of facts indicates what the Board is capable of doing in the way of considering an assistant medical officer who was ready and willing to consider the Board.

I am, Sirs, yours faithfully,

EX-A.M.O.

Feb. 15th, 1904.

THE INQUEST ON WHITAKER WRIGHT.

To the Editors of THE LANCET.

SIRS,—I observe that there is still a dropping fire of remarks on the trial of the late Whitaker Wright and on the subsequent coroner's inquest, and yet what seems to me by far the most important oversight in the latter has apparently passed without any commentary either in THE LANCET or elsewhere. Was it not a matter of clear duty in conducting this inquest to inquire minutely and even suspiciously as to how the suicide became possessed of the poison by which he made away with himself? Admitting, as was suggested by the coroner to a witness, that Whitaker Wright was familiar with cyanide of potassium as employed in the arts and that he may have had unusual opportunities thereby for the possession of it, is it not the case that under a very strict law the sale of cyanide of potassium or of any similar poison has to be registered carefully by the seller as well as the purpose to which it is to be applied. How was it that no directions proceeded from the coroner to investigate carefully this point and without loss of time? What dealer had so completely set aside the letter and the spirit of the "Poisons Act" and how comes it that the whole press of the country (so far as I have remarked) has passed over this subject without criticism. No doubt it was easier for a man familiar with the use of the cyanides, even when he himself was watched and suspected, to obtain them than it would be for others, but still he must have employed an agent, and as we are informed that he got the poison in the form of capsules it stands to reason, one would think, that the delivery of those capsules ought to have been diligently sought out and the question raised and decided at the inquest whether there was a violation, and a criminal violation, of the "Poisons Act," yet no trace of such inquiry remains except in the fact that the coroner, as if anxious to help a witness over a difficulty, suggested that Whitaker Wright's familiarity with the cyanides made it, as it were, quite easy for him to have them in his possession in that particular form. As a Scotsman I am not familiar with coroner's inquests or the proceedings that may be ordered under them, but I cannot help thinking that here is a case of negligence which should have been avoided in the public interest. I am, Sirs, yours faithfully,

Feb. 13th, 1904. MIDLOTHIAN.

SMALL-POX IN THE LEVANT.

(FROM THE BRITISH DELEGATE TO THE OTTOMAN BOARD OF HEALTH.)

THE spread of cholera in Syria and Mesopotamia and the occurrence of occasional cases of plague in Egypt and elsewhere have attracted more attention than the prevalence of small-pox in the Near East, although the latter has probably caused a far higher mortality than the other two diseases put together.

In Constantinople small-pox has been mildly epidemic during the past two months. It is probably rarely absent altogether from this city, although it usually causes but a [illegible] e weekly mortality bulletins. The [illegible] small-pox deaths week by week [illegible] beginning with the week ending Oct. 18th, 1903: 1, 3, 2, 0, 1, 6, 7, 7, 4, 6, 6, 6, 7, 8, 3 6, and 14. The last and largest figure is for the week ending Feb. 7th. The cases have been scattered more or less all over the city, but the quarters most affected have been those of Kuskunjuk on the Asiatic side of the Bosphorus, Hasskeui and Sultan Ahmed on the two sides of the Golden Horn, and Pera.

Smyrna has been the scene of a severe epidemic of the disease since the middle of last year. A single death from it occurred in each of the first four months of the year. Then in May there were three deaths, in June eight, in July 81, in August 199, in September 268, in October 134, in November 37, and in December 10. Occasional cases are still reported as occurring in Smyrna.

In Aleppo small-pox was epidemic throughout the last three months of the year, particularly in the Macharka quarter of the town. At one time as many as five deaths a day from the disease were reported as occurring. Damascus has also been visited by an epidemic of the disease, but the figures have not yet been reported. Outbreaks of greater or less severity have also been observed in the islands of Chios and Mitylene In the former it was imported from Smyrna in the month of September, and though a large number of cases were seen there were only two deaths from the disease. In the latter small pox appeared towards the end of the year and invaded many villages in different parts of the island. The disease was reported from Prevesa, on the coast of Epirus, in December; while at Kavala, on the Ægean coast, it was seriously epidemic through the greater part of last year. From Kavala it spread to Pravista and many villages in the neighbourhood. At Samsoun, on the Black Sea, small-pox was prevalent to a serious extent in the earlier part of the year. In the first three months of the year the cases reported numbered 165 and the deaths 45. It has not been mentioned in recent reports from there, but in the near neighbourhood of Trebizond, on the same coast, a malignant outbreak occurred last month, causing as many as 20 deaths out of only 29 cases.

Other places in the Turkish Empire from which the presence of small-pox has been reported in the last few months have been Valona on the Albanian coast, Latakia and Tripoli on the Syrian coast, Van in Armenia, and the island of Samos. The intensity of the disease in these different places has varied considerably. In Constantinople it has been mild in character. In Smyrna, on the other hand, it has been malignant, the cases being mostly confluent and not infrequently hæmorrhagic. The outbreak near Trebizond must also have been of a peculiarly malignant character to judge from the proportion of deaths to cases.

The law relating to vaccination in Turkey is contained in the "Règlement sur la Vaccination" of the year 1895. Article 1 of this Règlement requires that every boy or girl attending a public or private school must be vaccinated unless they show evident traces of having had small-pox. Article 3 makes vaccination compulsory for all persons entering a Government office, a college, the army, or the police. Article 11 states that parents should have their children vaccinated during the first six months of life and Article 19 advises revaccination every five years. Free vaccination is ordered to be provided by the municipal or other Government authorities and other articles lay down in detail the method of performing the operation and recording the results. The Règlement is an excellent one if it were strictly applied. An Imperial Iradé was recently issued ordering its immediate and strict application. There can be no doubt that it had been much neglected recently both in the capital and other parts of the empire. The frequency of small-pox and the rarity or inefficient performance of vaccination in this country are shown by the large number of persons met with who have at some time or other had small-pox. Out of 17 persons forming the subordinate (native) staff of a certain establishment here I ascertained by a recent inquiry that as many as nine had had the disease.

Constantinople, Feb. 11th.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Poisons Bill for India.—Increase of the Plague Epidemic.—Useless Inspections.

THE Poisons Bill for India has been passed but it remains for the local governments to carry it out. There will be no stereotyped lists of poisons, even for mercantile chemical manufactures, but the local governments will have wide powers to exempt at discretion both the persons engaged in the manufacture of such substances and the substances which they manufacture. In rural districts the sale of poisons will not be neglected, as in the case of the two principal ones, white arsenic and opium, control will be exercised either at the port of entry or under the Excise Act. The amount of poisoning by white arsenic, both of human beings and of animals, in India is probably very considerable—certainly much more than ever comes to light. Perhaps the most curious part of the new Bill refers to medical practitioners. There being no registration—not even any qualification—required for practice it was impossible to define what constituted a medical practitioner, so it is left to the courts to decide each case on its merits. Any other course would have necessitated what would amount to registration of practitioners.

The plague mortality throughout India, after remaining nearly stationary for several weeks, has again made a further advance. The number of deaths last reported was 21,302, an increase of about 4000 on the total of the preceeding seven days. The chief development is in Bengal, especially in the districts of Gaya and Patna, and in the Punjab. Plague has increased markedly also in the Central Provinces In Bombay city a further recrudescence is evident but in Calcutta the disease is apparently still dormant.

Medical inspection at the railway stations and at the bunders is still kept up in the Bombay Presidency which is as futile as it is oppressive. The Plague Commission reported against it and the absurdity of maintaining it is shown in the fact that plague has been prevalent in every district of the presidency. A petition signed by 4000 persons has at last been presented to Government and the grievance has also been brought repeatedly before the Government. Bengal and the Punjab have no restriction on travel and there are now no grounds for maintaining the system.

Jan. 29th.

THE PROPOSED LEGAL SHORTENING OF SHOP HOURS.

(FROM A CORRESPONDENT.)

THE passage in the King's Speech announcing that proposals for dealing with the hours of employment in shops will be submitted to Parliament this session is most welcome. It has always seemed an anachronism that whereas in most of the skilled trades strong adult artisans rarely work more than nine hours and sometimes only eight hours a day, young women are made to toil as shop assistants 12, and at times even 14, hours daily. Though the work may be defined as light work it is no light matter to have to remain standing all that time. Over and over again statistics, reports, and testimony have been published proving the excessive prevalence of varicose veins, displacements of the womb, and other evil consequences resulting from standing so long.

The Birmingham and District Early Closing Association has issued a handbill appealing to the public to take the matter in their own hands and to compel the shops to close early by refusing to shop late. But for one person animated with sufficient altruism to act up to this very reasonable suggestion there are scores who are ignorant and indifferent. Yet the movement is well supported. Favourable articles from the six leading Birmingham papers are quoted, as also the opinions of five well known practitioners of that town. Among these the late Mr. R. Lawson Tait said: "I have been horrified at the physical torture imposed by long shop hours. I have seen many a young woman whose epitaph ought to have been—Died from daily torture: 8 A.M. to 10 P.M." Mr. Jordan Lloyd says: "Weakened bodies and enfeebled minds are necessary consequences of prolonged confinement and monotonous occupation, whether behind the counter of a modern emporium or in the cell of an Eastern prison-house."

All this is sufficiently emphatic and what has been done in Birmingham to awaken the public conscience on the question has also been attempted in London and most of the large centres in this and many other countries. The principal result of an agitation which has now lasted for many years has been the securing in most towns of a weekly half-holiday for shop assistants and the passing of an Act compelling shopkeepers to provide seats. On inquiry, however, it would seem that the latter measure has been of little or no use. There are no statistics available, nor is it possible to speak in a very emphatic manner on this subject. Still, on questioning persons in the retail trade and secretaries of societies brought in contact with many shop assistants, I found that there is no enthusiasm manifested. Briefly put, the impression is that the legal imposition of seats has only done good as a means of propaganda. It has made people think about the matter and those employers who are animated by a kindly and humanitarian concern for their assistants have encouraged them to sit down when they could do so without neglecting their business. But this was done before the passing of the Act and these good, kindly employers are, it is painful to state, but a very small minority. Now the law has stepped in and says that seats must be provided. This is well so far as it goes, for people cannot sit down if they have no seats; but it does not follow that they will sit down when the seats are there. Let anyone observe as they enter our great emporiums how many shop assistants will be seen occupying the seats which the law insists must be provided. "Nothing succeeds like success," and the shopkeeper thinks that he will lose custom if he does not pretend to be very busy and successful. But if his shop assistants are seen sitting down it does not look as if they were very busy and therefore they must stand up and pretend to be busy even when there is nothing to do. The shopwalker is there ever pacing up and down. He does not sit down himself and is not perhaps particularly inclined to favour others who endeavour to secure a little rest. What can be done in this direction has been done voluntarily by good and considerate employers. The mere providing of seats does not in any way force the other employers to follow this example. Even if they did it is doubtful whether this would suffice. After all a shop assistant must stand up to serve the purchasers. Even the purchasers, as often as not, also stand up. The only really radical cure is to shorten the hours for shopping.

In these circumstances the Bill which Lord Avebury introduced into the House of Lords and which has now been printed by order of the House of Commons deserves careful consideration. In so far as it will contribute to shorten the hours of labour for shop assistants this measure is welcome. The phraseology of the Bill does not, however, indicate that the question at issue is approached from this point of view. A good deal has been said of late concerning the alleged physical degeneration of the race. There is no evidence to show that the "occupiers" of shops are physically degenerate. The term seems to imply the owner of a shop or his principal representative. In any case the "occupiers" only represent an insignificant minority of the population concerned and they are perfectly at liberty to sit down, to take holidays, and, in fact, to do whatever may be the most conducive to the preservation of their health. On the other hand, the great majority of those concerned enjoy no such freedom. Compelled by their poverty to accept employment at almost any terms they are subjected to a very severe discipline, have to remain on their feet for so many hours that the gravest physical injuries result, and to cope against such consequences they receive but a poor wage. By far the easiest means of mitigating these evils is to do for the shop assistants what has been done for children and women employed in factories—namely, to limit by law the hours of labour. A law to that effect is needed and this is the opinion generally held by all who have studied the question. The Bill before the House of Commons only proposes that this should be done in those localities where two-thirds of the "occupiers" of shops petition the local authority to enact a by-law to that effect. Surely if the limiting of the hours cannot be enacted without holding first a consultation with the trade concerned the persons to be consulted are those who suffer and who constitute the immense majority of the people affected. If there is to be a referendum on a question which so clearly affects the health of a large section of the population it is that section of the population in its entirety which should vote. The matter concerns the employers it is true but it concerns the employed very much more. The sale of goods must remain the same, whether the shops are open an hour or two more or less, for those trades that would be affected by earlier closing are excluded from the scope of the Bill, such as places for refreshment and for the sale of tobacco and newsagents. If, therefore, the same amount of business is done the "occupier's" main interest is secured, but to the people employed it is very important that their hours of work should not be so prolonged as seriously to endanger their health. The shortening of these hours is a matter of national concern. It is to the nation's interest, especially after recent disclosures that have rendered the danger of physical degeneration so evident, that the hours of work in the shops should be reduced. The nation therefore should decide upon this question instead of meekly waiting till the two-thirds of the "occupiers" shall in each district take the trouble to move in the matter. Under such a law years may elapse before this urgent reform is widely applied. Lord Avebury's Bill has been described as "a master's Bill" and what is wanted is a national measure instead of class legislation. Considering the large number of persons employed in the retail trade it is to the interest of the nation that the work of the shop assistants should be so regulated as to prevent its producing serious injury to their health.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Royal Southern Hospital: The Tropical Diseases Ward.

THE committee in its annual report to the subscribers stated that in July last it was so seriously impressed by the financial position of the hospital that it considered it necessary to make a special appeal for donations and increased subscriptions. Although the result did not realise the expectations of the committee the sum of £1529 16*s*. was received and new and increased subscriptions were promised to the extent of £110 In spite of this assistance the adverse balance on Dec. 31st, 1903 due to the bank amounted to £5325 2*s* 6*d*. Mr. John W. Hughes has generously contributed £300 for enlarging, improving, and lighting with electricity the x ray rooms, which would now make the department one of the most complete in the kingdom. The tropical diseases ward continues to justify its existence by the number and importance of the cases treated. During 1903 the patients were 149, as against 137 and 131 in the previous years. Year by year, therefore, testimony was afforded by this steady increase in numbers to the estimation in which it was held by those who entered the port in ships coming from tropical countries. As usual, the great bulk of these patients were suffering from malarial diseases alone or with serious complications. Other affections included dysentery, beri-beri, enteric fever, abscess of the liver, blackwater fever, bilharzia disease, craw-craw, sleeping sickness, enlarged spleen, &c. There were seven deaths. The nationalities represented were as follows: English, Irish, Scotch, Welsh, Manx, American, Canadian, South African, Indian, Chilian, Spanish, Portuguese, German, Austrian, Finn, Swedish, and Norwegian. There was also a constantly-growing number of students of the tropical diseases school in attendance. Those gentlemen were of many nationalities. It was probable that the institution of a diploma in tropical medicine contemplated by the University of Liverpool would still further attract students.

The Hospital Sunday Fund.

The amounts received representing the collections taken in the various places of worship on Jan. 10th show a falling off to the extent of £215, as compared with last year, but this adverse balance is lightened by the receipt of collections from new sources, which give a welcome lift of £75, so that up to date there is a net deficiency of about £140.

Civic Grant to the University of Liverpool.

At the monthly meeting of the city council held on Feb. 3rd it was unanimously resolved that a grant of £10,000 should be made during the current year to the University of Liverpool, to be paid out of the city rate and to be subject to the conditions that the council should nominate from time to time some person to make an inspection of the University and to report how far the methods employed were in the interests of the city and met its requirements; that the University should make an annual report in November to the council of its work, including a statement of accounts, particularly with regard to the amount voted by the city council, and that the city controller should inspect the same; also that of the sum of £10,000 not less than £1000 should be devoted to Liverpool scholarships, including the assistance of undergraduates and post graduates in the remission of fees in needy cases The grant was based on a contribution of £5300 to the sustentation fund, £1000 for scholarships, and the remainder towards the establishment of two new chairs—one of English literature and the other of French. The grant of £10,000 was not an annual grant but no doubt it would be continued if the council should be satisfied as regards the expenditure and the expected benefits to the city. The grant would stimulate rather than discourage the munificence of wealthy citizens, inasmuch as the question of maintenance would be made easier.

Sleeping Sickness at Uganda.

[illegible] panosomes and Sleeping [illegible] in the zoology theatre of [illegible] 12th by Colonel David Bruce, F.R S, R A.M.C., under the auspices of the Liverpool Biological Society. Professor Herdman presided over a good attendance. Colonel Bruce described how the trypanosomes, which are exceedingly minute blood organisms belonging to the lowest class of animal life, were first discovered in animals in India in 1877 and were spread by means of the tsetse fly, and the fact was then established that they set up sleeping sickness. Last year he was sent out as a commissioner by the Royal Society to Uganda for the purpose of studying the disease. The latter ran a course of from two to three years, sometimes more. For the first year or 18 months a man would apparently be free from illness and very often the disease would make itself known by undue signs of exultation on the part of the patient who instead of sleeping would be very much awake. The next stage would be depression and querulousness and it was in the last stage that the real symptoms would declare themselves. The sufferer would then lie about all day and would not get up even to feed himself. The disease attacked the brain, hence the lethargic condition The trypanosomes were found not only in the cerebro-spinal fluid, but also in the circulating blood of the natives who were examined by him. Every case of sleeping sickness died; more than 100,000 natives of Uganda had died from it and some parts of the country had become quite depopulated. The disease was almost absolutely confined to the shore of Lake Victoria and the islands, and it was only in those parts where there were lofty forest trees and thick undergrowth on the edge of the water that the tsetse flies were found.

Feb. 16th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Cardiff Infirmary.

THE sixty-seventh annual report of the board of management of the Cardiff Infirmary is a much more satisfactory document than many of its predecessors. Until three or four years ago the institution was often in difficulties. The expenditure frequently exceeded the available income so that invested funds had to be realised and it seemed well-nigh impossible to obtain much-needed improvements and additions to the buildings. For some reason or other the working classes of the town were not very large contributors to the funds although the institution was well supported by the principal inhabitants and by the colliers and workmen in the surrounding districts. All this is now altered and in 1903 one-third [illegible] king people. [illegible] the year's wor[illegible] 1.806. There we[illegible] and 18,381 out[illegible] and 2323 respectively. The average cost per occupied bed in 1903 was £65 and in 1902 it was £63. There is accommodation in the infirmary for 180 patients but the funds available will only admit of 154 beds being constantly used. In February, 1902, the board of management issued a supplementary report setting out in some detail certain requirements which were urgently needed to make the infirmary thoroughly efficient. The cost of each addition or improvement was definitely stated and in several instances the precise sum has been given by a donor for a specific purpose. In this way during the past two years no less a sum than £13,500 has been expended and the managers have very little more to ask for. The latest additions include an electrical pavilion, in which there is a waiting room; a room for photography, including a dark room for developing ordinary and x-ray photographic plates; an x-ray room; a room for high-frequency treatment, galvanisation, faradisation, and massage by electromotor; and a lupus room fitted with two Finsen lamps and an x-ray apparatus. Connected with this room is a dressing room. The cost of the pavilion, £1450, has been defrayed anonymously by a lady but £500 are still required for the appliances.

Wells Cottage Hospital.

The Cottage Hospital at Wells (Somerset), which was established in the year 1875 and has now accommodation for 13 patients, continues to be a most useful institution, and although the demands upon its accommodation are increasing there is a corresponding increase in the financial support given to the board of management. In 1902 there were treated in the wards 38 patients, while in 1903 this number had increased to 48. In 1901 there was an adverse balance on the year's working of £25, in 1902 there was a balance on the right side of £9, and last year the expenditure almost exactly equalled the income, thus showing that the administration of the hospital is in capable hands.

Action for Damages against a Surgeon.

An action for damages was brought at Newnham county court in January last against a surgeon, for alleged neglect while attending a boy, ten years of age. According to the newspaper reports the boy fell from a ladder in August of last year and dislocated his elbow and fractured his forearm. For two months he was under the care of the surgeon who declared at the end of that time that the arm was right. A week or more subsequently the boy was taken to two other practitioners who said that there was still a dislocation. The defence to the action was that some improper treatment or some accident must have occurred to the arm after the defendant had last seen it.

The county court judge, however, gave judgment for the plaintiff for £16. The amount claimed was £30.

Death of Mr. Edmund Samuel Warburton, M.R.C.S. Eng., L.S.A.

The medical practitioners of the Rhondda valleys have lost a valued colleague and the colliers a trusted friend and a skilled surgeon through the death on Feb. 6th of Mr. E. S. Warburton of Treherbert. He was born nearly 60 years ago in Cheshire and came of a family of medical men. After making several voyages as a ship's surgeon he settled in Treherbert in 1874, when the Rhondda valleys were beginning to be developed, and was appointed surgeon to several large collieries. He was a very able diagnostician and a most capable operator. Although educated in an older school he was always abreast of the times and ready to give his patients the advantages of the newest remedies; for example, when diphtheria was epidemic in the district a few years ago he was one of the first to recognise the value of the antitoxin treatment.

Bristol Eye Hospital.

The annual meeting of the subscribers to this institution was held on Feb. 8th under the presidency of the Lord Mayor. The annual report stated that during 1903 the in-patients numbered 486, being 21 in excess of those for 1902. The out-patients were 6869, being an increase of 915 compared with the previous year. The financial statement showed that the subscriptions received amounted to £660 and that an unfavourable balance of £593 remained.

Taunton and Somerset Hospital.

The annual meeting of the subscribers to this hospital was held on Feb. 11th. The report showed that 813 in-patients were admitted during 1903, against 824 in 1902; the out-patients numbered 4739, compared with 3968 in the previous year. The average daily number of in-patients was 77. The financial statement showed that the income was £5068 and the expenditure was £5190. The appeal issued by the committee for £4000 for alterations and improvements to the institution has up to the present realised £2407. The report alluded to the regret felt by the committee at the death of Mr. Samuel Farrant who for 30 years was an honorary surgeon to the hospital.

Feb. 16th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Aberdeen University Medical Society.

THE last meeting for the winter session of this society was held on Feb. 12th, Dr. George Stoddart presiding, Dr. Hugh Maclean read a most interesting paper on Some Points in Cardiac Diagnosis. When a dilated ventricle was observed, aortic incompetence should always be suspected and confirmation in other ways sought for. A water-hammer pulse was but a rare sign in aortic incompetence, because this was generally accompanied by some mitral regurgitation which served to keep up the blood pressure. It was the best [illegible] gnosing cardiac troubles previously to [illegible] other than the stethoscope all the abnormalities that could be so determined, and then to use the stethoscope to check or to confirm the diagnosis. Though of great use the stethoscope was not the only or the most valuable means of arriving at a correct diagnosis. An interesting discussion followed and on the motion of Dr. Stoddart, Dr. Maclean was accorded a vote of thanks for his paper. Office-bearers for the ensuing session were then elected.

Kingseat Asylum.

At Kingseat there will be opened in a week or two the first villa or segregate asylum, not only in Scotland but in Great Britain. The idea of a villa asylum—a most rational one—was brought to this country by Sir John Sibbald after a recent visit to the continent, and Aberdeen has been the first to teach the lesson of Alt Scherbitz, near Leipsic, so that Kingseat Asylum will now be the Mecca of alienists for some years. It is at present almost ready to open its villa and hospital doors to 472 patients and when completed some years hence it will accommodate 700. One of the remarkable features of this asylum is the economical cost of construction, affording as it does an object-lesson to every asylum board in Scotland. The following is taken from a statement by Mr. A. Marshall Mackenzie, [illegible] the asylum.

Comparative Cost of Glasgow, Lanark, Govan, and [illegible] Asylums per Bed available for Patients immediately after Completion.

	Price per bed for buildings [illegible]			Price per bed of cost of scheme, including land, buildings, and f[illegible]		
	£	s.	d.	£	s.	d.
Glasgow	[illegible]	7	2	[illegible]	6	0
Lanark	304	17	1	348	5	[illegible]
Govan	392	3	1	461	19	0
Aberdeen (Kingseat)	208	15	2	253	10	1

The above represents more than the true cost per bed of the asylum at Kingseat when completed, as meantime the general blocks, including laundry and power house, steam boilers, &c., electric and cables, kitche[illegible] lodges, medical [illegible] sewage works, an[illegible] to an asylum wi[illegible] future increased [illegible] additional villa buildings and furniture. Having in the [illegible] the cost of all buildings separate, I am able [illegible] of villas and find that to accommodate the [illegible] of £26,817 10s. would be required for build[illegible] reduces the cost per bed o[illegible] accommodate 700 patien[illegible] £200 19s. 2d. for the total [illegible] General Boar[illegible] economically [illegible]

There is the greatest c[illegible] view between what we have been accustomed to look [illegible] and this new villa asylum. The days of vast and [illegible] piles of buildings are over and if asylums ever [illegible] required no longer any householder wishing to live a [illegible] country life can purchase a villa. The buildings can never be lost, like many of our public institutions, tier above [illegible] and stretching in one line for hundreds of yards, [illegible] rectangular blocks jutting out on both sides. [illegible] if the hard headed Aberdonian claims it to be the best [illegible] cheapest asylum in the world.

Appointment of Medical Superintendent of Inverness Asylum.

At a meeting of the Inverness district lunacy board on Feb. 12th, Major Stirling presiding, Dr. Robert [illegible] Campbell of the Crichton Royal Institution, [illegible] was appointed medical superintendent of the [illegible] District Asylum in room of Dr. J. Keay, who has received the appointment of medical superintendent [illegible] the Bangour Asylum, Edinburgh. Dr. Campbell was [illegible] short time in general practice after graduation but [illegible] 1896 he has devoted himself exclusively to the study [illegible] treatment of insanity. He was assistant physician at [illegible] Inverness Asylum in 1896, then senior assistant at the Montrose Royal Asylum, and latterly at Dumfries. The salary of the new appointment amounts to £500, with [illegible] house, fire, and light.

Changes at the Royal Infirmary, Aberdeen.

Dr. J. Mackenzie Booth has resigned owing to [illegible] and intends to leave soon for Egypt. Dr. J. Scott [illegible] has succeeded consequently to No. 2 ward, while [illegible] H. M. W. Gray has been appointed to No. 1 ward.

Feb 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Legal Action for Personal Injury caused by the Use of the [illegible] Röntgen Rays.

A CASE of much medico-legal interest has recently been tried in Dublin before Mr. Justice Gibson and a special [illegible] The action of McCullagh v. The President and Professors [illegible] the Queen's College, Galway, William Blaire, and [illegible] Colahan was commenced on Feb. 4th, when the [illegible] a child, suing through his father, sought to recover [illegible] for personal injuries caused by the alleged negligence of [illegible] defendants in the use of certain electrical [illegible]

Mr. O'Shaughnessy, K.C., opened the case for the plaintiff and described the manner in which the child—who is between seven and eight years of age—was subjected to the Roentgen rays for the purpose of searching for a needle which was supposed to have penetrated his knee. Counsel said that the child was subjected for 20 minutes to the Roentgen rays, under the supervision of Dr. Colahan, the radiograph having been taken by the defendant Haire. Whether the instrument was out of order or whether those who used it did not know how to use it properly no result was achieved. Counsel stated that during the operation the vacuum tube, instead of being kept away from the leg was within two or three inches of it and the boy was subjected to the rays twice. Two of the operations took place on Dec. 26th, 1902, and as a result of these the boy suffered great pain. When the bandage was removed on Dec. 29th it was seen that the leg was burned. During succeeding days it became worse and the boy was taken to hospital. In the month of April, when he was better and out of hospital, Dr. Colahan ordered the patient to be subjected to the rays and he was taken to the College and the rays were applied. Finally, his mother, on account of the pain the child was suffering, took him to Dublin where he was seen—as counsel stated—by Mr. J. S. McArdle who sent him to Mr. Lewis to be subjected to the rays. Mr Lewis, seeing that the leg was burnt, declined to apply the apparatus. The plaintiff's mother then took him to Dr. J. Lentaigne who would tell the jury that the child had been burnt by the Roentgen rays. Many witnesses were examined for the plaintiff including Dr. W. S. Haughton, demonstrator of x rays in Trinity College, who said that the ordinary working distance of an x-ray apparatus was from 12 to 24 inches. Dr. Lentaigne said that when the case was admitted to the Mater Misericordiæ Hospital there was an ulcerated patch four inches by three and a half inches on the inside of the knee. Mr. Henry, K.C., in his address on behalf of Dr. Colahan, said that it would be impossible for the radiograph of April 22nd to have been taken if the globe were held within two inches of the limb and that they intended to produce x-ray experts from England On Feb. 9th Dr. H. Lewis Jones, medical officer in charge of the electrical department of St. Bartholomew's Hospital, London, Mr. J. Hall Edwards, surgeon in charge of the x-ray department at the Royal Orthopædic Hospital, Birmingham, Sir Charles B. Ball, Sir Thornley Stoker, Mr. McArdle, and other witnesses were examined for the defence, their evidence tending to show the rarity of injury by the application of the Roentgen rays, the absence of any indication of improper use of the apparatus in the radiographs produced, and generally to disprove the story of the plaintiff's witnesses as to the manner in which the rays were applied. Several questions were left by the learned judge to the jury who found that the sore complained of was caused by the rays but that the Queen's College had no responsibility in the matter. With regard to Mr. Haire, the mechanical assistant to the Professor of Natural Philosophy at the College, and Dr. Colahan, both of whom had taken radiographs of the child's knee, they found that each had by what he had done contributed to the condition of the child's knee but absolved both alike from any charge of negligence in the matter, the net result being a verdict and judgment for all the defendants upon the various issues raised.

Royal College of Surgeons in Ireland.

The annual dinner of the Royal College of Surgeons in Ireland was held in the College on Feb. 13th, under the presidency of Sir Lambert H. Ormsby. The occasion was honoured by the presence of the Lord Lieutenant.

Londonderry City and County Infirmary.

An influential deputation appeared before the Londonderry county council on Feb. 11th to request a contribution towards the payment of improvements recently carried out in connexion with this institution. A sum of £3120 2*s.* has been received from private subscriptions. According to the Local Government Act, one-third of this amount could be subscribed [illegible] rough of Londonderr [illegible] 17*s* 2*d*. and the co [illegible] has been referred to [illegible] ncil and there is a strong feeling in favour of granting the request.

The Belfast Water-supply.

At a meeting of the Belfast Water Commissioners, held on Feb. 11th, the chairman mentioned that since September, 1901, the Mourne water has been brought from the Annalong [illegible] ly of from 3,000,000 to [illegible] of the first section of [illegible] ing order and in addition the short length of the main conduit which lay between the Kilkeel and Annalong valleys was now complete and capable of bringing the water from the Kilkeel river. By this tunnel water will be brought a distance of 40 miles to Belfast. In reply to queries as to whether there was any truth in the statement that there was something wrong in the scheme for a reservoir in what is known as the Silent Valley in the Mourne Mountains it was stated that it was now beyond any question of doubt that this reservoir embankment could be completed in a slightly altered line at less cost than was originally estimated. At present there was an ample supply of water for the city of Belfast and so the new reservoir at the Silent Valley would not be required, but when needed it could easily be constructed.

County Down Infirmary.

During the past year 505 patients were admitted to this infirmary, being 103 in excess of the previous year, and in addition there were 37 who were in the hospital on Jan. 1st, 1903. There were 845 extern cases. Open air shelters are needed for the tuberculous patients, who form 15 4 per cent. of the total annual admissions, and better accommodation is asked for the extern cases. The total income for the year 1903 was £1910 2*s* 7*d*, exceeding the expenditure by £210 7*s*. 3*d*., but as £100 of this is a special grant from the county council for the introduction of a water-supply the actual balance towards the revenue account of the infirmary is £110 7*s*. 3*d*. The average number of beds daily occupied was 38.

Feb. 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Information Bureau of the University of Paris.

ON Feb. 10th the official opening of the Information Bureau of the University of Paris took place. The opportunity was taken for an official visit of the committee of the municipal council of Paris and of the council of the University, the two forming one grand committee to be known under the name of the Conjoint Committee for the common interests of the City of Paris and of the University. The Vice-Rector of the University, M. Liard, is president. Numerous press representatives, both French and foreign, were present at the opening, at which there was the usual interchange of ceremonious speeches between the Vice-Rector and M. Dausset, the president of the fourth committee of the municipal council. As a matter of fact, the bureau has been in working order since August, 1903, and I have previously given your readers an account of it,[1] for it will certainly be capable of rendering great service to foreign travellers and men of science and letters. The offices of the bureau are in a magnificent room in the Palace of the Sorbonne and are luxuriously furnished and decorated. Here are to be found employés speaking French, English, German, Spanish, and Russian, together with every information necessary for those seeking opportunities for studying in Paris. The information is all classified, so that anyone who wishes to study any particular question will find all books and documents which are able to help him with regard to lectures, conferences, museums, libraries, societies, journals, and the like. Information is also kept as to the hours of opening of museums and libraries and the conditions governing admission, while a large map of Paris is available to show the stranger his way. The bureau is on the telephone exchange and is under the general direction of Dr. Blondel, the general secretary of the International Association of the Medical Press. The advantages which this institution will offer to the large number of strangers who come yearly to Paris to avail themselves of the sources of information which that city possesses to so great a degree are obvious and it already has some 3000 indexed catalogues of subjects. Hitherto the multiplicity of catalogues, indices, calendars, and the like, the multiplication of places for obtaining information and their distance the one from the other, together with the difficulty which the stranger not well acquainted with the language experienced in obtaining information, often discouraged him. Since the bureau commenced operations many hundreds of English medical men and students of medicine have availed themselves of its services and have expressed themselves delighted at the help so given.

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[1] THE LANCET, Jan. 17th, 1903, p. 207.

Opposition to a Sanatorium for Tuberculous Patients.

I have already mentioned that the Assistance Publique in Paris had decided to establish a model sanatorium for tuberculous patients at Montmorency on ground belonging to the Duc de Dino, admirably situated from the hygienic point of view. All the preliminaries were completed and everything was in readiness for commencing work when about 100 property owners in Montmorency and the adjoining communes took united action under the presidency of the senator for Seine-et-Oise to oppose the institution, alleging that it would be the ruin of Montmorency and the neighbourhood. Such hostility is very annoying and behaviour of this kind betrays inability to understand the true interests of France. It is impossible for a great city to accommodate all its hospital institutions within the municipal boundary, especially a hospital for the isolation of tuberculous patients. It was difficult enough to persuade the Government that an important means of preventing the disease consisted in isolating the patients instead of allowing them to die in the general hospitals where they become foci of infection; it is therefore to be hoped that the progress which is being made in the right direction may not be checked by claims put forward on behalf of private interests.

Yoghourt.

At the meeting of the Academy of Medicine held on Feb. 2nd M. Saint-Yves-Ménard read for M. Dybowski of Adabazar in Asiatic Turkey an interesting communication on a preparation derived from milk and called yoghourt. In Turkey there is a great consumption of the milk of the buffalo, the common cow, the goat, and the ewe, but it is hardly ever used in the natural state. It is kept at a moderate heat—about 80° C. or 176° F.—until its bulk is reduced to one half, and after gradual cooling it is treated with a ferment taken from the previous day's supply. In some hours a curd forms which is called yoghourt. It is said to have a pleasant taste and forms together with bread the principal part of the food of the rural population. This preparation is preferred to milk. It not only has the nutritive value of the latter in a small bulk but it also possesses a diuretic property which is very useful in heart disease, in dropsy, and in the eclampsia of pregnancy.

Feb. 15th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Battle of the Clubs.

A CONGRESS of the German sick clubs was held at Leipsic on Jan. 25th for the purpose of discussing the measures to be taken in opposition to the demands of the medical profession. As already described in THE LANCET, membership of a sick club is compulsory under the Workmen's Insurance Act in Germany, so that the clubs have an enormous number of members, and the medical profession, especially in the industrial towns and districts, is largely dependent on the goodwill of the club committees. The fees paid in club practice are extremely low and, what is still worse, only a limited number of medical officers are appointed. In some places such positions can be obtained only by practitioners who are either acquainted with members of the committee or are known to belong to the Socialist party. Some years ago, first in Berlin and afterwards in other towns, the so-called "free-choice" movement began in the profession, its object being to admit every medical practitioner of a locality to club practice provided that he was willing to accept the club fees; the clubs had to pay a certain annual sum for every member and the aggregate proceeds were eventually divided among the various practitioners according to the number of consultations, visits, operations, &c., which had fallen to the share of each. In course of time the movement spread throughout Germany and though it worked quite satisfactorily in a good many clubs it was nevertheless strongly opposed not only by other clubs but also by certain medical men who, as club officers appointed at fixed salaries, were afraid of losing a considerable part of their income by the introduction of the "free-choice" system. A few years ago the encroachments of the clubs were resisted only by local organisations of the medical profession, so that in the case of a difference between the club and the local profession the club had only to appoint medical men coming from other places who were anxious to engage in practice and were therefore willing to accept any fee, even the lowest, offered to them by the clubs. Recently, however, a general association was founded at Leipsic, the so-called Leipziger Verband, for the purpose of organising resistance on a larger scale. The Leipziger Verband is in connexion with the [illegible] Deutsche [illegible] those of th[illegible] and in cer[illegible] It has loc[illegible] arises betw[illegible] first tried, [illegible] proclaimed [illegible] medical a[illegible] settling in [illegible] practitione[illegible] by a club [illegible] leave the [illegible] happened at C[illegible] in a strike [illegible] the "free[illegible] augmentat[illegible] of the club[illegible] to act a[illegible] 150,000 m[illegible] medical a[illegible] quite unsa[illegible] powers of [illegible] certain ex[illegible] latter int[illegible] provide w[illegible] men, the alternative being that in case of default the Government in exercise of the power conferred on it by the law would dissolve the [illegible] would have the clubs managed by a Govern[illegible] clubs accordingly were forced to [illegible] the profession and to comply with [illegible] branch of the Leipziger Verband [illegible] off the 20 newly appointed medic[illegible] medical service of the clubs. [illegible] the profession, not only at Colog[illegible] wise, and due principally to the e[illegible] on a large scale, have greatly excited the leaders of the workmen's sick clubs who h[illegible] view to defeat the policy c[illegible] held at Leipsic was there [illegible] a good many of the large [illegible] explained that the unsa[illegible] profession was not due to the club[illegible] overcrowding of the profession and [illegible] clubs to their medical officers must [illegible] employers to employed, the clubs, t[illegible] charitable institutions. The "free c[illegible] opposed as a matter of principle, [illegible] take place by common agreement [illegible] medical trade union or by legislatio[illegible] "free-choice" system from the sta[illegible] according to the report, that unde[illegible] but also the cost of medicine and [illegible] an enormous degree. The report [illegible] tion enacting that in the event of a medical strike the medical men should be obliged to attend provisionally the club members at a fixed rate until the matter was settled, so that a strike would be practically rendered illegal. After a long and animated discussion, in which also delegates of clubs adopting the "free-choice" system spoke, the congress passed a resolution to the effect that the introduction of the "free-choice" system by legislation or by a medical trade union was undesirable and that any intervention of the authorities, as in Cologne, was deserving of censure.

The Preservation of Milk.

Professor von Behring, whose views on the origin of tuberculosis are well known, has recently directed his attention to methods of artificial feeding and the preservation of milk. In an article published in the *Therapie der Gegenwart* he says that fresh milk taken from a cow under every possible precaution against contamination contained at least from 100 to 200 germs in every cubic centimetre. Milk taken by the usual method contained many thousand germs per cubic centimetre In order to avoid chemical alteration of milk he recommended not sterilisation by boiling but the addition of formalin One gramme of this substance (a quantity too minute to be tasted at all) was sufficient to preserve 4000 grammes of milk for eight days In a large farm where many newly born calves died within 48 hours from an epidemic termed "Kälbersterbe" artificial feeding of the calves on milk containing formalin had the effect of making the mortality at once decrease Professor von Behring has also obtained experimental results which are important with respect to tuberculosis According to the views explained by him at the Medical Congress in Cassel tuberculosis arose in the early days of life and was conveyed by the milk through the intestinal wall of infants He has also ascertained that milk from cows which were immunised against tuberculosis contained certain substances highly antitoxic against tuberculosis Bacterium coli might be advantageously used in the study of the antitoxins of milk When a quantity of these bacteria were added to milk yielded by immunised cows the number of germs decreased from 700 000 to 4000 within 24 hours and to 200 within 48 hours, but by previously boiling the milk for one hour the antitoxic substances were destroyed and even the action of formalin was neutralised Veterinary surgeons were already aware that the enteritis of calves caused by the bacterium coli might be avoided by feeding them with fresh cows' milk, whilst the administration of sterilised milk produced fatal diarrhœa Professor von Behring was of opinion that the great mortality of infants might also be due to the administration of sterilised milk The best nourishment was, of course, the milk from the mother, but when this was not available genuine unsterilised cows' milk should be used He hoped to be able to produce a milk free from the germs of tuberculosis, the cows being immunised at an early date by preventive injections By addition of formalin the milk might be preserved and made fit for transport The attention of the Government has evidently been directed to Professor von Behring's proposals as during his last visit to Berlin he had an interview with the sanitary authorities

Feb 15th

Obituary.

HENRY ROBINSON, L R C P, L R C S EDIN

BY the death of Mr Henry Robinson the medical profession in Chesterfield loses its doyen and an interesting link between the immediate past and the present is broken He was born in Chesterfield where the family to which he belonged was well known and highly respected At the time when he chose medicine for his profession it was still the custom to enter it by the way of apprenticeship He accordingly became apprentice to Dr Holland and after his death to his successor, Dr Charles Booth, who subsequently became Mr Robinson's brother in law At a later period he passed to the wider sphere of the University of Edinburgh but as domestic causes unfortunately hindered him from graduating in the University he took the qualifications of L R C S and L R C P Edin in 1863 and returned to his native town, where his professional ability, his gentle and pleasing personality, and his family connexions speedily secured to him a busy and lucrative practice Despite the cares this incurred he yet found time for occasional contributions to medical literature A case of Pregnancy with a Perfect Hymen was described by him in THE LANCET of August 7th, 1869 p 223, and he was one of the first to call attention to laburnum poisoning in a communication to the *British Medical Journal* in 1883 As for local medical records he was a perfect mine of wealth and his recollections were always at the service of his younger brethren, in spite of the fact that during his later years his impaired health enforced on him an almost complete retirement

GEORGE HADDOW, M B, CH B EDIN, D P H CANTAB

Dr George Haddow, whose death at the age of 29 years occurred recently in the Royal Infirmary, Glasgow, was the eldest son of Mr. James Haddow, Springbank, Falkirk, and studied medicine at Edinburgh University, where he graduated with first class honours After a voyage round the world as medical officer on board the s s *Rakaia*, belonging to the New Zealand Steam Navigation Co, he took the diploma of D P H Cantab and settled down to practice in the Shettleston district of Glasgow about eighteen months ago Of a genial and warm hearted disposition Dr Haddow soon gained the esteem and affection of his colleagues and the people of Shettleston and the keen anxiety which was manifested by all classes during his illness bore eloquent testimony to the high place he had attained in their regard The funeral, which took place at Falkirk, was attended by a large and sympathetic gathering

Medical News.

UNIVERSITY OF CAMBRIDGE —At a Congregation on Feb 11th the following degrees were conferred —

Doctor of Medicine —J C S Rashleigh Trinity
Bachelor of Medicine —G T Birks Kings
Bachelor of Surgery —A Wylie Pembroke and E Bigg Gonville and Caius

In the Easter term the Final M B examination (medicine surgery, and midwifery) will begin on April 26th, the M C examination will begin on April 28th Candidates for either examination must send their names to the registrar by April 14th —The programme relating to the visit of the King and Queen to the University on March 1st has now been published by the Vice Chancellor The Vice Chancellor will meet their Majesties, who will be accompanied by H R H Princess Victoria at the Great Northern railway station and will conduct them to the Senate House Here the Queen and Princess Victoria will remain while the King will proceed to the University library to join the Chancellor's procession The Chancellor's procession will enter the Senate House for Congregation, after which their Majesties and Princess Victoria will proceed to the Fitzwilliam Museum for luncheon The first visit after luncheon will be to the medical school where the Regius Professor of Physic, the Downing Professor of Medicine, the Professor of Surgery, and the Professor of Pathology will receive their Majesties for the opening of the new medical school buildings Next will come an inspection of the new law school and of the new botanical laboratory and, lastly, their Majesties will proceed to the Sedgwick Museum and there unveil the statue of Professor Sedgwick Post cards to be filled up as applications for seats in the Senate House during the ceremony, will be sent to all members of the electoral roll Non resident Doctors of Medicine wishing to take part in the procession should apply to the Vice Chancellor, Queens' College Lodge, not later than to day (Saturday, Feb 20th) Doctors of Medicine will wear scarlet —The regulations for a new examination for a diploma in tropical medicine and hygiene were issued on Feb 13th Any person whose name is on the Medical Register is admissable as a candidate subject to certain conditions and fees All applications for information respecting the examination should be addressed to Mr G F H Nuttall, University Pathological Laboratory, Cambridge

TRINITY COLLEGE, DUBLIN —At examinations held in Hilary term the following candidates were successful —

Final in Medicine —Herbert St M Carter Arthur W Goldsmith Wright Mitchell Owen J Parry Edwards Henry M Crawford John C Hall Wilfrid Thunder, William J M Iver and David C Pearson
M B —Robert Moore

THE KILMARNOCK INFIRMARY —The total number of patients treated in this institution during the year ending Nov 11th, 1903, was 1273 a decrease of 55 compared with the previous year—viz, 335 fever patients, against 392, 390 medical, against 398, and 548 surgical, against 538 In addition, 167 out-patients were treated for accident and other troubles who did not require to remain in the hospital The average daily number resident in the various wards throughout the year was 106 compared with 118 in the previous year The total income for the year was £4742 4*s* 11*d*, being £339 1*s* 1*d* less than the income of the previous year, and the total expenditure was £5390 4*s* 2*d*, a decrease of £85 15*s* upon the past year.

The general subscriptions amounted to £789 14*s.*, being £19 16*s.* 9*d.* less than the previous year. The employés' subscriptions were £841 18*s.* 9*d.*, a decrease of £291 7*s.* 3*d.*; and the church contributions amounted to £271 15*s.* 9*d.*, an increase of £8 12*s.* 9*d.* The expenditure has exceeded the income by £647 19*s.* 3*d.*, and the loss in maintaining the institution during the past two years has amounted to nearly £1042.

Death of Dr D. R: Guns.—The untimely death is recorded of Dr. D. R. Guns, house surgeon to the Royal Infirmary, Newcastle-upon-Tyne. He was only 25 years of age, was qualified last September, and entered the infirmary as house surgeon about a fortnight ago. A few days since he developed double pneumonia and died on Feb. 13th. Although cut short at the very commencement of his professional career he had gained for himself a host of friends and had already given promise of a brilliant future.

Society of Arts.—At a meeting of this society, held on Feb. 10th, Professor C. Vernon Boys delivered an address on Thermit, at the same time showing a variety of lantern pictures, samples of thermit welding both rough and in section, and requisites for the process. Thermit is a mixture of aluminium and iron oxide; it has the appearance of small black elongated grains resembling short lengths of very slender "pencil lead" and not unlike the gunpowder used for sporting purposes. When ignited it produces a temperature of at least 3000° C. and therefore much above the melting point of platinum and the dissociation temperature of the products of the combustion of carbonaceous fuel. The combustion products of thermit are molten pure iron (not cast iron) and molten alumina, both of them at such a temperature that they will instantly melt a hole in boiler plate and run through it. Its ignition point is so high that ordinary combustibles have no effect on it and it is usually ignited by contact with a burning mixture of aluminium and peroxide of barium which can be easily set on fire with a match. Before being lighted the thermit is put into a crucible lined throughout to a depth of about an inch with magnesia.

Edinburgh University Graduates' Annual Dinner, Newcastle upon Tyne.—The second annual dinner of the Edinburgh University graduates was held in Newcastle-upon-Tyne on Feb 12th. Dr. Frederick Page, professor of surgery in the University of Durham, occupied the chair. The guest of the evening was Sir William Turner, K.C B., Principal of the University. About 55 sat down to dinner, amongst whom were Professor Sir G. H. Philipson, Professor R Howden, Professor T. Oliver, Dr. T. W. McDowall (Morpeth), Dr. David Ridpath (Sunderland), Dr. J. W. Smith, Dr. J. Limont, and Dr. J. S. McCracken. Dr. Smith submitted the toast of "Alma Mater" In a very interesting speech he traced the history of the Edinburgh University and College of Medicine since its inception and mentioned the names of many of its most distinguished alumni, especially Joseph Black, William Collin, James Gregory, Sir Douglas Maclagan, Thomas Locke, Sir Joseph Lister, and Sir James Simpson. He mentioned the fact that the two greatest blessings to humanity and the medical profession—chloroform and antiseptics—were both discovered by Edinburgh men. Sir William Turner also spoke and said that the University, notwithstanding its 300 years, had an extremely good constitution. It had a power of retaining its youth and of recuperating itself from time to time. It had a great history to live up to and those who were in office realised their responsibility. He spoke for his colleagues and for himself when he said that they intended, as far as human means allowed them, that the University should keep its place. In conclusion, Sir William Turner expressed the hope that their warm love for the old University would long continue. Professor Page proposed "Our Guest." He described Sir William Turner as one of the most distinguished anatomists in Europe and also as a teacher of unexampled experience and success. Responding, Sir William Turner said that if a man was to rise to any position as a teacher there must be sympathy between him and those whom he had to teach. He mentioned a curious fact connected with the anatomical chair of Edinburgh. It was founded in 1720 and up to the month of January last year there had only been five professors in the chair. He took that as an evidence of the healthiness of the occupation of a professor of anatomy. The concluding toast, "The Chairman," was proposed by Professor Howden and was duly responded to.

Medical Barrister.—Mr. Lewis Lewis, M.D. Durh., who formerly practised in Plymouth and in Brixton, was on Jan. 26th called to the Bar at the Middle Temple.

Sanitary Assurance Association.—The twenty-third annual meeting of the members of this association was held on Feb. 15th, at the offices, 5, Argyll-place, London, W., Mr. Andrew Stirling, the President, being in the chair. In the annual report the council expressed regret that the principle of the Sanitary Registration Bill, promoted by the association, had not yet received the sanction of Parliament. The income of the year was £202 15*s.* 7*d* which, after meeting all liabilities, left a balance in hand. The report was adopted on the motion of the President, seconded by Mr. Mark H. Judge, and the retiring members of the council, Mr. Walter Butler and Dr. E. F. Willoughby, were re-elected.

Manchester and Salford Skin Hospital—At the annual meeting of the supporters of this hospital, which was held on Feb. 2nd under the presidency of the Lord Mayor, a strong case was brought forward for more room. The attendances made last year by patients were 64,130, of which 29 948 were for "light" treatment, a considerable increase on the previous year. The patients were not only from the Manchester district but from places as remote as Aberystwyth, Colwyn Bay, Blackpool, Douglas, Huddersfield, Oswestry, and Windermere. The "light" treatment had been satisfactory; a number of cases of lupus and other tuberculous affections of the skin had been discharged cured. In addition to the use of the Finsen-Reyn lamp the staff recently began to work with radium; but, as Dr. H. A G. Brooke said, it was too early yet to speak of its action. He emphasised the need for more beds, saying that they could deal with the out-patients fairly well. Dr. R B. Wild also strongly urged the same plea. There are two beds for men, which provision "was not only inadequate but ludicrous," four for women, and none for children. They hoped to provide 30 beds in the new hospital which would enable them to admit all the acute cases. For the contemplated new hospital a sum of £35,000 is needed and as £25,271 have been provided it has been decided to begin to build immediately.

Lectures on Medical Jurisprudence.—On Feb. 11th Dr. F. J. Waldo, coroner of the City of London, delivered a lecture on Poisoning in its Medico-legal Aspects at the Old Hall, Lincoln's Inn. The chair was occupied by Judge Marten, K.C, as representative of the Council of Legal Education. It was pointed out that neither lawyers nor medical men had any universally accepted definition of the term "poison." It would be obviously incorrect to call vitriol a poison when thrown into another person's face with intent to commit bodily injury. On the other hand, if administered internally the vitriol would be considered a poison both by lawyers and by medical men. Powdered glass, again, formed an extremely ancient method of causing death by mixing it with food. For all that it was not a poison although it killed after internal administration. The "poison" must, in other words, not only be taken internally but must exert some kind of chemical action upon the tissues. The Sale of Poisons or Pharmacy Act, 1868, was discussed at length by the lecturer who pointed out various ways in which its scope of usefulness might be enlarged. He agreed with Dr. W. Wynn Westcott in recommending the addition of the strong mineral acids, ammonia, and certain other poisons to the scheduled list. The evidence of poisoning as produced in court was then considered. The simulation of various diseases by poisoning and *vice versâ* was described, as, for instance, the similarity of lockjaw and strychnine poisoning and the resemblance of slow arsenical or antimonial poisoning to typhoid fever. The important subject of the evidence of poisoning to be derived from an examination of the dead body was exhaustively dealt with. The limitations and the powers of chemical analysis were described. In the case of some powerful alkaloids the dose was so minute that it would be almost impossible to detect their presence. Fortunately, both clinical and moral evidence was often available in these cases. The lecture was followed with interest by a large audience. This special course of evening lectures, open alike to the public as well as to lawyers, follows those already given by Judge Willis, K.C., Mr. Fletcher Moulton, K.C, M.P., Mr. Birrell, K.C., M.P., Dr. Blake Odgers, K.C., Sir Harry Poland, K.C., and other eminent lawyers.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS

Proposed Amendment of Medical Act, 1886.

GENERAL LAURIE's Bill to amend the Medical Act, 1886, is supported by Sir Walter Foster, Sir John B Tuke, Mr Rothschild, Sir Howard Vincent, Mr. Middlemore, and Sir Mancherjee Bhownaggree. The following memorandum is circulated with the text of the proposals "In order to facilitate the admission of colonially trained and registered medical men to practise in Great Britain and hold appointments in the imperial service the Act of 1886 provided for reciprocity between the mother country and such of the self governing colonies as might comply with certain conditions, but that Act expressly stipulates that when any colony had a provincial and a federal organisation such reciprocal arrangements should be entered into with the federal government and not the provincial In the case of Canada the British North America Act of 1867, enacted by the Imperial Parliament, expressly provides that education shall be entirely under the control of the provincial and not the federal governments, so that it is impossible to bring the Act of 1886 into force with Canada It is impracticable to amend the British North America Act of 1867 and to transfer the control of education to the federal authorities, and therefore it is the object of this Bill to amend the Medical Act of 1886, without in any way interfering with the principle and to enable reciprocal arrangements to be entered into either with the federal or provincial governments"

Registration of Nurses.

Dr. R Farquharson's Bill to regulate the qualification of trained nurses and to provide for their registration has been put down for nally for second reading on Monday It is backed by Mr Haldane, Sir Thomas Wrightson, Sir James Joicey, Sir John Tuke, Mr. H C Smith, Mr Munro Ferguson, Mr. Tennant, Mr. Black, Mr. Colston, Mr Eve, and Dr E C Thompson.

HOUSE OF COMMONS

THURSDAY, FEB. 11TH.

Care of Lunatics

received but I cannot give an undertaking that the Government will introduce legislation dealing with the matter during the present session.

Mr. FIELD asked the Chief Secretary to the Lord Lieutenant of Ireland whether he h
conference of asylu
Asylum on Nov 25th
if he proposes to deal
as follows The reso
capitation grant of 4s per week in respect of the maintenance of each pauper lunatic, (2) an extension of the period for, and alteration of the conditions upon, which loans are made for asylum purposes, (3) the establishment of a central laboratory in connexion with asylums, (4) the introduction of a system of boarding out of persons of unsound mind, and (5) the assimilation of the capitation

at such will be introduced during
funds available at present for the
est.

Whisky Blends

Record of Cancer in India

Mr. WEIR asked the Secretary of State for India whether the

FRIDAY, FEB 12TH

Health of Post Office Staff.

Mr CLAUDE HAY asked the Postmaster General whether the room containing the A and B Divisions Central Telegraphs had been

last previous inspection was made a few months ago.

MONDAY, FEB. 15TH.

Nursing in Ireland.

Mr. PATRICK O BRIEN asked the Chief Secretary to the Lord Lieutenant of Ireland whether he would give the names of the institutions in Ireland considered competent by the Local Government Board to give certificates for trained nurses within the meaning of the first portion of the Nursing Order; the names of the institutions in Ireland considered competent to give certificates for qualified nurses within the meaning of the second portion of said Order, and the position of nurses (who had been in the service of boards of guardians previously to the said Orders and whose service had been satisfactory) as to promotion to other offices, increase in salaries, or appointment to posts in other unions —
no official record kept of
cles 2 (*a*) and 2 (*b*) of the

Sanitary Inspectors.

Sir WALTER FOSTER asked the President of the Local Government Board whether he could state the number of persons seeking certifi-
ied in
Local
ndon)
have
l that
the numbers are as follows —

Year	Number of applicants for certificates.	Number of certificates granted.
1899 ...	18	16
1900	21	12
1901	27	24
1902	70	57
1903 ...	60	46

Inspection of Pauper Children.

Mr TENNANT asked the Secretary for Scotland whether, in view of
nd are not inspected
oor under the Local
iency of having the
inspectors under the
land.—Mr. GRAHAM
overnment Board for
boarded out are of
before the Depart-
and when the report
whether any action

Sophistication of Spirits

asked the Chancellor of the Exchequer whether he
reduced, coloured, bottled,
and sent out by itself as
eeds of the customer, that
s in this country with the
cautioned not to interfere;
is obtained from such
materials as molasses glucose, rice, and sugar, he would give in-
properly described —
The matter referred
deal with adequately
I may say that the
sue of instructions by

Board of Inland Revenue whose experience is very considerable in this matter

TUESDAY, FEB 16TH.

Lead Poisoning

Mr COGHILL asked the
total number of deaths in
earthenware trade and in
and whether he proposes
with regard to the trade of house painters and plumbers —Mr. AKERS DOUGLAS, in reply, said. The number of deaths from lead poisoning in the pottery trade in 1903 was three The trade of house

painters and plumbers does not come within the Factory Act and returns of deaths are not required to be made to the Home Office. It appears, however, from information supplied by the registrars of deaths that there were in the same year in the whole of the United Kingdom 39 cases in which the death of persons stated to be employed in this trade was attributed directly or indirectly to lead poisoning. I do not propose to introduce legislation this session with regard to this trade.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ACLAND, H. T. D., F.R.C.S. Eng., has been appointed Honorary Surgeon to the Christchurch Hospital, New Zealand.

BELGRAVE, T. B., M.D. Edin., has been appointed Inspector of Pearl Fisheries at Sharks Bay, West Australia; also to be District Medical Officer and Public Vaccinator at Denham.

BENNION, J. M., M.B. Cantab., has been appointed Junior House Surgeon to the Radcliffe Infirmary, Oxford.

BERRY, ROBERT SAWERS, M.R.C.S., has been appointed Medical Officer of Southport, Queensland, Australia.

CURL, SYDNEY W., M.A., M.B. Cantab., M.R.C.P. Lond., has been appointed Pathologist and Bacteriologist to the North-Eastern Hospital for Children, Hackney-road.

EWART, D., M.B., B.S. Edin., F.R.C.S.E., has been appointed Certifying Surgeon under the Factory Act for the Chichester District of the county of Sussex.

FOSTER, C. W., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Radcliffe Infirmary, Oxford.

GARDNER, A., M.B., C.M. Edin., has been re-appointed Medical Officer of Health for the Kirbymoorside District of Ryedale, Yorkshire.

GIBSON, A. G., M.B., B.Ch. Oxon., has been appointed House Physician to the Radcliffe Infirmary, Oxford.

HOLLICK, HUBERT HARRY, M.R.C.S., L.R.C.P. Lond., has been appointed Acting Medical Officer for the Care of Lepers detained in the Lazaret at Stradbroke Island, Queensland, Australia, during the absence of the Medical Officer, and Acting Superintendent of the Institution for Inebriates at Dunwich during the absence of the Superintendent; also to be Acting Medical Superintendent of the Dunwich Benevolent Asylum during the absence of the Medical Superintendent.

IVENS, FRANCES, M.S. Lond., has been appointed Surgical Assistant to the New Hospital for Women.

MANNING, RICHARD BEATTIE, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Medical Officer to the Wells (Somerset) District Cottage Hospital.

MARSH, C. J., L.R.C.P. Edin., M.R.C.S., has been appointed Certifying Surgeon under the Factory Act for the Yeovil District of the county of Somerset.

MARSHALL, J. COLE, M.B., F.R.C.S. Eng., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

MORGAN, EDWARD H., M.R.C.S., has been appointed Officer of Health of Hamilton District, Tasmania.

PENNY, HENRY J., L.K.Q.C.P. Irel., has been appointed Officer of Health of St. Helena, Tasmania.

SNELL, SIDNEY H., M.D., B.S. Lond., has been appointed Assistant Anæsthetist to the Royal Ear Hospital, Soho.

WATSON, GEORGE, M.B., Ch.M. Edin., has been appointed Officer of Health of Burnie District, Tasmania.

WATSON, J. F., M.B., M.Ch. Melb., has been appointed Assistant Medical Superintendent of the Hospital for the Insane, Toowoomba, Queensland, Australia.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ABERDEEN, KINGSEAT ASYLUM.—Assistant Medical Officer. Salary £110 per annum, with board.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—Assistant Physician. Also Assistant Surgeon.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, John Bright-street, Birmingham.—Clinical Assistant. Honorarium at rate of 52 guineas per annum.

BIRMINGHAM, GENERAL HOSPITAL.—Surgical Casualty Officer. Salary £50 per annum, non-resident.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £100, with board, residence, and washing.

BURTON-UPON-TRENT, COUNTY BOROUGH OF.—Medical Officer of Health and Public Analyst. Salary £400 per annum.

CANCER HOSPITAL, Fulham-road, London, S.W.—Surgical Registrar. Honorarium £26 5s per annum.

CARMARTHEN, JOINT COUNTIES ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, apartments, and washing.

CHELTENHAM GENERAL HOSPITAL.—Junior House Surgeon, unmarried. Salary £[illegible] per annum, with board, lodging, and washing.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House Surgeon, single. Salary £[illegible] per annum, with board, lodging, and washing.

CROYDON GENERAL HOSPITAL.—Senior and Junior House Surgeons, unmarried. Salaries £105 and £60 respectively, with board, laundry, and residence.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary £100, with board, residence, and washing.

DUDLEY, GUEST HOSPITAL.—Senior Resident Medical Officer. Salary commencing £100 per annum, increasing to £120, with board, residence, attendance, and washing. Also Assistant House Surgeon for six months. Salary £40 per annum, with residence, board, and washing.

EAST INDIAN RAILWAY.—Assistant Medical Officer. Salary commencing at Rs.400 per mensem.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Surgeon for six months. Honorarium of £25, with board, residence, &c. Also Medical Officer for the Casualty Department for six months, renewable. Salary at rate of £100 per annum.

GESTO HOSPITAL, Isle of Skye.—Resident Medical Officer. Salary £200 per annum, with house, coals, light, and taxes.

GLASGOW ROYAL HOSPITAL FOR SICK CHILDREN.—Resident House Surgeon. Salary at rate of £50 per annum, with board and laundry.

GORDON HOSPITAL FOR FISTULA, &c., Vauxhall Bridge-road, S.W.—Honorary Anæsthetists.

HOSPITAL FOR EPILEPSY AND PARALYSIS AND OTHER DISEASES OF THE NERVOUS SYSTEM, Maida Vale.—Resident Medical Officer for six months. Salary at rate of £50 a year, with board and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—House Physician, unmarried, for six months. Salary £20, with board and residence.

HOSPITAL FOR WOMEN, Soho-square, London, W.—House Physician for six months. Salary £30.

LEEDS, HOSPITAL FOR WOMEN AND CHILDREN.—Honorary Assistant Physician.

LIVERPOOL CHILDREN'S INFIRMARY.—Assistant House Surgeon for six months. Salary £22 10s., with board and lodging.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer for four months. Salary at rate of £50 per annum, with board, residence, and washing.

READING, ROYAL BERKSHIRE HOSPITAL.—Assistant House Surgeon for six months. Salary £60 per annum, with board, lodging, and washing.

ROCHESTER, ST. BARTHOLOMEW'S HOSPITAL.—Assistant House Surgeon for six months. Salary at rate of £100 per annum.

ROYAL PIMLICO DISPENSARY, 104, Buckingham Palace-road, S.W.—Attending Medical Officer.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Head Dispenser.

SALFORD ROYAL HOSPITAL.—Junior House Surgeon for six months. Salary £[illegible] per annum, with board and residence.

ST. MARY'S HOSPITAL, Paddington, W.—Resident Casualty House Surgeon for six months. Salary £100 per annum, with board and lodging.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road.—Honorary Dental Surgeon.

WEST BROMWICH DISTRICT HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

WEST LONDON HOSPITAL, Hammersmith road, W.—House Physician and House Surgeon for six months. Board and lodging provided.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fourth Assistant Medical Officer. Salary £150, rising to £180, with board, &c. Also Fifth Assistant Medical Officer. Salary £140, rising to £160, with board, &c.

WEST RIDING OF YORKSHIRE.—Bacteriologist and Assistant to County Medical Officer. Salary £250 per annum, rising to £400.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory Act at Hornsea in the county of York, at Aughnacloy in the county of Tyrone, at Falmouth in the county of Cornwall, and at Broughton Astley in the county of Leicester.

Births, Marriages, and Deaths.

BIRTHS.

O'LEARY.—On July 21st, 1903, at Glenelg, South Australia, the wife of A. P. Evelyn O'Leary, M.R.C.S. & R.C.P., of a daughter.

POCOCK.—On Jan. 17th, at Quetta, India, the wife of Major Herbert Innes Pocock, R.A.M.C., of a son.

MARRIAGES.

BRIDGE—DAVIS.—On Feb. 11th, at St. Matthew's Church, Ealing, John Crosthwaite Bridge, M.R.C.S., L.R.C.P., to Bessie Coleridge Davis, eldest daughter of the late Gateward Coleridge Davis, Barrister-at-Law, Inner Temple.

CAZENOVE—CRAWLEY.—On Feb. 13th, at All Souls Church, Leeds, William Reginald Cazenove, M.R.C.S., L.R.C.P. Lond., to Amy, younger daughter of Edward W. Crawley, of Leeds and Ilkley.

DEATHS.

HIND.—On Feb. 16th, at Blytheholme, Harrogate, Annie Charlotte, wife of Henry Hind, F.R.C.S.

MARVAL.—On Jan. 4th, at S. Catherine's Hospital, Cawnpur, U.P., Alice M. Marval, L.R.C.P.S. Ed., of pneumonic plague.

STARLING.—On Feb. 11th, at The Rowans, Brook-green, John Starling, M.R.C.S., L.R.C.P., in his 72nd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE OLD-FASHIONED APOTHECARY'S BILL.

IN another column will be seen some comments upon a copy of an apothecary's bill received from Dr. R. P. Smallwood of Little Waltham, near Chelmsford. By a coincidence during this same week we received from Mr. H. O. Huskisson, of 5, Gordon-square, W.C., a copy of an apothecary's bill rendered in 1806 by Mr. A. Robinson to an invalid—Mrs. Huskisson. From this bill it would seem that Mrs. Huskisson took a draught and a pill every day from Dec. 2nd, 1806, to the 19th, except upon the 14th. Upon the 6th she had a box of pills, whether of the same quality or not is not stated, and on the 7th she took an extra draught. In the seventeenth and eighteenth centuries it was evidently the medical man's medicine rather than his advice that was paid for and we doubt if public intelligence has got as far beyond this point as it should. There is still a widespread impression, not [illegible] of the community, that there [illegible] medical man unless you also [illegible] ts do not in the twentieth [illegible] ıgs on medical instruction as they did 200 years ago they swallow more upon their own initiative. Children may hate medicine but the world at large loves it, and now that the medical profession has become more chary in prescribing formulæ the enterprising druggist and the unscrupulous quack are prepared to fill the vacancy.

GARLIC AS A REMEDY.

To the Editors of THE LANCET.

SIRS,—Having read Dr. W. C. Minchin's interesting letter in THE LANCET of Feb. 13th, p. 481, upon the action of garlic in tuberculosis, it may interest some of your readers to know that garlic has been a remedy in common use for certain diseases in Wales for a great number of years; in fact, it is only one of a large number of herbs used by the natives, the therapeutical action and uses of which have been probably handed down from father to son since the days of the Druids who were the physicians as well as priests in their day and were good botanists. I inclose a recipe in Welsh with English translation taken out of a book compiled by Lewis Morris, formerly of Anglesey (Môn) and an ancestor of Sir Lewis Morris (author of the "Epic of Hades"). The book from which I take the extract is called "Rhodd Meistr i'w Brentis" ("The Master's Gift to his Apprentice"), published in 1812 by R. Jones at Dolgelly.

> "Rhag clefyd y garreg, neu garchar dwfr cymmer thyme, parsley, topiau ffenigl, a'r ddalen pum dalen, chwech neu saith o ewinedd *garlleg;* pwywch hwynt ynghyd, ac ystreiniwch i win gwyn, neu gwrw da; yfwch o hono bob nos a bore."
>
> *Translation of above.*
>
> For *the disease called gravel* (stone) or stoppage of water (stricture) take thyme, parsley, fennel tops, and the five-leaved leaf, and six or seven claws of garlic; powder them together and strain with white wine or good ale; let the patient drink of this night and morning.

In addition to the above, in another book published over 50 years ago by Daniel Evans, druggist, of Llandyssul, Ceredigion, I found the following, also in Welsh: "Garlic should be raised to dry in August. They are useful to remove flatulence."

In the first-named book there is also a recipe for a cough mixture which contains garlic, horehound, &c. Some years ago the juice of garlic mixed with whisky was a popular remedy for phthisis and quite recently I have heard it lauded as a cure for hysteria, probably on account of its strong odour.

I am, Sirs, yours faithfully,

Y. M. JONES-HUMPHREYS.

Cemmaes, Montgomeryshire, Feb. 15th, 1904.

PREHISTORIC THERAPEUTICS.

IN a recent number of the *Revue de l'Ecole d'Anthropologie de Paris* M. Manouvrier has dealt with certain markings which he and others have observed on neolithic skulls. The markings usually take the form of straight or T-shaped dotted lines apparently due to localised periosteal inflammation. It has been supposed that they may be connected with unknown ceremonial rites but the probabilities are in favour of their having rather a therapeutical interest. M. Manouvrier refers to statements which he has found in ancient surgical writings where it is laid down that "to regulate the humidity of the skull," upon which many maladies were thought to be dependent, the cautery should be lightly applied at numerous points in the occipital or the frontal region. He suggests that this use of the [illegible] and that the skulls [illegible] The skulls found mar[illegible] leads us to infer that primitive man adopted [illegible] methods of treating the attacks of headache or of the vapours from which the feminine members of his family suffered.

MR. BLANK OF PICCADILLY CIRCUS.

WE have received a copy of the *Barbados Advocate* wherein is an advertisement calling attention to the scientific claims of one, "G. Thomson Blank (late of Piccadilly-circus, London)," who is described in the heading as dental surgeon to His Excellency Sir Frederic Hodgson, K.C.M.G., Governor of Barbados, Lady Hodgson, and Miss Hodgson. The advertisement is the usual thing: the artificial teeth are the finest and most life-like, the treatment is [illegible] modern instruments and [illegible] the advertisement is, in [illegible] heading, and we admit that we are curious to know if Mr. Blank has authority for describing himself as dental surgeon to the Governor of Barbados—His Majesty's representative in our colony. If he has not the necessary authority he ought to be made to expunge the line from his advertisement. If the advertisement is in order Sir Frederic Hodgson, K.C.M.G., appears to us not to be a very prudent man.

RADIANT HEAT AND LIGHT TREATMENT.

To the Editors of THE LANCET.

SIRS,—For some little time past I have been suffering from gouty arthritis of both knees, both shoulders, elbows, and wrists and now contemplate trying the Dowsing radiant heat and light treatment.

Can any of your readers kindly answer the following questions? 1. Is it of any good in such cases? 2. Is there any danger in the treatment? 3 Is any special getting ready of the skin over the joints required? My joints have been painted with iodine and the skin is tender over them. 4. How many baths are usually taken? 5. After having had a bath are any extra precautions necessary to be taken to avoid chill? I am, Sirs, yours faithfully,

Feb. 13th, 1904. M.D. BRUX.

MOTOR CARS FOR MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—There is one point in connexion with motor cars to which attention does not appear to have been called either in THE LANCET or in any other medical journal—viz., the risk of injury, of even severe injury, to the chauffeur in the act of starting. I have seen many cases myself. Usually it is a sprain of the wrist or a bruise or laceration of the back of the hand caused by a "back-fire." The wrist is sometimes actually fractured; but other parts, such as the face, may be cut; and the muscular efforts occasionally required to start a reluctant engine certainly sprain the lumbar muscles and, I am convinced, even the heart of not a few automobilists. It is chiefly in the case of single-cylinder engines that these accidents are frequent. But I doubt whether any petrol cars are quite exempt from occasional troubles of the kind. It is difficult to get anyone interested in the motor-car trade or any owner conceited about his own motor car to acknowledge the whole truth about this matter. And a person not acquainted with motors, judging merely by the comparative ease with which he usually sees two- and four-cylindered cars started in the street when the engine has not long [illegible] and is still warm can form no idea of what the unfor[illegible] before starting out from [illegible] strain seems to me really [illegible] mobilist to do as I have [illegible] hich will not suffer from [illegible] y a lady or a child I beg leave to make this communication.—I am, Sirs, yours faithfully,

London, Feb. 15th, 1904. C. B. KEETLEY.

A CAT STORY.

THE following is taken verbatim from the New York *Electrical Review* of Feb. 6th, the note within brackets being, of course, by the editor of that well known technical journal.

CAT ELECTRICITY CAUSES CATASTROPHE.

To the Editor of the Electrical Review.

There is an article in your paper describing a paper read at the meeting of the New York branch of the Society of Chemical Industry on "Electrostatic Influences on Inflammable Gases." I should like to state for the benefit of those who did not read the article I refer to that an explosion occurred recently at a home for lost cats through the static discharge from the back of a large tom. It is the system of this place to put the cats which are to be done away with into an iron box which is filled with gas. The explosion occurred when the attendants were putting the large tom into the case. He clung to the basket and in shaking him off generated enough static electricity to ignite the gas, causing the explosion.

Dover, N.J., Jan. 30th. R. RUSTLEWHITE.

[The explosion referred to above occurred at New York and the disastrous results are given in one of the daily papers as follows: [illegible] perhaps [illegible] Good- [illegible] ,' while companions held one of the [illegible] a tackle attached to the glass lid. The cats in these baskets were well behaved, but basket No. 4 contained a black cat. As soon as this animal was dropped there was a flash and a bang and a shower of cats and men."—ED.]

THE REFUGE ASSURANCE COMPANY, LIMITED, AND ITS MEDICAL ADVISERS.

To the Editors of THE LANCET.

SIRS,—I notice in THE LANCET of Jan. 30th, p. 345, a letter from the Law Union and Crown Insurance Company to its medical officers with your comments thereon. I should like to bring to your notice the inclosed slip from the Refuge Assurance Company. It was brought to me by one of their agents who said that if I would insure my life with them they would send me proposers for examination before acceptance by the company. I replied that this was a very one-sided agreement, but on promising to think the matter over he produced the inclosed. I then told him that it settled the matter as my fee was always a guinea, as no matter what the sum assured the amount of trouble and responsibility to me was the same. He replied that other medical men did the work for those fees and that one of them was in this town and he had never heard any objection made to them. After your remarks the other day it is superfluous of me to ask your opinion as to whether I did right, but I should like to know whether it is only the poorer companies who do this sort of thing to their medical officers. Alas, that such things should be or that such poor companies could exist.

I am, Sirs, yours faithfully,

Feb. 16th, 1904. "MONAS."

⁂ "The inclosed slip" sets out the following scale of fees: 5*s.* if the sum assured be £100 or under; 10*s.* for sums over £100 and under £200; and 20*s.* for any sum over £200. These figures speak for themselves.—ED. L.

THE BRITISH VIAVI CO.

To the Editors of THE LANCET.

SIRS,—A lady friend of mine recently replied to the following advertisement in the *Irish Times* (Dublin):—

> LADY, 30–35, well educated, capable of holding a responsible Business Position; good abilities, more important than any special experience; references and security. Apply, by letter, T 693, this office.

She received a reply asking her to call at the Dublin branch of the British Viavi Co., Limited, in Westland-row, Dublin (head offices, Regent House, Regent-street, W., formerly 52, Oxford-street, W.), and was interviewed by a lady who represented herself as the agent in Ireland, a manageress of the company. After a conversation extending over a couple of hours regarding the wonderful qualities of Viavi she learned that the company wanted a lady to open a branch for them in Belfast and that the lady would have to deposit with the company the sum of £300 *in cash* as security, for which she was to receive nothing save an acknowledgment.

My friend was offered in the alternative a position as canvasser for the Viavi productions on a commission of 25 per cent. To qualify for the latter she was asked to pay a fee of five guineas for instructions (to be returned as guaranteed commission), and to purchase certain charts at a further fee of five guineas.

I inclose you one of their pamphlets. Can you tell me, in confidence, or through your columns, anything about the company?

The request to deposit £300 and the fees for "instruction" and "charts" aroused the suspicion of my friend.

I am, Sirs, yours faithfully,

Dublin, Feb. 11th, 1904. CAVE.

⁂ If our correspondent will consult our issue of Feb. 13th, 1904, p. 482, he will see what we think about the Viavi treatment.—ED. L.

CLUB PRACTICE MEDICINE.

To the Editors of THE LANCET.

SIRS,—There is another phase of the question which "Inquirer" raises in your last issue—that of serum therapy. Who would like to treat a case of diphtheria, of even moderate severity, without using the antitoxin, and what can one call it but medicine? The expense of a minimum number of injections would be nearly twice the amount of the usual annual payment of each club patient.

I am, Sirs, yours faithfully,

Feb. 16th, 1904. CLUB SURGEON.

◆

Poor-law Appointment.—The examination referred to by our correspondent is one in medicine, surgery, and midwifery, so we think that one holding a certificate of having passed such an examination would be eligible for a Poor-law appointment, but as the Act governing such appointments is capable of different interpretations it might be as well for him to consult his legal adviser.

Mr. E. Hughes.—Our correspondent will find some information on the matter about which he inquires in the lecture by Dr. J. F. Woods, which appears in the present number of THE LANCET. He might also consult any general psychological treatises as well as various works on hypnotism.

Nemo should consult one of the recognised agents for the sale and transfer of practices or his solicitor. Every point that he raises is one for special arrangement.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 18th, 1904.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Feb. 12	29·86	S.W.	...	53	51	37	38	39	Fine
" 13	29·18	W.	0·40	82	51	39	45	48	Stormy
" 14	29·21	W.	...	63	48	46	44	46	Cloudy
" 15	29 33	S.W.	0·09	53	44	34	34	36	Foggy
" 16	29 51	W.	...	70	45	36	35	37	Hazy
" 17	28 86	W.	0 13	46	40	37	37	37	Raining
" 18	29 42	N.E.	0 09	63	40	34	34	35	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9 30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P M.).

TUESDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9 30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.).

WEDNESDAY (24th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9 30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (25th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2 30 P.M.), Metropolitan (2.30 P.M.), London Throat (9 30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (27th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.). Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (22nd).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M. Council. 8 P.M. Paper:—Mr. C. Robbins and Mr. J. T. Carter: Further Notes on some Prehistoric Skulls. Casual Communication:—Dr. H. B. Gardner: Variations in the Atmospheric Pressure and their Influence upon the Inhalation of Anæsthetics.

MEDICAL SOCIETY OF LONDON ([illegible] -square, [illegible] he W.).—8.30 P.M. Dr. T. B. Hy [illegible] Insane.—Dr. C. W. Buckley: [illegible]

TUESDAY (23rd).—THERAPEUTICAL SOCIETY (Apothecaries' Hall, Blackfriars).—3.30 P.M. Council Meeting. 4 P.M. Papers:—Dr. J. Burnet (Edinburgh): Ichthoform and Ichthorgan, an Account of their Therapeutic Applications.—Mr. W. McAdam *Eccles*: Some Remarks respecting Trusses and their Use.

THE LONDON LICENTIATES' AND MEMBERS' SOCIETY (Wimpole Hotel, 63, Wimpole street, W.)—4 P.M. Meeting.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8 30 P M Paper:—Dr. G. C. Garratt: Observations on Metabolism in the Febrile State in Man.

WEDNESDAY (24th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8.30 P.M. Clinical Evening. Exhibition of Cases.

THURSDAY (25th).—HARVEIAN SOCIETY OF LONDON (St. Mary's Hospital).—Clinical Meeting. Patients will be in attendance at 8.15 P M.

CHILDHOOD SOCIETY (Library of the Sanitary Institute, 72, Margaret-street, W.).—8 P.M. Lecture:—Mr. H. Hall: On Some Elementary Aims in Education.

FRIDAY (26th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.)—8 P.M. Exhibition of Clinical Cases followed by Discussion. Patients will be in attendance from 8 P.M. to 9 P.M.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (22nd).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. A. Keith: The Structure and Evolution of the Auricles of the [illegible] round their great [illegible]

[illegible] [illegible]al, Hammersmith-[illegible] [illegible]gery.

[illegible] (22, Chenies-street, [illegible] (Skin.) 5.15 P.M.

UNIVERSITY OF LONDON.—5 P.M. Lecture:—Dr. A. E. Wright: Physiology of Immunisation.—On Anti-staphylococcus Inoculation.

TUESDAY (23rd).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. M. Moullin: Posterior Dis-[illegible]

[illegible] [illegible]2, Chenies-street, [illegible] [illegible]dical.) 5.15 P.M.

[illegible] [illegible]ILEPTIC (Queen-[illegible] Subacute Combined Spinal Disease.

WEDNESDAY (24th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. A. Keith: The Structure and Evolution of the Auricles [illegible] Mechanism round their [illegible]

[illegible] [illegible]spital, Hammersmith-[illegible]

MEDICAL GRADU[illegible] W.C.).—4 P.M. [illegible] Mr. S. Stephens [illegible]

HOSPITAL FOR C[illegible] ton).—4 P.M. [illegible] its Uses.

LONDON TEMPERANCE HOSPITAL (Hampstead-road, N.W.).—4 P.M. Lecture:—Diseases of the Stomach. (Post Graduate Course.)

THURSDAY (25th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East).—5 P.M. Dr. W. Williams: Deaths in Childbed, a Preventable Mortality.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.)—5 P.M. Mr. Keetley: [illegible]

MEDICAL GRADUATES' COLLEGE AN[illegible] W.C.).—4 P.M. Mr. Hutchinson: [illegible] Mr. E. Clarke: Errors of Refra[illegible] ment.

SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone-road, N.W.).—[illegible] [illegible]ration

[illegible] [illegible]F THE [illegible] The [illegible]urse.) [illegible]quare, [illegible]ure.) [illegible].C.).— [illegible] Hos-[illegible]

FRIDAY [illegible] ENGLAND.—5 P.M. [illegible] the Auricles of the [illegible] round their great [illegible]

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. R. J. Reece: Beri beri.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Clinique.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Mr. Ballance: Surgery of the Nervous System.

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

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THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1903, which was completed with the issue of Dec. 26th, were given in THE LANCET of Jan. 2nd, 1904.

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ABSTRACT OF

The Hunterian Lectures

ON

THE EVOLUTION AND ACTION OF CERTAIN MUSCULAR STRUCTURES OF THE HEART.

Delivered before the Royal College of Surgeons of England on Feb 22nd, 24th, and 26th, 1904,

By ARTHUR KEITH, M.D. ABERD., F.R.C.S. ENG.,

HUNTERIAN PROFESSOR ROYAL COLLEGE OF SURGEONS OF ENGLAND, LECTURER ON ANATOMY, LONDON HOSPITAL MEDICAL COLLEGE.

LECTURE I.

Delivered on Feb 22nd.

MR. PRESIDENT AND GENTLEMEN,—It is with a feeling of keen disappointment that men who seek to extend our knowledge of the origin and development of the human heart lay down any of the standard treatises on the function and diseases of that organ. Their labour, apparently, as far as one may judge from the perusal of such works, lies outside the field of practical medicine and is useless to physician and physiologist alike. The purpose of these lectures is to show that, by studying the unique collection of vertebrate hearts in the museum of this College in the manner which Hunter intended them to be studied and by using them to interpret the developmental phases of the human heart, light can be thrown on certain obscure problems concerning the action of the heart in health and disease.

PULSATION IN THE VEINS.

In the later stages of heart disease, when the right side becomes engorged, well-marked pulsations may appear in the veins of the neck. Thanks to the careful observations of Dr. James Mackenzie,[1] we know that these pulsations or rises of pressure in the great veins occur at two points in the cardiac cycle: (1) during auricular systole and (2) towards the end of the ventricular systole. In early cases of back pressure both these pulsations are present; in the latest stages the ventricular wave gradually merges with, and ultimately absorbs, the auricular wave. If Mackenzie is right in regarding these venous pulsations as directly due to the contraction of the auricular and ventricular chambers, then it is plain that the caval orifices of the auricle have been rendered incompetent when these waves appear. Whenever the great veins pass behind the clavicle above or Poupart's ligament below and come to lie within the respiratory area of negative pressure they lose their valves and there is thus no obstacle to prevent the appearance of a regurgitant wave from the auricle in either the jugular bulb above or termination of the femoral vein below. The problem as to the cause of these two venous waves, named by Mackenzie the "auricular" and "ventricular," is rendered more difficult by the fact that both of them, although much less marked in amplitude, occur in veins in health[2] During auricular systole the auricular mouths of the venæ cavæ are closed; the venous blood is dammed back, giving rise to the normal auricular venous wave. In health there is no regurgitation during systole from the auricles,[3] but in disease there is apparently added to the normal back pressure in the veins an increase due to a regurgitation during auricular systole.

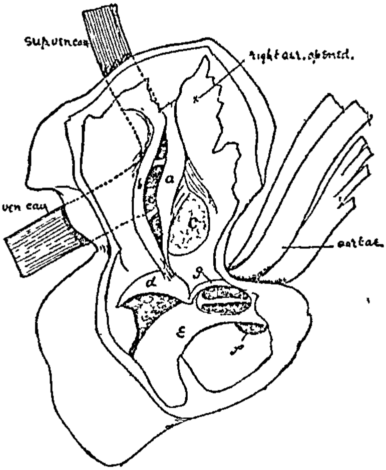
The point to be settled first is: How are the caval orifices closed during auricular systole? The current teaching is that they are closed by the contraction of muscular fibres which surround the terminations of the great veins. The largest vein of all, the inferior vena cava, has no annular muscular fibres surrounding its termination; those round the superior vena cava are weak and do not seem strong enough to act as a competent sphincter. The coronary sinus, on the other hand, is covered by circular and longitudinal layers of muscle and is provided with competent valves as well. Thus the explanation usually given of the manner in which the venous orifices are closed breaks down under anatomical examination and the true explanation is still to seek.

THE MANNER IN WHICH AURICULAR REGURGITATION IS PREVENTED IN LOWER VERTEBRATES.

When one sees the secure manner in which the venous valves prevent blood returning to the veins during auricular systole in the three lower classes of vertebrates, it becomes a matter of the highest probability that there is a corresponding functional mechanism in the two highest classes—birds and mammals. In fishes amphibians, and reptiles all the veins of the body unite at their terminations in a common dilatation or reservoir—the sinus venosus. The margins of the fissure-like mouth by which the venous blood passes from the sinus to the auricle are guarded by two strong membranous valves, which are right and left in position, and unite at their upper and lower ends in drawn out angles or fornices. During the auricular systole the valves are rendered taut and competent. The venous sinus and the venous valves appear in the human embryo as they do in that of every vertebrate, and are at first well-developed structures functionally active. During the third, fourth, and fifth months of embryonic life the valves and the auricular muscle which acts on them undergo a gradual transformation, until by a reduction of one part and an increased development of another there is evolved a mechanism which takes on the function of the valves. No organ in the whole body is so conservative in its tendencies as the heart; what improvement it has obtained in the course of its history it never loses; its progress is made not by the introduction of new structures but by modification of the old.

The structures in the right auricle which arise from the venous valves and the musculature of the valves and which we may expect to be concerned in the closure of the caval orifices are represented in Fig 2. For comparison there are represented in Fig. 1 the venous valves in the right auricle of a child who lived for some weeks after birth; in their form and attachments they resemble exactly the venous valves of a reptile. The lower part of the right venous valve

FIG. 1.



Right auricle and ventricle of a child's heart laid open to [illegible] valves. The heart shows [illegible] heart (from a specimen [illegible] llege Museum) a left [illegible] alve. c, Septum ovale [illegible] ve. e Pulmonary aortic septum f, Opening of pulmonary artery. g, Auriculo-aortic angle.

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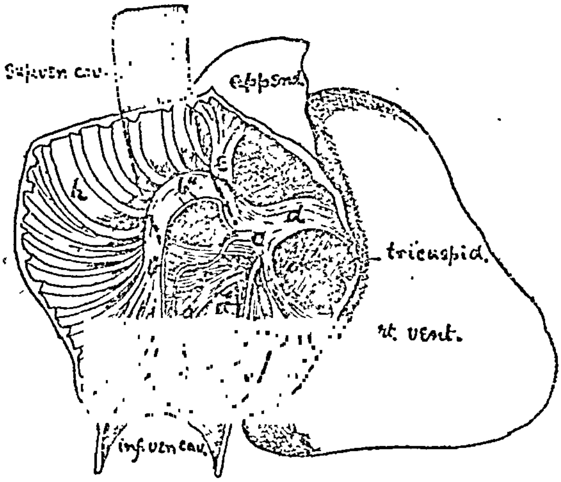
[1] [illegible] the Pulse, 1902.

[2] [illegible] he External Jugular Vein, Ame[illegible] 435, 1902.

[3] [illegible] du Physiologie Humaine, Gand, 1893.

forms the Thebesian and Eustachian valves (Fig. 2) which still help to guard the opening of the coronary sinus and inferior vena cava. The upper part of the right valve disappears but it is not an uncommon thing to see a trace of it on the septal wall between the caval orifices and ending above by passing across the anterior margin of the superior caval orifice to end on the septum in front of that orifice (Fig. 2). The disappearance of the valve is due to an enormous development of the musculature of its base; it forms a great rounded fasciculus, the right tænia terminalis,[4] which commences in the inter auricular septum and passing across the anterior margin of the superior caval orifice turns down in the wall of the auricle to terminate by feeble fasciculi in the Eustachian valve and outer margin of the inferior caval orifice (Fig. 2). Below, where the right venous valve has preserved the primitive form, its musculature is nearly absent. From the right tænia terminalis rise the musculi pectinati. In auricular systole the tænia terminalis sinks like a guillotine blade within the auricle over the mouths of the venæ cavæ, thus assisting to close the orifices.

FIG. 2.



Right auricle of a child thrown open to show the position of remnants of the venous valves and of the muscular bands developed from their bases. *a. a*, Position of the left venous valve. *a'*, Remnant constantly present at the lower margin of the septum ovale. *b*, Thebesian valve. *b'*, *b'*, Eustachian valve *b''*, *b'*, On the right tænia terminalis, and showing other remnants of the right venous valve. *c*, Between the upper and lower fornices of the venous valves. *d*, Annular fibres of the auricular canal. *e*, Tensor of appendix. *f*, Upper band of auricular muscle which breaks across opening of sinus venosus. *g*, The lower band. *h*, Musculi pectinati. *k*, Sub-Eustachian sinus.

The only trace that remains of the left venous valve is a membranous reticulation seen on the inner or septal margin of the inferior caval orifice along the base of the fossa ovalis (Fig. 2). In fœtal and abnormal hearts the valve can be traced upwards till it unites with the right valve below the superior caval orifice and downwards on the septum till it joins the Thebesian part of the right valve (Fig. 2). Thus the upper and lower fornices of the venous valves come to lie on the septum of the adult auricle. The musculature of the left valve remains as a narrow flat bundle that is best seen beneath the remnant of the valve below the fossa ovalis. It can be traced above to the upper fornix and below to the lower (Fig. 2).

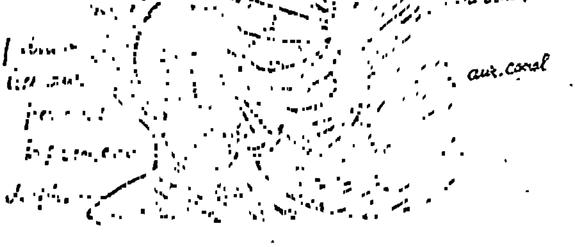
While the musculature of the right venous valve has undergone a new development both valve and musculature of the left side have atrophied. The atrophy is due to the appearance of two new bands of muscle, derived from the septal wall of the auricle. It is the development of these two bands that relieves the left valve of its function and causes its atrophy. They arise in this way. The wall of the sinus venosus becomes thrown into two folds; one of these projects within the right auricle (Figs. 1 and 2) between the orifices of the superior and inferior venæ cavæ; the other between the orifices of the inferior vena cava and coronary sinus. In these two inflections of the sinus wall muscular bands from the septum pass beneath the base of the left valve and gain an attachment to the right. In this manner the sinus venosus is absorbed in the right auricle and the original opening between the venous valves is divided into three parts—the upper for the superior cava, the lower for the coronary sinus, and the intermediate for the inferior vena cava. By the action of these structures derived from the venous valves and the two auricular bundles that have broken across the venous sinus the orifices of the veins are closed during the systole of the auricle. It is important to remember that the muscle of all these structures is derived from the musculature of the auricular canal (for the interauricular septum is derived from the canal), which we know, from the researches of Gaskell[5] on the heart of the tortoise, and MacWilliam[6] on that of the eel, is more easily stimulated to contraction than that of the proper auricle. The proper auricle is developed as a diverticulum of the canal.

THE MANNER IN WHICH THE VENOUS ORIFICES ARE CLOSED.

The movements of the living auricle are so quick that it is impossible to follow them with the eye. By using a modification of the method adopted by Hesse[7]—namely, by throwing injections of molten paraffin wax at the temperature of boiling water into the auricles of the dead heart their walls can be thrown into a condition of heat contraction, which, as far as the change of form is concerned, resembles approximately the natural contraction. The injection must be made while the heart is still within the unopened thorax and after the blood has been washed out from the auricles. When such an injection is made it will be found that the wax within the auricles is partially or sometimes completely separated from that within the great veins by the contraction of the structures which have been described as arising from the venous valves. There is the further advantage in this method of investigation that the action of the various parts of the auricular wall may be studied, for on the cast within the auricle are impressed the various muscular bands, and one can see at a glance what part each will play in propelling the load of the auricle.

The structures which close the orifice of the superior vena cava are shown in Figs. 2 and 3. Along the anterior margin of the orifice, which is oval in shape, passes the right tænia terminalis; along its posterior or septal margin runs part of the muscular band which broke across the sinus venosus between the superior and inferior venæ cavæ. Between

FIG. 3.



Human heart with part of wall of right auricle removed showing the cast of wax within. The cavity is in a state of partial contraction. *a*, Sphincter fibres of superior vena cava. *b*, Septal fibres which end on right tænia terminalis. *c*, Sub-Eustachian sinus in front of Eustachian valve. *d d d*, Ridges between impressions for musculi pectinati. *e*, Groove of tænia terminalis.

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[4] For a full description of the anatomy of the auricles see paper in Proceedings of the Anatomical Society of Great Britain and Ireland, November, 1902.

[5] W. H. Gaskell: Text-book of Physiology, edited by E. A. Schäfer, 1900, vol. ii.

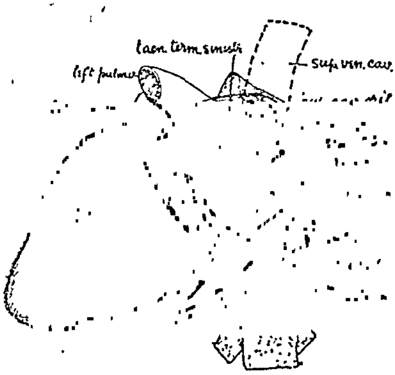
[6] J. A. MacWilliam: Structure and Rhythm of the Heart in Fishes, Journal of Physiology, 1885, vol. vi., p. 192.

[7] F. Hesse: Zur Mechanik der Herzbewegung, Archiv für Anatomie, 1880, p. 328.

these strong muscular bands the orifice of the superior vena cava is reduced to a fissure in auricular systole. The muscular fibres which surround the terminal part of the superior vena cava also help to secure the orifice (Fig. 3). These fibres are derived from the musculature of the sinus venosus, the most excitable of the auricular musculature. In front of the termination of the superior vena cava but separated from it by the tænia rises up a thin-walled diverticulum of the auricle which acts towards the tænia the part which a sinus of Valsalva serves to a semilunar valve.

At the inner or septal angle of the superior vena cava (see Fig. 4) the septal fibres behind the orifice of that vessel and those of the right tænia terminalis become continuous with a band which crosses the roof of the left auricle. As it is a constant feature of the hearts of birds and mammals, and is similar in origin and function to the tænia of the right side, it may be named the left tænia terminalis. The two tæniæ form together a horseshoe shaped band which encircles and helps to close the venous orifices of both auricles (Fig. 4). They terminate below on and near the right and left margins of the inferior vena cava. The terminal part of this vessel, which is fixed in the diaphragm and pericardium, forms the fulcrum on which and from which the tæniæ act in auricular systole.

FIG. 4.



View of the human heart from behind, showing diagrammatically the relationships of the tænia terminalis of the right and left auricles.

The inferior caval orifice, which is double the size of the superior, is closed by the anterior margin, which carries the Eustachian valve, being drawn inwards until it comes in contact with the inner or septal margin. On the septal margin is situated the septum ovale, and since the pressure in the left auricle is held to be the greater in systole it is possible that the septum may bulge to meet the incoming lateral margin. That margin is drawn inwards by the muscular bands which broke across the common orifice of the sinus venosus. These bands surround the fossa ovalis and form what is called at present the annulus ovalis or limbus of Vieussens, but when that structure is examined it will be seen to be composed of an upper and lower part which are only partly fused together at their origin in the interauricular septum (Fig. 2). The lower band, or inferior limbic band, which broke across the venous orifice between the inferior caval and coronary orifices, ends in the Eustachian valve and in the margin of the inferior vena cava. The upper limbic band, which forms only part of the auricular fibres which crossed the sinus venosus between the caval orifices, also ends in the lateral margin of the inferior vena cava. By the contraction of these bands, aided also by the terminal fibres of the right tænia terminalis, the lateral and septal margins of the inferior caval orifice are brought in apposition, so that the Eustachian valve is brought against the septum ovale and renders the orifice competent. But while the closure of the superior caval orifice is wholly due to the muscular bands which surround it that of the inferior is accomplished partly by mechanical means. The free edge of the Eustachian valve may be reticulated or absent but its basal part is constantly present. The auricular wall at the base of the Eustachian valve forms a thin-walled projecting sinus in the hearts of all mammals (Fig. 3, *c*) which by its distension during auricular systole helps to press inwards the Eustachian valve and lateral margin of the inferior caval orifice against the septal margin. In the later stages of cases of auricular hypertrophy the wall of the sinus becomes thickened and its extent less defined; in distension of the auricle, with atrophy of its wall, the sinus becomes greatly distended and may reach a large size. The orifice of the coronary sinus is closed by the Thebesian valve and the annular fibres of the auricular canal, amongst which the orifice is imbedded. In auricular systole the base of the right ventricle is drawn towards the opening of the inferior cava, this movement greatly aiding the closure of the orifice by the structures described.

THE REASON FOR THE DISAPPEARANCE OF THE VALVES.

The venous valves are reduced and the muscular bundles described above appear in those animals in which the heart is completely separated into right and left halves. Complete division is only found in the hearts of birds and mammals. A rigid, mechanically accurate mechanism is replaced by one which will allow regurgitation during engorgement of the auricle. If the auricles of an amphibian or reptile become overfilled by active exercise, the right heart quickly relieves itself into the left side through the interventricular foramen, but when that communication is closed then of necessity a safety mechanism must be introduced at the venous orifices of the right auricle so that the auricle may not overload the ventricle *The function of the auricle* appears to be not only to fill the ventricle but to regulate the load of the ventricle.

THE AURICULAR VALVULAR MECHANISM IN CASES OF VENOUS PULSATION.

Dr. Mackenzie was good enough to submit to me for examination four hearts from cases in which he had taken records of the pulse in the veins for some years before death. Besides these I had at my command a series of specimens showing greatly distended auricles in the museum of the London Hospital Medical College, but of these I had no history as to the venous pulse. Dr. Mackenzie's cases [illegible] mitral and tricuspid stenosis; in all the auricles were [illegible] *hypertrophy of the* [illegible] r there was extreme atrophy, and the remaining two specimens showed intermediate conditions. In all, too, the appendix of the auricle was filled by an ante-mortem clot. The tænia terminalis was in all greatly elongated, but it was hypertrophied in the hypertrophied auricle and small in the one which showed marked atrophy. The parts which were markedly changed were the bands which I have described as crossing the original mouth of the venous sinus; the septal fibres which help to close the superior caval orifice and the limbic bands which close the inferior caval orifice were stretched to nearly twice their normal length. The Eustachian valve and its sinus were also distorted or absent. The muscular fibres round the terminal part of the superior vena cava were partially atrophied in all these hearts. The caval orifices, especially that of the superior vena cava, were also dilated.

A marked feature of all these cases in which the auricles are greatly distended is the great extension of the interauricular septum. Normally in the diastolic condition it measures about an inch when the distance is reckoned from a point taken between the caval orifices to one on the margin of the septum which lies against the aorta, but in mitral disease this diameter frequently measures two and a half or three inches. With this extension of the septum the foramen ovale may become widely open. That need not mean that the foramen ovale has been opened afresh, for in the valuable statistics given by Professor E. Fawcett and Dr. J. V. Blachford[8] this foramen was found patent in 27 per cent. of subjects which were over 20 years of age.

RELATIVE COMPETENCY OF THE VARIOUS ORIFICES.

From an examination of the anatomy of the parts one would say without hesitation that the superior caval orifice is by far the most strongly guarded and least likely to allow regurgitation in auricular systole. The inferior caval orifice, unprotected by circular fibres, and partly mechanical in its manner of closure, seems, on the other hand, one that would be easily deranged and rendered incompetent by distension of the auricle. The coronary orifice stands, in the strength of its guard, intermediate to the other two. The clinical experience of Dr. Mackenzie points in an exactly opposite direction. It is to be observed in the first place that he uses the pulsation of the liver as an index of the extent to which regurgitation takes place through the inferior caval orifice in auricular systole; an auricular pulsation he found to occur in the liver only when there was tricuspid stenosis with hypertrophy of the right auricle, whereas an auricular systolic wave occurred in the jugular vein in all heart cases where there was over-distension of the right side. That observation leads one to conclude that a venous pulsation in the liver is produced under a considerable positive force, such as can be produced by a hypertrophied auricle, the force of which is diverted by the narrowed tricuspid orifice or by the ventricle acting through an incompetent tricuspid orifice. An exaggeration of the normal auricular wave, seen in the jugular veins in cases of back pressure, need not mean an actual regurgitation from the auricles, for in these cases the great veins are so distended that the mere occlusion of their orifices during auricular systole would be sufficient to produce the auricular wave seen in the earlier stages of venous back pressure. On anatomical grounds one would expect a positive auricular wave, due to regurgitation of the auricular blood, to appear in the tributaries of the inferior before it can be felt in those of the superior vena cava.

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[8] E. Fawcett and J. V. Blachford: The Frequency of an Opening between the Right and Left Auricles at the Seat of the Fœtal Foramen Ovale, Journal of Anatomy and Physiology, vol. xxxv., p. 67.

THE EFFECTS OF ADHERENT PERICARDITIS.

Clinicians readily admit that there is still much that is obscure in the sequelæ of pericarditis. When adhesions form after pericarditis they begin between the auricles and the pericardium where the great veins pierce to enter the heart and where the structures which close the venous orifices are situated. Mere adhesion of the auricles to the pericardium, while it may lead to some hypertrophy of the muscular wall, will not markedly affect the normal action of the auricles so long as the outer surface of the pericardium remains free. But when the pericardium becomes adherent to surrounding structures the muscular bands which surround the venous orifices are greatly handicapped by the adhesions and regurgitation takes place. Dr. J. H. Sequeira[9] found that liver tenderness was one of the most common sequelæ of adhesive pericarditis; the tenderness may be due purely to the venous back pressure, but that back pressure will be increased if the auricle adds part of its load to the already distended veins of the abdomen. In cases of adhesive pericarditis with great distension and hypertrophy of the auricles, the caval opening in the diaphragm will be found greatly reduced in size, not from a cicatricial contraction but evidently owing to an attempt to ameliorate the conditions resulting from an incompetency of the auricular orifice of the inferior vena cava.

FIXATION OF THE HEART IN CASES OF PERICARDITIS

When the pericardium becomes fixed by adhesions to the lungs and chest wall a number of obscure symptoms follow owing to the arrest of the normal respiratory movements of the heart. The type of respiration may change; the patient, instead of gaining his inspiratory space by a forward heave of his abdominal wall, due to the descent of the diaphragm, inspires by expanding the walls of his chest and body in a lateral direction. Further, in some of these cases, especially if the inflammatory process and adhesions have been confined to the structures of the posterior mediastinum between the base of the heart and the spinal column a peculiar type of heart action—pulsus paradoxus—may appear in which the pulse beat is stronger or only perceptible during expiration. These conditions find their explanation in the disturbed respiratory movements of the heart.[10] John Hunter[11] laid it down as a morphological law that the heart is attached to the organs of respiration and follows the movements of these organs When the lungs supplant the gills the heart migrates from the neck to the thorax In mammals the heart is firmly fixed to the roots of the lungs by fibrous prolongations of the pericardium carried into them on the pulmonary veins and mesentery which fixes the base of the heart to the dorsal wall of the body cavity that the developed and from which they sprout out as buds. dorsal mesentery forms that part of the binds the pulmonary roots and the base of the heart A true conception of the respiratory movements of the heart has been retarded by the traditional statement that the roots of the lungs are fixed parts. It is impossible that could be a movement of the base of the heart corresponding movement of the roots of the lungs, so closely are they bound. It is admitted on all hands since the introduction of the x rays that there is a very movement of the base of the heart during inspiration downward and forward direction. In that merely follows the roots of the lungs. The lung expand either in a backward, inward, or upward because in these directions the chest wall cannot be enlarged. It will be found that the apex of the lung is fixed point from which the inspiratory movement of lung takes place and from it the expansion of the lung proceeds in a forward, downward, and outward direction. In this general movement of the lung the root The extent of the movement of the root is indicated in life by the shadow of the base of the heart. The lungs in all their movements carry their pump with them. In no is the inspiratory movement of the pulmonary roots so great as in man, because in him the heart and the roots of the lungs are so firmly bound to the diaphragm (see Fig. 5).

FIG. 5.

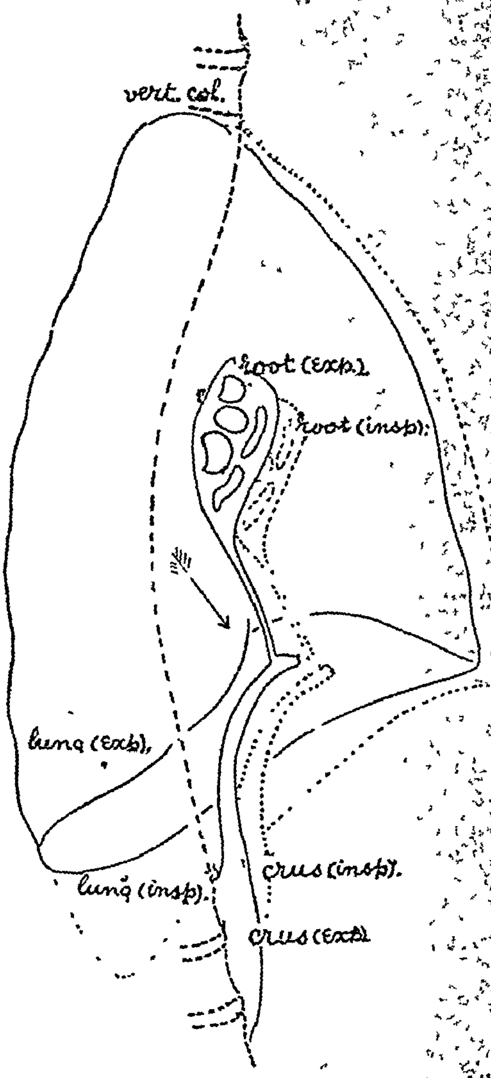

Diagram to show the directions in which expansion of the lung takes place during inspiration and the corresponding movement of the root. (From THE LANCET, March 7th, 1903, p. 634.

Mere adhesion of the heart to the pericardium does not interfere with the cardiac respiratory movements but when adhesions fix the pericardium to the lungs at each side and to the chest wall in front and behind these movements become impossible and cease to take place. The patient then develops a type of respiration which can be performed without moving the roots of the lungs. That is accomplished by expanding his thoracic wall in a lateral direction. In that movement the central part of the diaphragm and its crura take no part. If, however, only the base of the heart is attached to the posterior thoracic wall by the adhesions which follow posterior mediastinitis, the lungs being left unaffected and free, then, when a breath is taken, a strain is thrown on the structures in the roots because the heart cannot follow the movement of the lung. It seems to me that such a strain would be sufficient to retard or to stop the flow of blood in the pulmonary veins during inspiration but as yet no opportunity has occurred to me of verifying this theory.

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[9] J. H. Sequeira Remote Prognosis of Pericarditis, Transactions of the Royal Medical and Chirurgical Society, vol. lxxxii, 1899.

[10] A. Keith · The Anatomy and Nature of Glénard's Disease, THE LANCET, March 7th, 1903 p. 631.

[11] John Hunter, Palmer's edition, vol. iii.

ABSTRACT OF

The Hunterian Lectures

ON

THE AFTER-EFFECTS OF HEAD INJURIES.

Delivered at the Royal College of Surgeons of England on Feb. 15th, 17th, and 19th, 1904,

By T. CRISP ENGLISH, F.R.C.S. Eng.,
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LECTURE II.[1]

Delivered on Feb. 17th.

Mr. President and Gentlemen,—At the conclusion of my last lecture I was dealing with the mental disturbances which follow injuries to the head. I shall next speak of the impairment of certain special intellectual faculties.

Motor aphasia is a well-known consequence of injuries to Broca's speech centre. A typical example was seen in a man, aged 52 years, nine months after a blow with a pitchfork exactly over Broca's area. The aphasia had improved somewhat since the accident and was associated with severe localised headache and giddiness. Operation was recommended but refused. Aphasia was present in three other patients, being associated with hemiplegia in two; all these cases are included in the third series. I have met with no example of the interesting condition known as "*recurring utterances*" continuing for a long period after the head injury, although I have several times seen it during the gradual return to consciousness after cerebral contusions and lacerations. The expression "recurring utterances" is applied to verbal repetitions made by the patient at every attempt to speak. One word or one phrase may be constantly repeated perhaps for months, years, or even a lifetime after an injury which has involved the centres of speech. Sometimes it is the last word spoken before the accident, sometimes it is part of a word, sometimes a meaningless expression. In one reported case the last words used by the patient before loss of consciousness had been "Mrs. Walker" and later the "recurring utterances" occurred in the constant repetition of the word "Mrs."

Traumatic amnesia of some kind is very common, varies greatly in degree, and may be temporary or permanent. It is important to distinguish between loss of memory of the details of the accident, loss of memory of events preceding the accident, and the later impairment of memory. The loss of memory of the details of the accident and the events immediately following it is well known. This was found in many of the patients and was as a rule permanent. Sometimes the loss may be gradually repaired, as in a case recorded by Kompken, in which a man after a head injury had entirely forgotten the events of the three days following it and each day was successively remembered until at last the accident itself was recalled. In a certain number of cases after recovery from the early symptoms the patient finds to his surprise that he has forgotten entirely not only the accident and the succeeding circumstances but a certain length of time, varying from a few hours to a few days or even longer, before the accident occurred. A few cases are recorded in which the whole of the patient's previous life became a complete blank to him. Abel[2] reported a case of puncture of the frontal part of the brain in which the patient's life for 20 years before the accident was completely obliterated from his memory. He failed to recognise his wife and old friends and asserted that he had never worked on the railway but was a farm labourer. He had, however, been a railway labourer for 20 years and before that time had worked on a farm. A year later there was some partial return of memory.

Distinct from these cases we have the later amnesia, varying from slight difficulty in remembering names and numbers to extreme impairment of memory. This condition was found in 36 cases in series 1 and in 21 in series 2, but probably occurred in many others. Generally speaking, where symptoms following head injuries were marked there was some impairment of memory. There are two distinct varieties of this condition. In the majority of cases it is an outcome of the general nervous instability: the patient is unable to fix his attention and to concentrate his thoughts and the result is impairment of memory. In some cases there has been a definite lesion of one or more of the centres for special memories, such lesion being usually cortical contusion or laceration.

Agraphia is sometimes a consequence of cerebral injuries which persists for several months or even indefinitely. It [illegible]

[illegible] words of more than two syllables. Sometimes the patient realises his mistakes; in other cases he is quite satisfied with what he has written until his attention is drawn to the wrong words and even then may be unable to grasp the nature of the mistake.

Loss or impairment of the arithmetical faculty is a curious and not uncommon feature; I have met with several instances. The business man may be quite unable to add up the simplest column of figures, the attempt to do so being a complete failure and producing headache. I tried this test with several patients and the frequency with which the simplest arithmetic baffled them was very interesting. This faculty is one most commonly impaired after head injuries and often the last to be recovered completely. For business men, then, I should recommend a much longer period of mental rest than for men engaged in other pursuits, for such a man takes much longer before he is fit to return to his business than the man whose occupation is purely manual.

The *musical faculty* is sometimes lost when all others are retained. I tested this faculty in several cases but found no instance in which it was impaired. There are a few remarkable instances on record in which patients have had periods in which they cannot speak words but can only sing them.

[illegible] *somnambulism* sometimes occurs, especially in [illegible] ain acts quite uncon- [illegible] of what he has done. I met with an example of this condition last year. The patient, a man, aged 26 years, was at a convalescent home five weeks after concussion; he was found walking about unconsciously at night and when taken back to bed had no memory of his action beyond stating that he could not find his way about at night. He was quite well during the day. It was thought that this was due to his having played cricket in the sun, but the sun was not strong then, and I am inclined to think that the excitement of cricket was the more important factor. There had been no somnambulism before the accident.

Lesions of the cranial nerves will be mentioned next. *Loss of smell* was found in four cases at periods of one and a half, six, six and a half, and ten years respectively after the accident; in three cases the base of the skull had been fractured. One patient who had sustained a severe fracture of the anterior fossa stated that the loss of smell was not noticed until one and a half years after the accident. He said, as is often said by such patients, that he had also lost the sense of taste. He described it thus: "I can distinguish decided tastes, such as sugar or salt, but not the finer ones, such as mutton, beef, or game of any sort." Subjective sensations of this special sense are usually the result of hæmorrhage in the anterior fossa or direct damage to the olfactory bulb and its branches, in the common accidents in which the frontal lobes are injured by *contrecoup*.

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[1] Lecture I. was published in The Lancet of Feb. 20th, 1904, p. 485.

[2] Brit. Med. Jour., Feb. 16th, 1895.

There are two conditions connected with the *eyes* which commonly follow head injuries; the one is inequality of the pupils and the other is accommodative asthenopia. *Inequality of the pupils* is frequently seen and may persist for a long period after the accident. In my experience it is only found in cases in which there has been reason to suspect some macroscopic lesion of the brain and the larger pupil appears to be on the injured side of the head. *Accommodative asthenopia* frequently accompanies chronic headache, vertigo, depression, and other manifestations of nervous disturbance. The effort of ciliary accommodation is soon followed by fatigue. The patient usually complains of weakness or mistiness of vision; on attempting to read or to look at any objects closely headache is produced, the letters or objects appear to run one into the other, and sight seems to fail him. The ophthalmoscopic examination fails to detect any change in the fundi and usually no error of refraction is discoverable. If the patient happens to be hypermetropic or astigmatic the symptoms are more marked. In two cases complete blindness in one eye led to the discovery of optic atrophy at intervals of eight and 14 months after the accident; in both there had been the signs of fracture of the anterior fossa of the base. *Nystagmus* was met with in two instances. It was seen in one patient 19 months after a depressed fracture of the left parietal bone and in another three years after a compound depressed fracture of the left frontal region treated by trephining. In the latter case there was paresis of the right arm. In each case it was horizontal and unaccompanied by other ocular changes. Its significance is unknown.

Facial paralysis was found present in one case four years and in three cases about one year after fracture of the base. On the other hand, in nine cases in which this symptom had occurred after the accident it had disappeared at the time of the investigation.

Deafness was noticed in 12 cases in the first series and in three in the second series. It always occurred on the injured side of the head and in two cases was bilateral. It is probable that deafness is more often due to the injury having involved the middle or internal ear rather than the auditory nerve itself. In seven cases out of the 300 "post traumatic" otitis media occurred. Each case was carefully examined and there seemed no doubt that the otitis was directly referable to the injury. Three doubtful cases were excluded. In five of the seven cases there had been evidence of a fracture of the middle fossa. Three of the patients were children. Tinnitus was complained of in some cases and was associated usually with giddiness, rarely with deafness.

The condition of the superficial and deep reflexes is inconstant. The knee-jerks are most commonly exaggerated and this exaggeration usually lasts until complete recovery has occurred. In 40 cases in which symptoms were complained of the knee-jerks were exaggerated in 21, were normal in 10, and were diminished in eight.

The pulse after head injuries sometimes remains permanently slow with a tendency to intermission. In these cases complete recovery is rarely present and there is often a tendency to mental inertia.

There are numerous other conditions which may follow injuries to the head, to some of which I will now refer. It has long been known that these injuries may be followed by *glycosuria*; this may be temporary, appearing within a few hours of the accident and usually lasting for a few days only; or permanent, appearing after an interval of a few weeks or months. The former condition is common, the latter is rare. I met with no instance of traumatic glycosuria in series 1 and 2. In the third series is the case of a young officer who was under the care of Mr. G. R. Turner. He had been brought home from Egypt having sustained a severe fracture of the base followed by prolonged unconsciousness. Glycosuria was discovered six weeks after the accident and persisted; the patient's condition became extremely serious 12 months later. The urine contained about 8 per cent. of sugar and coma developed; for three days he was completely unconscious. Finally, however, he completely recovered, the urine becoming free from sugar 18 months after the accident. Only very occasionally does the glycosuria appearing after the accident persist for a long period; as a general rule, the later sugar appears in the urine the more pronounced and the more likely to persist is the condition. The precise explanation of the traumatic glycosuria is at present impossible. It has long been known that lesions of certain areas in the floor of the fourth ventricle produce glycosuria, but it is equally certain that lesions of many other parts of the nervous system may produce a similar result. This fact has been indisputably proved by experimental observations in animals. The clinical aspect of the question gives us but little help and although it appears that glycosuria most often follows fractures of the base and injuries to the back of the head the post-mortem observations in fatal cases have failed to reveal any constant lesions. We are therefore driven to the conclusion that the symptom possesses no localising value.

Traumatic hemiplegia may be primary, dating from the time of the accident, or secondary, appearing later after a variable interval. In the latter case it is due to cerebral sclerosis or softening involving the motor areas of the cortex. I have recently seen an interesting example of this late hemiplegia. The case was that of a man, aged 60 years, who sustained a compound depressed fracture of the vertex in the year 1861, a brick having fallen from a height on to the top of his head. He was operated upon and erysipelas followed. Later several pieces of necrosed bone came from the wound. His left leg was paralysed at the time of the accident but had recovered almost completely a few weeks after. In 1876 he noticed that the leg was beginning to become weak and to drag in walking. When seen last year there was a large depression over the upper part of the right parietal bone with a firmly adherent scar. The left leg was almost completely paralysed and the muscles were atrophied. There was also moderate paresis of the left arm. There appeared to be some blunting of the intellectual faculties but no other nervous effects. An instructive case of traumatic hemiplegia was admitted into St. George's Hospital under the care of Sir W. H. Bennett last year. The man had been struck on the head by a portion of a shell in South Africa 27 months previously. He was unconscious for nine days and left hemiplegia resulted; no operation was performed. The paralysis persisted and there had been severe headache and giddiness with impairment of memory and hearing. On admission a tender adherent scar was found over the right upper Rolandic area; the left leg was completely paralysed and the left arm partially. On operation the following lesions were found: thickening and adhesion of the pericranium, great thickening of the bone with an old fracture of its inner table, firm adhesion of the dura mater, and a blood cyst between the dura mater and the cerebral cortex. A large area of the bone was removed and the cyst was partially excised. Considerable improvement has since taken place in the movements of the arm but the condition of the leg is unaltered.

The pathology of certain of the conditions which I have described is obvious. The structural lesions connected with hemiplegia, motor aphasia, and disturbances of the cranial nerves, for instance, are well known and do not call for comment. I have already discussed the causation of the localised forms of cephalalgia. On the other hand, the pathology of many of the other symptoms which I have discussed is obscure and demands further research. I refer especially to generalised cephalalgia, vertigo, vomiting, and the various minor mental disturbances which owe their importance to their frequency. Some of these effects may be due to structural lesions, others are supposed to be the result of functional changes. In using the word functional I mean to say that we fail to find any anatomical or structural change to account for the symptoms and it is interesting to note that with the advance of knowledge many diseases formerly described as functional are now known to be structural. I admit that certain of the symptoms which follow head injuries may be due to functional disturbances but I believe that in the larger number of cases definite organic changes exist which are either direct or indirect causes of these symptoms.

It is not generally recognised that in the great majority of head injuries accompanied by loss of consciousness definite organic lesions occur. Pure concussion, I believe, is extremely rare. It is argued that we have no evidence of the presence of organic lesions in cases of mild concussion. But there is a certain group of cases which gives us very definite evidence. I refer to those accidents in which the patient dies from thoracic or abdominal injury and in which there has also been some slight cerebral injury producing a short loss of consciousness. I collected ten cases of this nature, taking those in which there was a clear history of loss of consciousness for less than five minutes. In eight of these the necropsies revealed some definite intracranial lesion; in four there was cortical contusion, in one there was cortical laceration, and in all of the eight cases there was some degree of intrameningeal hæmorrhage. Further, the post-mortem examinations in cases where death follows at some more or less remote period after the receipt of the head injuries show that all but the slightest of the contusions and lacerations of the brain are followed by permanent changes. The most conspicuous of these changes is adhesion of the damaged part to the bone, an adhesion which is frequently so intimate that the brain tears away on attempting to separate it from the bone. In most cases we also find thickening of the meninges and discolouration of the cortex from old extravasated blood. The fact that mental disturbances following injuries to the head may disappear in time is no proof that they are not due to structural changes. Motor aphasia may be cured by the corresponding centre on the opposite side of the brain taking up the function of speech, and it is highly probable that when the centres of any of the intellectual faculties have been injured the function may be restored by being represented in other parts to the brain.

The diagnosis will sometimes present difficulties and one cannot always be certain that the symptoms attributed to the head injury are really due to that injury. After accidents of this nature the patient is on the watch for after effects and may now notice some condition previously overlooked. An excellent example of this is found in ocular defects and in several cases I have found that defective vision complained of has been due to refractive errors which must have existed for some long time previously. Further, previously existing pathological conditions may be intensified by an injury to the head. In order that the features of the case may be thoroughly grasped it is necessary to examine the patient on three or four occasions at least and when possible to see the relatives, friends, and employers. In this way we shall be able to estimate correctly the significance and importance of the various symptoms and signs present.

The elements of malingering and exaggeration must always be remembered. It may be extremely difficult to determine whether the patient is honestly suffering from the symptoms of which he complains. Yet the malingerer will often reveal himself by the exaggeration of certain symptoms or by telling us of troubles which we know do not follow head injuries. I have noticed that such persons almost invariably complain of pain and more especially of tenderness in any scar that may be present. The facial aspect will tell much to the experienced eye. Cephalalgia and insomnia, for instance, are conditions which will inevitably impress themselves on the patient's expression. The red-faced, cheerful-looking individual who tells one that he has a continued headache and has slept but little since his accident may confidently be described as a perverter of the truth.

The utmost care must be taken to exclude hysteria, simple neurasthenia, and constitutional conditions such as syphilis and gout. Local causes for the head symptoms must [illegible] the mouth, nose, ears, and eyes [illegible] kind or other are common in [illegible] a tendency on the part of the parents to attribute to these injuries any mental or other condition which may arise months or even years after. I have recently seen two children who were brought to me as suffering from the after-effects of head injuries. A careful examination, however, convinced me that all their symptoms resulted from nasal obstruction and this opinion was confirmed by the improvement which followed the removal of post-nasal growths. It has been suggested that when once a patient has apparently made a complete recovery from a head injury he will remain free from any further effects and that if head symptoms develop at some later date they are due to some other cause. My experience is that this is correct in the great majority of cases but that exceptions may undoubtedly occur. I have met with two instances in which chronic cephalalgia has developed as the result of osteo-sclerosis at the site of the injury after a prolonged interval in which the patients had been free from symptoms of any kind. Another striking example is afforded by a case to which I shall refer in my next lecture, in which a cerebral abscess following a depressed fracture remained completely latent for a period of ten years. As a general rule, however, I believe that when a patient has been completely free from symptoms for a period of six months any symptoms arising later will be due to some other cause. A head injury, of course, may increase a predisposition already existing and in particular the resulting susceptibility to the effects of alcohol may render the patient more liable to mental disturbances.

The prognosis in these cases must always be [illegible] and should never be given until [illegible] fully considered and until the [illegible] several occasions. At least a year is required for complete recovery in most cases of severe head injury and a prognosis given before that period is very likely to prove erroneous. The various etiological factors to which I have drawn attention will help us in determining the prospects of cure. It is clear that our efforts are more likely to meet with success in the cases in which the previous treatment has been imperfect than in cases which have failed to respond to thorough treatment. The means available for treatment must be reckoned with. The process of cure may involve much time and expense which many patients are unable to afford. When a patient comes for treatment for the after-effects of a head injury it is advisable at once to inquire whether he is bringing an action for damages or not, for the prognosis varies greatly with this factor. When the patient has been placed under treatment we are soon enabled to judge the prospects of ultimate recovery. In many cases the state of the temper is a good guide to the rate of progress and it is a particularly hopeful sign if the patient is conscious of his irritability and is anxious to overcome it. The return of natural sleep is another encouraging sign.

TREATMENT.

I will now proceed to consider the *general treatment* of these cases. In few other conditions are such careful consideration and such constant supervision required, and upon the treatment adopted depend the ultimate recovery and the future happiness of the patient. I wish to point out most emphatically that the majority of these cases are curable. But their cure requires the greatest care; it requires discrimination and it requires time. It cannot be brought about by a single examination and a hastily written [illegible] a careful study [illegible]ondition of each [illegible]he management [illegible] to the varying [illegible]e dealing. Too often these patients are put on mercury or sent on a sea voyage, with a vague hope that time will see an end to their symptoms, and the usual result is that symptoms persist; valuable time is thus wasted, for the longer the symptoms have persisted the more difficult is their cure. In the well to-do and in those who can afford to undergo the correct treatment the prospects of complete recovery are good; in the out-patient department of our general hospitals when the patients cannot or will not submit to the necessary treatment the results are very unsatisfactory. In a majority of the cases the question of operation does not arise, but whether operation is performed or not the general principles of treatment will be the same.

There is no part of the treatment which is more essential to success than the securing of mental and physical rest. It is impossible to emphasise too strongly the absolute necessity of prolonged mental rest. It has already been pointed out that where the period of rest after head injuries is short incomplete recovery almost invariably results, and it is as necessary in the cases with which we are now dealing as during the period immediately following the head injury. It is important at the outset to impress upon the patient the need of time and patience for successful treatment. He will often not realise the gravity of his troubles and the possibility of permanent nervous disturbance. In the medical profession, too, it is not sufficiently recognised that the period of treatment must be measured by months rather than by weeks. The following are the general measures which I should recommend for the more serious cases in which chronic headache, depression, and irritability are marked features. To insure complete rest for the nervous system it is necessary that the patient should be removed from all sources of worry and excitement. The word "vegetation" describes most expressively the mental condition under which we desire to place him. Sometimes this can be managed at his home; but at home it may be impossible to free his mind of business troubles and much harm may be done by injudicious relatives or friends. We must be guided by circumstances. If the symptoms are severe and if the patient is well-to-do he should be treated in a private nursing home, and it will be thus possible thoroughly to control the management of the case. In other cases our object may be best effected by sending the patient to some quiet country village or farmhouse; let him vegetate here for some weeks or months, doing nothing which requires the slightest mental exertion, living in the fresh air as much as possible. He must not, however, be isolated, for isolation will do more harm than good. Let him be put in charge of a medical man or of friends who will take care to see that the details of the treatment are conscientiously carried out. For the more serious cases life at the seaside can rarely be recommended, for it is difficult to obtain the requisite amount of quietude. In no circumstances should a patient be sent to travel or to go for a sea voyage, if for no other reason than that he will be no longer under the supervision of the surgeon. For cases in which the after-effects are slight a stay at the seaside will be indicated. As improvement advances an increasing amount of exercise may be allowed; rowing is one of the best forms of exercise, as it involves but little exertion. Sea-bathing must certainly be prohibited. Certain other forms of exercise often indulged in by these patients must also be mentioned to be condemned: these are bicycling, motoring, and playing cricket or tennis in the sun. The main principle is that the patient must be strictly kept from any mental or much physical exertion; he must never be allowed to get tired. With mental quietude should be combined high feeding and general massage. Feeding must be pushed to apparent excess; food must be given in large quantity and frequently, and this will do much to favour the recovery of a healthy nervous tone. The occurrence of attacks of vomiting is no contra-indication to high feeding, for, as I have said, the vomiting is cerebral and not gastric in origin. Alcohol in any form must be strictly prohibited. Massage will assist in restoring the reduced nutrition and the increasing weight of the patient will be proof of its value.

The *drugs* which have been used in these cases are innumerable. I have never seen any good follow the use of bromides; the patient is already depressed and in low spirits and anybody who has ever taken bromides will appreciate their depressing effect, which is the last thing that these patients desire. In fact, the use of bromides will almost invariably aggravate the very symptoms which we wish to relieve. The epileptic undoubtedly improves under their use In many mental and nervous diseases bromides are invaluable. For the sequelæ of head injuries their use is illogical and attended with harm. Iodides, again, rarely do good and are depressing but not so depressing as bromides. Strychnine should be avoided. Mercury in my experience is the only drug which gives these patients any lasting relief and even it will sometimes fail. Its mode of action is quite unknown; its use is entirely empirical. I have seen it do good again and again and therefore recommend it. I have usually prescribed it in the form of grey powder in combination with Dover's powder; one grain of each may be given three times daily and the dose then gradually increased. There is one point which must always be attended to whilst this drug is being used: the patient's weight must be taken regularly each week. In the majority of the cases we are discussing it will be found that the general nutrition is much impaired and it will be found that weight will steadily increase as improvement in the symptoms takes place and then remain stationary when the normal weight is reached. If at any time during the treatment weight is lost the dose must be lessened or the drug discontinued. The patient's weight is thus an accurate indication of the amount of improvement that is taking place. Some authorities state that mercury is best tolerated for a long period in the form of the tannate. I have used this preparation in two or three cases but have not seen enough of it to give a definite opinion.

For the temporary relief of headache, phenacetin, antipyrin, antikamnia, or aspirin should be used. I have found citrophene in doses of five grains often useful. If one drug fails another should be tried, for there are very few people to whom one of them at least will not give some relief. Unfortunately, however, the relief is usually but short. Localised headache may sometimes be greatly relieved and sometimes cured by that old-fashioned and much neglected remedy, the seton. It should be applied close to the site of pain and be used for three or four weeks continuously.

The insomnia which is so frequently present can often be treated satisfactorily without resource to drugs, but their use is justified in severe cases, for regular sleep is of the first importance. One of the most satisfactory drugs is veronal and this may be ordered in ten-grain doses each night. Small continuous doses are given, so that the physiological effect is gradually produced. Very little result may be noticed for the first few nights, but in two or three weeks the patient will probably be sleeping regularly and well. The dose should then be reduced to five grains each night and in a fortnight or so left off. There is one other measure to which I must refer which is of the greatest value in soothing the irritability and in allaying the depression and that is the oft-abused pipe. Smoking does no harm in these cases; it usually does great good by quieting the nervous system. Let the patients, then, smoke as much as they wish.

I will now proceed to discuss the *operative treatment* of these common conditions which follow injuries of the head. I shall not refer here to traumatic epilepsy and traumatic insanity as these will be dealt with in my next lecture. We shall have to consider the indications for operation and the nature of the operation to be performed. I must first draw attention most emphatically to the fact that the operation of trephining *per se* involves practically no risks. It is, in fact, one of the safest and simplest operations in surgery. It is now being recognised in the profession that the risks of an exploratory laparotomy are practically negligible, but it is not yet recognised that the same is true of simple trephining. Unfortunately, the wide and free access cannot be obtained by trephining as by abdominal section, but localisation in cerebral surgery is as accurate as in abdominal surgery, and if larger openings be made into the skull we can usually reach the diseased part. I would urge, therefore, that trephining should be performed far more frequently and at a much earlier date than is usually the custom for the following reasons. The operation is practically devoid of risk when, as is often the case, the dura mater is not incised and in any case it is an extremely safe one. The second and more cogent reason is that the results are most excellent and constant in properly selected cases.

I shall speak mainly of the treatment of cephalalgia, for in the cases with which I am dealing it is this symptom which most often calls for operation and the removal of its causes will usually result in the cure of associated mental disturbances. In discussing the operative relief of cephalalgia it is necessary to bear in mind the different varieties of this condition. The generalised forms of headache are usually amenable to non-operative measures and those which prove rebellious can only be treated surgically if some distinct localising lesion be present—that is to say, generalised headache without any local lesion is not likely to be cured by operation. Supposing now that there is diffuse headache and that a scalp wound or evidence of an old fracture is present what is to be done? In such cases I believe that the best practice is to carry out carefully the non-operative treatment to which I have already referred for a period of six months and if at the end of this time no improvement has taken place then the site of the injury should be exposed and dealt with according to circumstances. In the localised forms of cephalalgia the treatment is more clear and operation is indicated in all cases in which pain is intense and has proved uncontrollable by milder measures. In the neuralgic variety the whole scar should be freely excised down to the bone, pericranium being included if it appears in any way altered. The most satisfactory cases are those in which osteo-sclerosis is the cause of the pain and I have seen several cases promptly and completely relieved by trephining. A large flap is turned down and the diseased bone is very freely removed: if the dura mater is thickened it should be cut away; the scalp flap is then replaced. When the localised headache is not due to lesions in the scalp or to thickened bone the operation is of an exploratory character and its nature will be determined by circumstances. The lesions met with and the treatment to be adopted are the same as in cases of traumatic epilepsy. In many instances we shall find unsuspected depressions of the bone; sometimes these will be found to have involved the inner table only, having presented no external evidence of their existence. Splinters of bone may be discovered pressing inwards or actually penetrating the dura mater. We must never omit to explore the inner surface of the bone by passing a probe between it and the dura mater for some distance around the trephine opening. Thickening and adhesions of the cerebral membranes are best treated by excision of the part of the membranes involved; any measure short of this will fail. Intrameningeal cysts containing blood or serum may be found but can seldom be diagnosed before the dura mater is opened. The smaller cysts can often be removed entirely; with the larger ones this is impossible. In the latter case the cyst should be opened, its walls cut away as far as possible, and the remaining part treated by gentle scraping and the application of a solution of 1 part in 10 of carbolic acid. Unless this is done a persistent sinus may follow. If in the course of the operation we have reached the cortex of the brain without finding any definite lesion to account for the symptoms the cerebral cortex must be carefully scrutinised and palpated. Cortical cysts are occasionally met with; if superficial they are readily recognised, if deep we find some localised tumidity, impairment or absence of the cerebral pulsation, and a feeling of increased resistance on palpation. In doubtful cases a long narrow scalpel should be introduced directly into the region of the suspected cyst. The other lesion which may be found comprises scarring and sclerosis of the cortex. In such cases it has been proposed that the diseased area should be excised but I believe that more harm than good will usually be done. If as the result of the operation no lesion of any kind is found we have at least the satisfaction of knowing that cure of the symptoms may follow, although we can apparently point to no step in the operation which is responsible for this result.

I must briefly refer to one or two of the most general steps of the operation. First, the simple trephine is undoubtedly the best means which we possess at present for opening the skull. Numerous other mechanical and electrical devices have been invented to take the place of the trephine but these all fail in one essential point: the sense of touch is lost by their use. In addition they are complicated, difficult to keep aseptic, and very liable to get out of order.

Secondly, large trephines only should be used and all trephines with a diameter of less than one inch should be abolished for these operations. It is essential for success to start with a large opening. If a half-inch crown of bone be removed it is impossible as a rule to deal adequately with the diseased parts; whilst to start with a small opening and to enlarge it afterwards is a slow and unsurgical method. For general purposes a trephine with a diameter of one and a quarter inches is most serviceable. There is one other instrument which is indispensable in these operations and that is Hoffmann's bone-cutting forceps. They are the most useful means of rapidly enlarging the trephine opening in any required direction.

The third point which I wish to bring forward here, is that if it is decided to deal with any extensive lesion of the brain itself the operation must be performed in two stages. The only argument which I need adduce in favour of this proposition is that the mortality in these operations if completed in one stage is very high, patients being unable to withstand the serious shock resulting, whilst if the operation be performed in two stages comparatively little shock follows. At the primary operation, then, a large opening in the skull, usually about three inches in diameter, is made and the flap which has been raised is sutured into place again. A fortnight later the flap is turned down and the diseased area is dealt with.

Lastly, there is the question of adhesions between the brain and the overlying tissues after operation. When thickened and adherent meninges have been excised it is clear that extensive adhesions may form and a strongly contracting cicatrix may result. The objects of the operation will thus be defeated and symptoms will recur. It is useless to talk about the prevention of adhesions: they will form in spite of anything that may be done. Our aim must be to reduce them to a minimum. In order to effect this various substances, such as gutta-percha tissue, egg-membrane, and gold foil, have been placed between the cortex and the structures lying over it. Of these I believe that gold foil is the best at the present time. In the future we may discover some more natural tissue for the purpose. The gold foil is cut very slightly larger than the opening in the dura mater and is then carefully inserted between the brain and the cut edges of the dura mater, the greatest care being taken to leave it lying quite smoothly. The bone, of course, is not replaced.

To sum up briefly, the following are the conclusions to which I have come in regard to treatment. 1. In rather more than half of the cases cure may be brought about by medical measures; prolonged mental rest and the proper administration of mercury are the essential points. 2. In a few of the cases the symptoms are mainly due to chronic osteo-sclerosis and such cases may be almost certainly cured by trephining. 3. In the remainder of the cases the symptoms are more persistent and do not yield to general measures or to the removal of thickened bone only. I believe that in such cases these symptoms are the reflex results of lesions or irritations of the dura mater; and if the injury has involved the vault of the skull cure can be effected promptly by excision of the thickened or adherent dura mater and removal of any other source of irritation which may be present.

A CASE OF
RUPTURE OF A TUBAL PREGNANCY ON THE NINETEENTH DAY AFTER CONCEPTION AND TEN DAYS AFTER THE UTERUS HAD BEEN CURETTED.[1]

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THE patient, aged 27 years, was married in 1900. She consulted me in October, 1901, for menorrhagia. The periods, which commenced at the age of 12 years, were quite regular, lasting four days, until the early part of 1901, when they began to increase in amount, with pain, the passage of clots, and a muco-purulent intermenstrual discharge. The patient was a healthy looking but pale woman of very active temperament. On examination the uterus felt a little enlarged, was somewhat tender on palpation, in normal position, and freely mobile. Nothing abnormal could be felt in either the lateral or posterior fornices. Per speculum the os uteri was eroded and some purulent discharge was seen exuding from it. I diagnosed fungous endometritis and recommended that the uterus should be curetted. The patient went into a nursing home and I dilated the uterus (under anæsthesia) up to No 14 Hegar and scraped away a very hypertrophied endometrium; the uterus after having been swabbed out with liquor iodi was packed with iodoform gauze for 48 hours. At the end of that time the gauze was removed and a vaginal douche of a 1 in 4000 solution of perchloride of mercury was ordered to be given night and morning whilst the patient remained in the home (this is my usual method of treatment after curetting the uterus). The patient made a perfectly uneventful recovery and returned home well after three weeks. I saw nothing more of her until the beginning of last November (1903) when she again consulted me for a recurrence of the menorrhagia. She then informed me that she had had a miscarriage at the third month at Christmas, 1902, and that since that time the periods had been excessive and with clots. Since the miscarriage *she had never missed a period*. On examination I found a similar condition of things to that present when she consulted me in 1901, except, perhaps, that the uterus was somewhat more bulky than on the former occasion, but nothing whatever abnormal was detected in either fornix. As the next period was due in a few days it was decided that the curettage (which I again advised) should be deferred until a couple of days after the period had ceased. This occurred on Nov. 14th after a week's loss; accordingly, on Nov. 16th I went to the patient's home and with the assistance of Mr. Arthur John Hogg of Ealing (under whose care the patient had placed herself and

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[1] A paper read before the British Gynæcological Society on Feb. 11th, 1904.

"hyperæmic" and "fibrous" varieties (corresponding to the "transient" and "protracted" varieties of this paper). He does not, however, recognise a "malignant" class, though this has recently been done by Poynton and Paine in a paper on malignant rheumatic endocarditis.[5]

The following cases are quoted as representative of the transient, protracted, and malignant varieties of rheumatic infection of the joints, the heart, and the brain. Arthritis is perhaps the best to begin with, because it is the most familiar of all rheumatic lesions. Indeed, till recent years the word "rheumatism" stood in the first place for all forms of articular pain and after that unfortunately became a "rubbish-heap" sort of word, to which all sorts of pains of unknown pathology were consigned. This error is passing; still to the majority the term "rheumatism" calls up the picture of a particular form of multiple arthritis and not of a definite systemic infection.

The transient degree of arthritis is so familiar that one scarcely need describe a particular case. A girl 18 years of age falls ill rather suddenly with pains all over her, perhaps preceded by a sore-throat; she becomes feverish and has to stay in bed. Her joints are found to be slightly swollen, pink and hot, and very painful whenever they are moved. Those first affected get well while others are freshly involved. There is a notable similarity between such a condition and the polyarthritis produced by inoculations of animals with micrococci in the experiments of Wassermann and Malkoff,[6] Poynton and Paine,[7] Ainley Walker and Beaton,[8] and Shaw.[9] There are free acid sweats and the tongue is thickly coated with a white fur. She is given salicylate of sodium; the temperature falls from 101° F. to normal in two or three days and in five or six days she is free from pain. This is called recovery; but one must bear in mind the great commonness of relapse and of recurrence in after years. These seem to indicate a less complete triumph on the part of the body than would at first sight appear and at the same time form a link with the group of cases next exemplified—the protracted forms of rheumatic arthritis.

Many patients who have had repeated attacks of acute rheumatic arthritis show permanent thickening of the joints, ulnar deviation of the fingers, &c. There are between the acuter pains of the rheumatic outbursts a slight, but none the less real, constant disability and stiffness, with occasional aches and pains, suggesting that perhaps the recurrent acute attacks are merely the bursting into flame of an infective process all the time quietly smouldering. This kind of thing was well exemplified by the following case which was recently treated in St. Mary's Hospital under the care of Dr. Cheadle.

CASE 1.—The patient, a man, aged 21 years, had rheumatic fever for the first time in November, 1901, while he was serving in South Africa; there was no preceding gonorrhœa, dysentery, &c. He was invalided home with "rheumatic fever and V.D.H." He went home and rested a month. All this time he had rheumatism, mostly in his toes and fingers. Then he went to work but the pain in his feet compelled him to give this up. He rested for a week and then tried to work once more. Since then he has had 15 situations, the longest being held for six weeks. Each had to be given up on account of pain and swelling in the feet. His hands were also affected in the cold weather. Three weeks before admission he had a severe attack, beginning in the feet and knees and spreading to his fingers. This was, however, by no means the worst attack of all. There were fever, malaise, and sweating as in all previous exacerbations. On admission various joints were swollen and were pink and painful. Ten days later these acute signs had gone but the metacarpo-phalangeal joints of the forefingers and middle fingers of both hands showed thickening with crepitus and stiffness, especially in the forefingers. Similar but rather less marked changes were observed in the proximal interphalangeal joints of the same fingers, and still more definitely were they present in the corresponding joints of the corresponding toes, which were very stiff and much deformed. There were interosseous wasting in the hands and in the toes fine rhythmic tremor on attempts at flexion. He had early mitral stenosis.

Here, then, is a case illustrating the running fight between joints and micro-organisms and at the same time throwing light on the pathology of the type of crippling polyarthritis met with chiefly in young and middle aged women. Of these there are, however, cases in which the destruction of articular surface is greater than could be achieved by infection of the degree of intensity represented by the case just described. It has frequently been suggested[10] that some at any rate of these cases of extreme arthritis deformans are really due to a destructive rheumatic invasion and the following case goes to support that suggestion.

CASE 2.—A woman, aged 42 years, was admitted to St. Mary's Hospital under the care of Dr. S. P. Phillips after being for three weeks in bed suffering from painful swelling of the feet and the legs. At the age of 21 years she had had rheumatic fever but between then and now she had suffered in no degree from joint pains or from anything else except confinements. There were free acid sweats; the only cardiac sign was a transient systolic murmur at the apex, and there was slight pyrexia. The joints especially affected proved to be the metacarpo-phalangeal joints of the forefingers and the middle fingers on both hands. These were hot, pink, and swollen, with thickening, apparently bony, and consequent ulnar deviation of the fingers. The corresponding thumb-joint was affected and there was considerable interosseous wasting. The right wrist-joint contained fluid and showed very distinct bony thickening and crepitus. The metatarso-phalangeal joints of the great toes were also thick and showed lipping. In the shoulder-joints there appeared to be much bony overgrowth with loss of mobility. The lower border of each patella and the outline of each ligamentum patellæ were obscured by what seemed to be thickened synovial tissue. Salicylate was effective in removing the signs of acute disease though other means of treatment had been unsuccessful.

In this case, then, a patient's joints, infected apparently by rheumatism, underwent deforming bony changes in less than a month. In connexion with this it is useful to remember that small diplococci were found in the osteo-arthritic joint of a man who died from carbolic acid poisoning and that intravenous injection of such cocci set up rheumatoid changes in rabbits.[11]

So far, therefore, we have seen that rheumatic infection can produce a transient arthritis, a protracted arthritis, and a rapidly deforming arthritis which may well be called malignant. Similar degrees may be recognised in the results of rheumatic infection of the heart. For the present purposes it will be well to separate endocarditis, myocarditis, and pericarditis while fully recognising their actual interdependence.

Taking the endocardium first, one has to acknowledge the impossibility of speaking decidedly on the question of the occurrence of transient forms of rheumatic infection. Still, it may be worth while to remark that the disappearance of murmurs apparently due to acute valvular endocarditis has led many (including Cheadle,[12] Byrom Bramwell,[13] and Sansom[14]) to suppose that transient rheumatic endocarditis does occur. The following case may be quoted as an example.

CASE 3.—A boy, aged eight years, was admitted to St. Mary's Hospital under the care of Dr. Phillips on June 3rd suffering from rheumatic arthritis which quickly subsided. On admission he was found to have mitral disease and during the three weeks subsequent to admission he developed well-marked signs of aortic incompetence. The temperature ran between 99° and 102° F. till June 22nd, when it fell to, and remained at, normal. On the 27th it was found that the previously distinct aortic diastolic murmur could no longer be heard and I believe it did not return again.

It is, of course, easy to find cases of protracted rheumatic endocarditis where the severity of the process and the gravity of the permanent results are proportional to the irrepressibility of the infection. A case of unusual interest will be used as illustration of this group.

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[5] Transactions of the Royal Medical and Chirurgical Society, vol. lxxxv.

[6] Berliner Klinische Wochenschrift, 1889.

[7] THE LANCET, Sept. 22nd (p. 861) and 29th (p. 932), 1900, and May 4th, 1901 (p. 1260), &c.

[8] Brit. Med. Jour., Jan. 31st, 1903, p 237.

[9] Journal of Pathology and Bacteriology, December, 1903.

[10] As long ago as 1859 Sir Samuel Wilks, in his lectures on Pathological Anatomy, said: "The cardiac inflammation of a rheumatism may become ulcerative, and at the same time the joint disease may put on a destructive severity."

[11] Poynton and Paine: Transactions of the Pathological Society of London, vol. liii., Part ii., 1902.

[12] Harveian Lectures, 1888.

[13] Diseases of the Heart, 1884 edition, p. 371.

[14] Diseases of the Heart and Aorta, 1892 edition, pp. 40, 41.

CASE 4.—The patient was a female, aged 26 years, who was admitted into St. Mary's Hospital under the care of Dr. D. B. Lees, with rheumatic pains of a few days' duration. She had had rheumatic fever at 20 and at 24 years of age. The arthritis improved under treatment; once or twice, however, during her stay in hospital it relapsed feebly. She also had pleurisy on the left side, with pain and rub, from time to time, but by no means constant (this probably indicated a quiet pleuro-pericarditis, but no definite signs of pericarditis were found). There was fever, at first remittent and later intermittent, extending over two months. Meanwhile an aortic diastolic murmur appeared (being first noticed while there was fever, but no arthritis or pleurisy) and gradually became more and more definite; the pulse at the distinctive collapsing charac great anæmia, and occasion. time the endocarditis was thought malignant in degree but her fever subsided and she was able to go back to her friends. This case, then, represents a prolonged fight between valve and micro-organism, in which the valve was, for the time at least, victorious but suffered irreparable damage.

The next case is one of malignant rheumatic endocarditis.

CASE 5.—A man, aged 22 years, was admitted to St. Mary's Hospital suffering from feverishness and sweating. He gave a history of acute rheumatism at the ages of six and ten years. At 16 years of age he became short-winded and two months before admission he gave up work, went short of food, and got wet. His joints became painful and kept him in bed for three weeks, after which he was admitted to hospital under the care of Sir William H. Broadbent. There were free sweating and irregularly hectic fever; he was clearly very ill and had signs of mitral disease. Two days before death he lost power in his left limbs; this was followed by a gradual loss of consciousness. Post mortem the endocardium of the left auricle was found to be ulcerated in one patch. There were thick masses of fibrin on the mitral valves and many of the chordæ tendineæ were torn. There were old infarcts in both kidneys and recent ones in the right lung and in the brain. The latter had given rise to aneurysm of the right middle cerebral artery and subsequent hæmorrhage. Similar changes have been found in rabbits dying after experimental inoculation with the micrococcus of rheumatism.[15]

Myocarditis will only receive brief consideration here as it is so intangible clinically. Of the transient type the following will serve as an example.

CASE 6.—A woman, aged 29 years, who was admitted to St. Mary's Hospital under the care of Dr. Lees for her first attack of acute rheumatism, had normal cardiac signs till several days after admission, when the sounds became poor and the impulse diffuse and increased in area to the left. The cardiac dulness was also increased to the left and the pulse became slow and irregular. A systolic murmur of rest, &c., all I can offer no wever, exist in association with mitral and with pericardial fibrosis due to rheumatism.[16] No doubt these myocardial changes must make a great difference to the patient's power of compensation in valvular disease, but at present our methods are too coarse to enable us to appreciate this factor clinically.

Can myocarditis of rheumatic origin cause death of itself? Herringham has reported such a case.[17] A patient, who acute rheumatism with old ddenly in St. Bartholomew's were found minute valvular vegetations and pericarditis of the slightest degree. The cells of the cardiac muscle showed cloudy swelling and fatty change, with considerable overgrowth of the connective tissue. This is as much as one can say of myocarditis from the present standpoint. In the pericardium, however, it is easier to trace the various grades clinically.

The following case is an example of transient rheumatic pericarditis, which is common enough, though, in children especially, the mischief done is often not so transient as it seems at first to be.

CASE 7.—A man, aged 35 years, was admitted to St. Mary's Hospital under the care of Dr. Cheadle. He was taken ill on June 29th, 1900, with joint pains; on July 4th pain in the chest with dyspnœa supervened and on the 7th he was admitted. He was feverish and sweating; his joints were still swollen and painful. His cardiac dulness was increased both ways and there was a loud to-and-fro rub all over the præcordium. There were signs of consolidation at the left base. Within a week both temperature and cardiac signs were normal and he was discharged on July 23rd.

Examples of progressive pericardial fibrosis are, unfortunately, common among rheumatic children. The following is an illustrative case.

CASE 8.—A girl, aged 12 years, was admitted under the care of Dr. Cheadle in July, 1902, for dyspnœa beginning three weeks after articular rheumatism. She also had chorea, for which a year previously she had been in St. Mary's Hospital; on that occasion her heart was normal. On admission in July, 1902, her heart was very big; there were a rough præcordial rub and a mitral systolic murmur. The veins in the neck were swollen and pulsating. There was fever in bursts—a type of pyrexia rather characteristic of rheumatic endo-pericarditis. The rub disappeared, otherwise the heart remained the same. The general condition improved and she went out. In April, 1903, she came back with intense dyspnœa and cyanosis, enlarged liver, &c. There was an aortic diastolic murmur and a pleuro-pericardial rub was heard several times for a day or two at a time. Fever was persistent and there were crepitations at the left base. She died suddenly 16 days after admission. Post mortem there was found to be universal adhesion with thickening of the pericardium and only slight recent endocarditis with scarring of the mitral and aortic valves. The myocardium, especially of the right ventricle, was pale and flabby. There was some slight recent pleuro-pericarditis on the left side of the heart and the mediastinal glands were enlarged. In a similar case Dr. J. F. H Broadbent found small cocci—corresponding in staining, &c., with the micrococcus rheumaticus—in these enlarged glands.

This, then, was a case of protracted rheumatic pericarditis where an acute outburst proved the "last straw" to a heart hopelessly crippled by its fibrous prison. A case of malignant rheumatic pericarditis comes next.

CASE 9.—A girl, aged 18 years, was admitted on Nov 24th, 1880, to St. Mary's Hospital under the care of Sir William Broadt arthritis of five days years previously sounds being distant. There were erythematous patches on her legs and a trace of albumin in her urine. The arthritis persisted. There was delirium at night and soon a loud pericardial rub was heard. The temperature kept high and on Dec. 4th she died. Post mortem the pericardial sac was found to contain two ounces only of turbid fluid. Both pericardial layers were swollen and the opposed surfaces were plastered with fibrin. Immediately beneath the visceral pericardium the heart muscle was pale. Death in this instance must have been due to toxæmia and to yielding of the sodden pericardium allowing of acute dilatation.[18]

Our scale of cardiac rheumatism is now as complete as it can be made. It has not been possible to speak positively, from clinical standpoints, of the occurrence of transient endocarditis or of myocardial fibrosis, but it has been shown that the one perhaps occurs and that the other is found post mortem.

Now, lastly, is it possible to trace this gradation of results of rheumatic infection of the brain—i.e., of rheumatic chorea? The transient case of chorea is always with us, though, as in the joints and the brain, the infection often proves more enduring than is at first expected. It is quite common to get a history of chorea in the earlier years of young adults with mitral stenosis, one definite attack occurring without relapse or recurrence. Further, many children with rheumatism are in a "choreiform state"; the fingers are unsteady and hyperextended when held out straight; the face is unduly mobile and so are the emotions. All these signs may subside and never return or they may in the course of days, weeks, or months, develop into a full-blown chorea. The chronic cases are as familiar. One example is that of a boy who was recently under the care of Dr. Lees both at the Hospital for Sick Children, Great Ormond-street, and at St. Mary's Hospital. He had had choreic movements continuously for a year and according to his mother for over 18 months. Another continuous case is that of a girl, aged 11 years, who had chorea, arthritis, and endocarditis in February, 1903. In April she had very slight twitchings of the hands and the face. In June and September she had well-marked chorea and again in January, 1904. This waxing and waning of symptoms in a chronic course are very characteristic of these protracted forms of rheumatism; compare the case of pericardiac fibrosis described just now and the outbursts of fever with effusion into osteo-arthritic joints which form the milestones of such cases.

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[15] Shaw: Journal of Pathology and Bacteriology, December 1903 Poynton and Paine: Transactions of the Royal Medical and Chirurgical Society, vol. lxxxv.

[16] Fisher: Bristol Medico-Chirurgical Journal March 1900 Cowan: Journal of Pathology and Bacteriology, December, 1903. Carpenter: THE LANCET May 30th, 1903, p. 1508.

[17] Transactions of the Clinical Society vol xxxi. A similar case is described by Dr. George Carpenter in THE LANCET of May 30th, 1903, p. 1509.

[18] A paper by Dr. W. Hale White, Guy's Hospital Gazette, November, 1903.

Malignant chorea is happily rare. Death is usually due to cardiac complications; however, here is a case in which the cerebral lesion was responsible for the fatal issue.

CASE 10.—A girl, aged 18 years, was admitted to St. Mary's Hospital under the care of Sir William Broadbent on May 16th, 1887, suffering from chorea. This had been preceded by several weeks of rheumatic polyarthritis—her first attack. The chorea was very severe but she was at first able to swallow food. There was delirium with incontinence of urine and fæces. The arthritis persisted but there were no signs of cardiac disease. The temperature steadily rose and she died on May 30th, refusing food for the last two or three days. The post-mortem examination showed slight aortic valvulitis, the surface of the brain and the choroid plexuses were congested, there was an excess of cerebro-spinal fluid, and on the under surface of the right lobe of the cerebellum some recent lymph was found.

Many observations on the changes found after death in the brain of choreic patients are now on record, the general trend being to show that extensive microscopical change is present when little or no abnormality can be detected by the naked eye. The case just narrated, which may fairly be called one of malignant chorea, completes the requisite series of cases which go to prove the truth of the proposition with which this paper began—that clinically there are certain characteristics of rheumatic infection and its results, whether the infection be of joints, of heart, or of brain. These characteristics are—two extremes of severity, transient and malignant cases; and between these extremes a complete gradation of protracted cases, in which an imperfect resistance on the part of the infected organ or tissue leads to connective-tissue increase of a permanent and crippling nature. These protracted forms are punctuated by more or less frequent exacerbations.

The rest of this paper embodies a suggestion with some fragmentary evidence in its favour. The suggestion is this: that in many cases of rheumatic infection the organism persists in the infected tissue after all obviously inflammatory signs and symptoms have disappeared in a comparatively but not absolutely harmless state, capable of re-exaltation of virulence in favourable circumstances. The facts forming the basis of this proposition may be summed up as follows.

1. It is common to see a woman 35 years of age with mitral stenosis who has had rheumatic fever at 15 or 20 years of age without recurrence. The symptoms of cardiac disease begin some years after the arthritis. Necropsy shows extreme fibrosis of the mitral curtains. Now it is hardly likely that the rheumatic fever laid down, so to speak, a definite dose of fibrosis, the great increase of which is to be ascribed solely to the restlessness of the valves and the mechanical strain to which they are subjected. It is more satisfactory to postulate chronic irritation of the valves by organisms of lowered virulence persisting therein.

2. A case of the above nature sometimes blazes forth into a state of malignant endocarditis. This is usually ascribed to reinfection of previously scarred valves. The following case suggests rather that organisms persist in the fibrous valve and, under conditions lowering the patient's resistance, undergo exaltation of virulence with malignant results. A female, aged 20 years, who had had cardiac symptoms for 12 years, was admitted to St. Mary's Hospital under the care of Dr. Lees after a fortnight's illness. She had had rheumatism and chorea but not recently. Up to admission she was suckling her first child. She was very pale and weak. The physical signs were those of mitral stenosis, but her symptoms were graver than the signs and there was irregular pyrexia with wide daily excursions. The post-mortem examination showed infarcts of the lung, the spleen, and the kidneys, without suppuration; recent and old pericarditis slight in degree; old mitral stenosis with massive vegetations on mitral and aortic valves, chordæ tendineæ, and left auricular wall. These vegetations contained swarms of micrococci, apparently corresponding to the micrococcus rheumaticus as it is described by the authorities mentioned above.

3. Relapse is common in rheumatic fever, commoner even than in enteric fever, occurring in about 20 per cent. of all cases.[19]

4. Rheumatic affections tend also to recur at intervals too long to allow them to be called relapses. Thus, a youth, aged 19 years, with acute rheumatic arthritis and aortic incompetence, had had rheumatic fever when he was 12 years old and chorea a few months later. At 13 years of age he again had rheumatic fever and his heart was affected. At the ages of 14 and 16 years he had further attacks and several milder attacks between the ages of 16 and 19 years. If this kind of story be due to repeated reinfection it is without parallel (not excepting lobar pneumonia) among microbic diseases.

5. The prolonged course of chorea and of endo-pericarditis in childhood shows at any rate a persistence of rheumatic infection over a period of months. In the same connexion the case described earlier in this paper may be recalled where a patient was for two years almost continuously disabled by waxing and waning arthritis.

6. Analogy is a much-abused form of support for theories, but it seems legitimate to draw attention to the many infections which are capable, and often convicted, of latency—to name only a few, tuberculosis with its quiescent foci ready to flare up at a favourable opportunity, the extraordinary persistence of bacillus typhosus in bone lesions, of bacillus coli in the liver, gall-bladder, &c., of staphylococci in bone marrow, and so on. If all these organisms can remain latent, reasserting themselves as soon as they get the chance, why should the micrococcus rheumaticus be held to differ from them in this respect?

To summarise, clinical observation of rheumatic infection goes to show (1) a certain similarity of effect, whatever the tissue infected; (2) the capability of such infection to inflict any degree of damage on the tissues attacked, within certain limits (transience and malignancy); and (3) a tendency on the part of the infective agent to persist in the infected tissues.

In conclusion, I must express my thanks to Sir William Broadbent, Dr. Cheadle, Dr. Lees, and Dr. Phillips for permission to quote their cases, and to Dr. Broadbent, pathologist at St. Mary's Hospital, for post-mortem and bacteriological data.

St. Mary's Hospital, W.

RADIOSCOPIC AND RADIOGRAPHIC APPEARANCES IN PLEURISY,

WITH ESPECIAL REFERENCE TO THE UPPER LIMIT OF PLEURAL EFFUSION.

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Dry pleurisy.—The subject of pleurisy without effusion may be dismissed in a few words. During a period of three months every case which presented the characteristic signs of stabbing pain in the side, dry cough, and friction sounds on auscultation was examined by the radioscopic method, with the result that in only two of these cases was there any loss of clearness corresponding to the part affected. One of these, a case of left-sided pleurisy, was interesting for two reasons. In the first place, with the tube anteriorly a shadow was cast on the right side of the chest with a well-defined margin, concave above, proceeding downwards from the spine of the scapula to the junction of the eighth rib with the vertebral column. In the second place the diaphragm in maximum excursion only moved three quarters of an inch on the affected side, while on the right side it moved one and seven-eighths of an inch. In quiet respiration the movement was five-eighths of an inch on the right side and three-eighths of an inch on the left.[1] The marked limitation of diaphragmatic movement on the left side was due to pain produced on taking a deep breath, the action being thus checked. On further examination the diagnosis of thickened pleura was reached. A history of right-sided pleurisy three weeks previously was obtained, but there were probably previous attacks to account for the thickening. Hence, on the whole, it is reasonable to conclude that acute pleurisy coming on for the first time when in the dry stage casts no shadow.

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[19] Church: "Acute Rheumatism," Allbutt's System, vol. iii

Pleurisy with effusion.—Appearances vary according to the amount of fluid contained in the pleural cavity at the time of examination. The patient should first be examined in a sitting posture with the tube posteriorly and the screen in front of the chest; then with the tube anteriorly and the screen on the back of the chest; next lying quite flat on his back on a canvas stretcher (or other form of support which will allow of the transmission of the Roentgen rays), under which the tube is placed; and finally, if necessary, the patient can be examined lying on his abdomen or lying first on the right and then on the left side with the tube and screen on opposite sides of the thorax. The most useful skiagram is taken with the tube posteriorly and the plate against the anterior thoracic parietes, as this position shows best any displacement of the heart. The right and left lateral positions are of value in a difficult case in deciding between pleural effusion and a very dense and consolidated lung, for the upper limit of opacity will alter its position unless the effusion be loculated. In one case which was examined with the tube anteriorly, the man being seated, the whole of the lower part of the left side of the thorax was in shadow continuous with that of the diaphragm as far as a line slightly concave above extending in a direction downwards and outwards following closely the direction of the seventh rib. Since here I had not previously percussed or auscultated the chest, the diagnosis on the screen examination alone rested between thickened pleura and serous pleural effusion, the loss of transradiancy not being sufficiently great to obscure the rib outlines. On listening over the area in shadow voice and breath sounds were heard distinctly and the vocal fremitus was not diminished, so that pleural effusion was put out of court. The greatest difficulty in the discrimination of fluid in the chest is met with in children; here, therefore, radioscopy is of the greatest service. The chief points to note in conducting such an examination are:—(1) the height of the fluid on the affected side; (2) the contour of the upper margin of the fluid; (3) whether or not the outlines of the ribs can be distinguished; (4) the position of the heart; and (5) the movement of the diaphragm, if this be visible. In this condition I believe the screen to be of more value than the radiograph on account of the facility with which alteration in position of the pleural effusion on change of posture can be recognised.

The conclusions which I have arrived at by means of radioscopy are these: (1) That the level of the fluid changes with the position of the patient unless (*a*) the quantity of fluid be great and (*b*) the fluid be encysted by adhesions; (2) that a purulent effusion yields a shadow of greater density than a sero-fibrinous effusion; (3) that the shadow is homogeneous and in the case of serous effusion gradually increases in density from above downwards; (4) that, however far the heart be displaced to the right, in most cases little alteration takes place in the position of the apex relatively to the base; (5) that other conditions being equal the heart is displaced more when the effusion is left-sided; and (6) that a somewhat triangular shadow, not normally visible, above and continuous with the shadow of the heart and pericardium is cast by the mediastinum which is displaced by the lateral pressure towards the healthy side of the thorax.

In a communication made to the French Academy of Sciences Professor Bouchard[2] states that on radioscopic examination the translucency at the apex increases as the effusion becomes absorbed. In one case, however, he noted that although the effusion was obviously diminishing the opacity at the apex still remained. "This fact," he says, "caused me to suspect that consolidation had occurred at the apex of the affected lung. Percussion and auscultation confirmed this and revealed the presence of commencing infiltration hitherto masked by the effusion."

Williams writes[3]: "The outline of the diaphragm is less defined, or obliterated altogether, according to the amount of fluid present, as are also some of the ribs in the upper portion of the affected side." The first half of the statement holds good but the latter half seems incomprehensible unless the word "upper" be a misprint for "lower." In every case of pleural effusion the outlines of some of the lower ribs are obscured, and if the effusion be dense enough they are obliterated. I have never seen a case in which the outlines of the upper ribs were obliterated unless the chest were full of fluid, in which case no detail can be made out at all.

In the classical researches of Damoiseau[4] we find the following: "Whenever the absolute dulness rises to the height of a horizontal plane, reaching as far as seven centimetres or thereabouts above the nipple, it is limited by a line which is almost level. Below this plane, on the other hand, it is always outlined by irregularly parabolic curves, less and less open, which form in the latest stage a demi-ellipse." This is stated by Damoiseau to be constant in all cases.

Osler says[5]: "It has long been known that when the patient is in the erect posture the upper line of dulness is not horizontal but is higher behind than it is in front, forming a parabola." In medium-sized effusions the line which marks the intersection of the plane of contact of lung and fluid with the chest wall "begins lowest behind, advances upward and forward in a letter S curve to the axillary region, where it proceeds in a straight decline to the sternum" (Garland quoted by Osler[6]). If the exudation be larger in amount the curve becomes much flatter and almost horizontal. The dulness, although modified to some extent by the condition of the lung, approximately indicates the actual level of the fluid within the pleural cavity. But what do we find on radioscopic examination?

In a paper by Professor Bergonié and M. Carrière[7] careful notes are given of 11 cases of pleurisy with effusion. These I will briefly summarise in order to show coincidence or not of the upper level of the shadow with that of the dulness.

Right Pleural Effusions.

Case.	Upper margin of opacity.	Percussion dulness.
1	Horizontal.	No coincidence.
2	Concave above.	Upper margin of opacity five centimetres below level of percussion dulness.
3	"	Upper margin of opacity just below level of percussion dulness.
4	Concave above after tapping.	No coincidence.
5	Convex above.	Coincidence.

Left Pleural Effusions.

6	Horizontal.	No coincidence.
7	Convex above.	Coincidence.
8	"	"
9	No precise results.	—
10	Concave above.	Coincidence.

Double Pleural Effusions.

11	Right side horizontal; left side concave above.	No results stated.

Hence we see that in four of these the upper limits of percussion dulness and of shadow exactly coincided with each other, in two there was almost exact coincidence, in three there was no coincidence, and in two no results were stated.

In the majority of cases I think that the results on radioscopic examination correspond with those on percussion. Where they differ we have to seek for a cause. The explanation in some cases may be as follows. The lung is liable to become adherent by a portion of its surface to the chest wall. The level of the fluid being represented by a straight line, the lung dipping into it may be represented by a curve with its convexity below. Hence the thin layer of fluid and the air-containing lung, opposite to where the lung dips into the fluid, will be seen radioscopically as a lighter and more transradiant area, convex below, whereas at the sides where only fluid is present and no lung the shadow will be much more dense. Hence adhesions probably account in some cases for the lack of coincidence. In sero-fibrinous effusions the shadow increases from above downwards and thus corresponds to the increasing dulness of the percussion note over the same area.

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[1] For range of movement of the diaphragm in health, vide THE LANCET, June 27th, 1903, p. 1802.

[2] Bouchard: Comptes Rendus, tome cxxii., Dec. 7th, 1896.

[3] Williams: Boston Medical and Surgical Journal, Oct. 1st, 1898.

[4] Damoiseau: "Epanchements Pleurétiques," Archives Générales de Médecine, October, 1843.

[5] Osler: Principles and Practice of Medicine, 1901, p. 669.

[6] Ibid., p. 669.

[7] Bergonié and Carrière: Archives d'Electricité Médicale, July 15th, 1896.

Among the deductions drawn by Bergonié and Carrière in the paper referred to above is found the following: "When the upper surface of the liquid presents, both to percussion and to the fluoroscope, the classic curve of Damoiseau we may be sure that the convex part corresponds to a hyperæmic or atelectatic area, for if we make the patient cough violently or take four or five deep inspirations we may see that the surface becomes horizontal instead of convex."[8] This deduction appears to me to be questionable. In the first place, I deny that a hyperæmic lung gives a shadow of the same density as one which is in a state of collapse. A lung in a condition of apneumatosis or acquired atelectasis gives a shadow of corresponding density to one which is the subject of fœtal atelectasis where the lung has never been inflated. A radiograph of a fœtus which has never breathed shows that the lungs exhibit the same loss of transradiancy as the rest of the tissues of the body with the exception of the bones. This condition is unlike that of the hyperæmic lung, in which case it is doubtful whether a shadow be thrown at all (*vide* Hugh Walsham's[9] experiments with washed lungs). The surface of the fluid naturally becomes more horizontal on deep inspiration owing to increase in the intrathoracic pressure; why the convex part should be thought to correspond to a hyperæmic or atelectatic portion of the lung does not seem obvious. Between the upper limit of the effusion and the spine there is often seen a faint shadow somewhat oval in outline. This corresponds to the compressed lung, which appears denser than that on the opposite side, but not completely airless. My own experience coincides with the observations of Walsham[10] and Williams,[11] which show that oftentimes the lung is compressed on the inner side of an effusion with a sickle shaped edge.

Much more work still remains to be done on this subject and the few brief preceding notes do not pretend to be anything in the nature of an exhaustive survey of the subject.

As regards the diagnosis between sero-fibrinous effusions and empyema, by the difference in the density of their shadows, the evidence of various observers is to a certain extent contradictory. With respect to this I will confine myself to facts which I have noted. If a large drop from a serous effusion and another of equal size from a purulent effusion be placed upon a radiographic plate the skiagram will show the shadow of the pus to be the denser of the two. A similar result will be obtained by radiographing two test-tubes, side by side, filled each with an equal amount of serous and purulent effusion respectively—the shadow of the glass being equal in each case; the pus gives a shadow almost as dark as that of bone of equal calibre. This corresponds with what we would expect were we to compare the density of the two fluids, since, volume for volume, the pus contains a much greater proportion of solid material in the form of dead leucocytes and débris than does the serous fluid.

In all cases which I have seen up to the present time serous effusion throws a light shadow usually with a well-defined curved upper margin; a purulent effusion throws a dense or even opaque uniform shadow. In the former case the rib outlines are not obliterated, in the latter they most frequently are. These results have been verified by subsequent tapping. Pleural effusion can be distinguished, unless too great in amount, from thickening of the pleura by the change in the level of the upper margin on movement. Hence, by the aid of the Roentgen rays we are often able to determine whether fluid be present in the chest or not and, if present, from the density of the shadow to arrive at a conclusion as to the nature of the exudate.

Ventnor.

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[8] Ibid., quoted in Archives of the Roentgen Ray, 1900 p. 67.

[9] Walsham: Transactions of the British Congress on Tuberculosis, 1901, vol. iii.

[10] Walsham: Brit. Med. Jour., July 6th, 1901.

[11] Williams: Boston Medical and Surgical Journal, Oct. 1st, 1898.

CHOLECYSTOTOMY FOR ACUTE POST ENTERIC INFECTION OF THE BILE CHANNELS; RECOVERY; DEMONSTRATION OF THE PRESENCE OF THE BACILLUS TYPHOSUS.

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ONE of us (J. L. T.) saw a man, aged 40 years, in consultation with Mr. J. Morgan Evans, of Llandrindod Wells, on August 21st, 1903. The history of the illness was briefly as follows. The patient contracted fever whilst in Paris and the first symptoms of the disease showed themselves on the night he left Vienna for Lucerne (June 29th) where he took to his bed on arrival and was laid up for five weeks under Dr. Siegfried Stocker. As soon as he was allowed to travel he hurried off to Llandrindod Wells on account of a former experience of the good effects of the water and climate upon him. The temperature chart he had with him showed the ordinary course of enteric fever. He arrived at Llandrindod Wells on August 15th and three days later he complained of pain and discomfort on the right side of the abdomen. Mr. Morgan Evans was called in on the 16th and found the temperature raised and a diffused tenderness over the ascending colon. These symptoms increased in severity and the tenderness became more definitely localised towards the hepatic flexure of the colon. When the patient was seen in consultation at 10 A.M. on the 21st the symptoms were slight cholæmia, raised temperature, and exquisite tenderness over the right hypochondriac region, with a maximum point over the area of the gall-bladder. On percussion the lower border of the hepatic dulness showed evidence of a probable distension of the gall-bladder which was mapped out on the skin. After consultation the patient refused our advice of having an operation performed but in about six hours he changed his mind owing to the increasing severity of his symptoms and when I (J. L. T.) percussed his abdomen again the dulness had increased an inch downwards and inwards towards the umbilicus, leaving no doubt practically as to the nature of the swelling. The rapid distension of the gall-bladder is worthy of comment, as we found three hours later when the operation was performed that the dulness had again increased at least half an inch during that time. I have never seen such an extraordinarily rapid distension of the gall bladder in other cases of infective cholecystitis, although I have had one case of infection by the streptococcus longus alone and another one which terminated in gangrene of the gall-bladder walls, as well as many other cases of a mixed infection in calculous cholecystitis. Rupture of the gall-bladder would have taken place before long had the operation been delayed.

Operation was performed on August 21st at 6 P.M. Dr. J. Murray anæsthetised the patient with ether after giving a hypodermic injection of strychnine and digitalin to counteract the post-enteric feebleness of the heart's action and Mr. Morgan Evans assisted me at the operation. A little clear fluid was found in the abdominal cavity and the gall-bladder was distended to the size of a hen's egg and projected well below the free edge of the liver. Its walls were very tense, the peritoneal aspect was glistening, and one could see a few white flakes in the clear fluid inside and one white patch could be seen on the mucous membrane near the fundus of the gall-bladder which was probably ulcerative in character and indicative of a threatening perforation. The tension of the gall-bladder wall was relieved by aspiration and afterwards a purse string suture was placed in its walls and a piece of firm indiarubber tubing was inserted through an incision and the purse-string tied round it; a second suture was placed round the gall bladder and the drainage-tube on the proximal side of the purse-string in order to safeguard against leakage through the puncture holes of the needle in introducing the purse string suture. It is always safer to apply the second ligature round a purse-string suture for retaining drainage-tubes in all cases where the walls are very thin and the difficulty of avoiding puncturing the mucous membrane is insurmountable. The same difficulty is found in draining cases of acute distension of the intestine; in this manner with a rubber drainage-tube (as was done and introduced by the late Mr. Greig Smith of Bristol) and a second ligature there is a like benefit in these cases. It is almost impossible not to contaminate the field of operation in cases of acute distension of the gall bladder unless the tension is greatly reduced before the introduction of the purse-string suture; as soon as one can get a fold of the walls between the fingers then the cause of one's greatest anxiety is over. When circumstances allow I always push into the portion of rubber drain which is inserted into the gall- [illegible] easons that that [illegible] collapsable and [illegible] more especially on account of the fact that one can tighten quickly and forcibly the purse string suture without any fear or danger of causing kinking or occlusion of the rubber drainage-tube. The character of the fluid removed from the gall-bladder is worthy of remark in connexion with the probable route of infection of the gall-bladder. The fluid from the fundus was practically transparent and limpid, but the last portion which came from the deepest part in the vicinity of, and perhaps from, the cystic duct was milky and was immediately followed by bile-coloured fluid with a peculiar weak nauseating smell.

After the operation the patient passed a very good night and all his pain and tenderness immediately left him. Six days later the drainage-tube was removed and two small calculi of recent origin were removed from the cystic duct [illegible] pious at first [illegible] umbilicated [illegible] a distance of three inches. The non pustular area was dressed with iodoform gauze, whilst the pustular area was at the junction of the double cyanide dressing with the iodoform gauze. By altering the dressings and by the application of topical treatment to each pustule the further treatment of the case was satisfactory. A week after the operation all traces of jaundice had disappeared and Dr. Cobleigh of Kingston, Pennsylvania, U S A., who had previously known the patient, stated that his eyes were clearer than they had been for nearly two years as the patient normally was of a "livery" disposition.

Cases of post-enteric infection of the gall-bladder which come under the hands of the surgeon are comparatively few as the treatment and the recognition of such cases are of quite recent date. The routes of infection are three: (1) the blood, when we must assume a *locus resistentiæ minoris* of the infected part; (2) transperitoneal; and (3) direct continuity by advance from the duodenum. The character of the fluid in this particular case showed more advanced changes in the portion coming from the cystic duct and would probably point to infection by direct continuity.

From post mortem records of cases of typhoid fever the occurrence of a specific infection of the gall-bladder is seen to be fairly common, and this fact, coupled with the records that exist of the isolation of the typhoid bacillus from the blood, urine, and sputum during life, shows that there is a definite systemic infection in a certain number of cases of typhoid fever. The bile, and therefore the bile in the gall-bladder, may be expected to show a similar infection. James Stewart,[1] in an interesting report on 620 cases of typhoid fever from the Royal Victoria Hospital, Montreal, stated that in his experience the complication of cholecystitis occurred but seven times and all recovered except one. Of the seven cases three were operated on and all had calculi and yielded the typhoid bacillus in pure culture. All these were cases occurring during the disease, but they can hardly be the only ones in which infection of the gall-bladder took place. In fact, a post-typhoidal cholecystitis has been recorded seven,[2] 15,[3] and 17[4] years after the original attack of fever, showing that the typhoid bacillus may be latent for a considerable time without giving rise to local symptoms. How far the presence of gall-stones before a specific infection, or as a result of such infection, determines the onset of an acute cholecystitis it is not easy to say, though the majority of cases operated on for post-typhoidal cholecystitis contain calculi in the gall-bladder. The probability is that the incidence of cholecystitis during or after an attack of typhoid fever will depend on purely local conditions and such will determine the time of onset. In our case the onset was just after convalescence. The infection was not a pure infection, the bacillus typhosus and the bacillus coli communis being both present. The typhoid strain isolated fulfilled all the cultural characteristics of the specific organism, as well as in its morphology (flagella). The blood serum of the patient agglutinated the organism to the same degree as it agglutinated the laboratory stock culture of typhoid bacillus and the organism behaved in the same manner towards the blood serum of other cases of typhoid fever. The bacillus coli was also typical in all respects.

In conclusion, I (J. L. T.) may be allowed to express my admiration at the prompt manner in which a room was converted into a model operation theatre by covering carpets and everything with sterilised white bed-sheets, at the careful way the ether was given by Dr. Murray, and, lastly, the plucky manner in which Mr Morgan Evans threw the entire responsibility of further delay upon the patient and his friends.

SOME IMPRESSIONS OF SALSOMAGGIORE AND ITS BATHS.

By W. W. BALDWIN, M.D.

SALSOMAGGIORE is an old acquaintance among the spas of Italy. My first visit there was made in the summer of 1884 in behalf of certain patients. It was no Lombard paradise in those days. One drove nine miles from San Donnino in billowy clouds of grey dust to be set down at last in a rather squalid, dilapidated village, swarming with flies and fleas and haunted, like Constantinople, by mongrel dogs. The few hotels were fairly good and comfortable, although primitive and simple. The country side was charming and the drives were most beautifully picturesque, although the dust still persistently surrounded one upon every movement. No doubt the country wine, which was liberally supplied without extra charge at meals, owed something of its acrid, gritty quality to the all-pervading surface powder, ground by traffic out of the smooth, hard, well-kept roads. This wine was the most active diuretic my professional experience has ever encountered, a quality that doubtless explains the avidity with which the male population seemed eagerly to haunt the convenient open places provided as urinals upon every corner. Northern visitors were much annoyed at first, to say the least, by this novel feature of Italian towns. But by-and by they ignored, as far as possible, what was unwelcome by observing more and more attentively things of artistic beauty and charm which fill the eye and stimulate the imagination upon every hand in adorable old Italy.

Notwithstanding these rather serious drawbacks to holiday humour a certain delightful hospitality and cordial coöperation to assist my purpose of study shown me by the Italian physicians then in charge of the baths make my memory of that ten days' visit a very pleasant one. I was also impressed by the dignified simplicity of our Italian *confrères* and the serious thoroughness which they displayed in their work. This also contributed to render my visit profitable as well as delightful.

From this time during active professional life in Florence until 1898, when I went to Rome, I continued to send patients to Salsomaggiore with growing confidence and satisfaction. I found that not only brilliant curative results were generally obtained in appropriate cases but that a certain proportion of these patients were permanently cured. It was also clearly noted that failures were more frequently due to mistakes in judgment as to indications than to any lack of therapeutic power in the treatment itself. In general experience taught me that acute inflammations were almost invariably aggravated by these baths and applications, but subacute inflammatory conditions and post-inflammatory adhesions and deposits were usually benefited or removed whatever the exciting cause. Thus the objection that these waters are prescribed for too great a variety of diseases may be met with the statement that their curative scope and value lie chiefly in the treatment of the results of inflammation following so many diseases or diseased conditions

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[1] Brit. Med. Jour., June, 1901.
[2] Buschke: Deutsche Chirurgie, 1897.
[3] Von Dungern: Münchener Medicinische Wochenschrift, 1897
[4] Droba: Wiener Klinische Wochenschrift, 1899, p. 1141.

In my practice one rarely meets with those tuberculous and tertiary specific lesions such as suppurating glands, open joint and bone abscesses, gummata, &c. These dreadful scourges of the ill nourished poor from damp, sunless, insanitary dwellings will require a separate discussion, and upon another occasion I purpose to publish an account of several hundred cases of this kind that came for treatment to my summer clinic in the Apennines in the summers of 1893 and 1895. Some of the worst of these cases were sent to Salsomaggiore for treatment by the village and town communes, assisted by generous private charity. It is worth remarking that some of the cures were extraordinarily brilliant and successful and many of those poor patients were restored to useful work-a-day life.

The only method of inhalation employed at Salsomaggiore during this time was the direct spray which was, however, so efficacious in chronic catarrhal and other affections of the upper air passages that I have continued to prescribe the "acqua madre"[1] of various strengths in private practice ever since with great success. This water, bottled and numbered according to strength, can be purchased at any pharmacy in Italy, and elsewhere if ordered, and by means of a suitable steam atomiser it may be inhaled at home with almost as much benefit, I believe, as at headquarters. I am also convinced that this procedure as claimed at Salsomaggiore does, in large measure, prevent the more or less frequent acute catarrhal attacks some months after the treatment.

Upon reviewing my notes from 1883 to 1898, during active professional work in Florence, I find three classes of cases recorded as having been treated at Salsomaggiore: (1) chronic arthritis of gouty, rheumatic, or gonorrhœal origin, muscular rheumatism, and rheumatoid arthritis; (2) various gynæcological ailments in chronic stage, such as endometritis, parametritis, and perimetritis, pelvic peritonitis, pelvic cellulitis, &c., certain cases of salpingitis, ovaritis, &c., functional derangements such as amenorrhœa, menorrhagia, dysmenorrhœa, suppressed or irregular menstruation due to various conditions of general debility or retarded development, and several cases of uterine myo-fibroma, accompanied by more or less menorrhagia; and (3) various chronic affections of the upper air passages such as naso-pharyngeal catarrh, bronchial catarrh of the larger tubes, &c.

In the first class I remarked, in almost every case, not only satisfactory improvement in the local condition but also great gain in the general health. Some patients who had been more or less crippled were restored to greater activity and others, by means of supplementary treatment with massage, electricity, &c., during the colder months at home, were relieved of former disabilities and gradually cured. I noted, however, that results in muscular rheumatism and rheumatoid arthritis were not generally so favourable and was led to adopt other treatment for some of these cases. In the second class of cases some very remarkable cures were noted and in general it might be said that not only was the proportion of permanent cures far greater than by any other treatment but relief was obtained in almost every case. Several cases of sterility were cured, one of which is sufficiently instructive to be reported.

A strong, well-developed, healthy young woman who during the first year of married life had a miscarriage due to accident, suffered over seven years previously from endometritis, dysmenorrhœa, profuse leucorrhœa, and general ill-health. For maternal and family reasons she was most anxious to have a child. She had undergone various kinds of treatment, including several operations such as curettage, mechanical dilatation, &c. She went to Salsomaggiore in the summer of 1890 by my advice, where the treatment consisted of baths and irrigations with "acqua madre." She returned to Florence much improved in every way. During the following winter she continued the douches with "acqua madre" and went to Salsomaggiore again the following summer. After the second course it was noted that not only was the local trouble comparatively well but that her general health was excellent. In the winter of 1891–92 she became pregnant and in due time, after an easy labour, gave birth to a healthy male child. Since then she has had two other children and remains in excellent health.

Treatment of the third class of cases by means of inhalations (and baths where there was a gouty or rheumatic background) was also signally successful. Indeed, I was led by-and-by, as experience grew, confidently to expect a larger proportion of cures in these cases at Salsomaggiore than by any other method I have ever known. Regarding my few cases of uterine myo-fibroma treated at Salsomaggiore, I did not record very definite results and do not consider my limited experience as warranting any conclusions.

Upon this basis of assured and approved therapeutic value an enterprising commercial company invested a large capital in truly admirable improvements, which were begun in 1899 and rapidly pushed towards completion, at the same time advertising the place so extensively in the Old and New World that Salsomaggiore and its wonderful curative properties have been ever since a topic of the time. As a result it has had a great American boom and a large contingent of foreign patients have been attracted to this modern Pool of Bethesda. It must be confessed, however, that, as is usual in such circumstances of artificially stimulated interest and excitement, the spa has been magnified into a universal panacea for every earthly ill and many unsuitable cases have gone in the vain hope to be healed. But the scientific conscience and accuracy have latterly evolved order out of the inevitable early confusion of such an extensive undertaking and at present greater care is exercised to avoid mistakes and to select only such patients as are susceptible of cure by this treatment.

Wholesale exploitation of human misery and credulity still remains a monopoly of the various money-making delusions. This fever of expectation upon every hand has interfered with the ordinary prosperous pursuit of healing and rendered it necessary to lay down the law most decidedly to some patients regarding the indications and limitations of treatment at Salsomaggiore. Indeed, one of the trials of a physician's life lies in the almost invincible difficulty of teaching primitive ideas of hygiene and of inducing obedience to simple natural laws. Certain patients are eager consumers of drugs and they throng the various spas in lively expectation not only that results of past social dissipation will be cured but that they may also thus obtain assurance for future license. As apostles of the truth we can only preach of nature's certain and remorseless revenge for all such self-indulgence and clearly show that no medical treatment, however skilful, can ever take the place of "physical righteousness."

Owing to important consultations I had been unable to visit Salsomaggiore since its renaissance until October, 1902, and again in August, 1903, to inspect the widely-heralded improvements. I was also anxious to investigate the claim that this treatment should be extended to a much wider range of diseases and diseased conditions than had been formerly contemplated and to obtain at headquarters in present circumstances more exact knowledge regarding indications and contra-indications to the treatment than had hitherto been published. Certain untoward accidents had also occurred in cases ill suited to those powerful baths or where the treatment had probably been pushed too rapidly. At the same time it seemed a favourable opportunity to discuss the wisdom of giving so much shorter courses of treatment here and in the other watering places of Italy than is the universal rule in the older northern spas of Germany, France, and elsewhere. For the purpose of making these and other inquiries I interviewed the various Italian specialists in charge of the baths. It is very pleasant to record again the charming courtesy and delightful kindness of our Italian colleagues; not only were all doors opened wide at my request but unwearied pains were taken at all times and seasons to demonstrate, to instruct, and to explain every detail connected with thorough and painstaking work. My questions were answered so fully and cheerfully that one seemed to be conferring rather than receiving favours. I was assured that great precaution had been taken to prevent accidents in future and to insure general safety in all respects. But of this later. The changes since my first visit were amazing; not only had the old hotels been rebuilt and regenerated as regards comfort and sanitation, but I found a large modern hotel upon a commanding site. This hotel is one of the best of its kind in any spa. Its situation at the junction of two valleys gives it free ventilation and for this reason the nights were fresh and cool in spite of the heat which prevails in Lombardy during the months of July and August. This hotel has provided baths upon every floor for patients who are unable to leave the house There were two new baths, one of which, the Magnaghi, is a model of its kind, furnished with every modern balneological equipment, including a complete medical electrical installation The village, although still leaving something to be desired by way of cleanliness, was undergoing the same transformation as the baths and hotels Many of the objectionable open convenient places had been replaced by decent covered iron structures (the same may be said of all the large towns in Italy) The fleas and flies were less numerous and the dogs had almost disappeared The dust was laid by frequent street sprinkling and although there were much débris and confusion here and there incident to rapid growth in building one could imagine a near future when this watering place will become one of the best and most complete of its kind So much in commendation of the work already accomplished and still in process of completion

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[1] Literally "mother water," the concentrated liquor that remains after evaporation of the iodo bromo saline water to remove common salt.

For particulars of the chemical analysis of the waters, description of the baths, &c, as well as the original discovery of the presence of organic iodine and sulphur compounds in the inhalation rooms and other important observations, I must refer to the admirable and exhaustive report of THE LANCET Special Analytical and Sanitary Commission on the Iodo-bromo Saline Waters of Salsomaggiore[1]

It is obviously of the greatest importance not only that physicians should have expert knowledge of balneology in general but also that they should have clear and definite ideas regarding indications and contra indications to treatment in those most potent available baths of their kind in the world Just in proportion to the undoubted efficacy of this treatment in appropriate cases must its power for harm and even disaster be when it is rashly or injudiciously adm [illegible] re some contra indications to the [illegible]

1 [illegible] it but a meagre pittance of reserve vital force to draw upon in case of emergency should not take the full baths

2 Where the excessive metabolism induced would throw a dangerous or even fatal burden of overwork upon organically diseased excretory organs, as in Bright's disease

3 In advanced arterial fibrosis or atheroma, especially if asymmetrical, these baths might initiate more rapid degenerative changes and even produce fatal accidents by causing excessive vaso dilatation on the one hand and through reflex action slower more powerful cardiac contraction on the other Thus the more inelastic vessels would bear the brunt of impact and either give way, as in apoplexy, or be strained and damaged, anticipating the slower advance of senile degenerative changes by many years as has occurred in several cases Dr Zoia claims that degenerative diseases of the aorta and carotids of syphilitic origin derive much benefit from these baths except when there is constant high arterial tension He never prescribes them, however, in such cases at a higher temperature than from 33° to 34° C

4 In any case where, owing to vital depression from any cause, reparative processes cannot keep pace with the tissue waste induced by this treatment

5 In advanced organic heart disease, almost without exception, these baths are too powerful—at least, they should not be prescribed in such cases until more accurate and exhaustive studies have been made regarding their effects upon blood pressure, &c I do not believe, however, that they can ever replace the Schott-Nauheim treatment for chronic heart diseases. While well compensated valvular cardiac lesions without degenerative changes in the myocardium might not contra indicate the treatment when necessary for other conditions nevertheless, in these circumstances, the temperature of the baths should never exceed 34° C

6 Certain patients with irritable skins cannot take these baths without suffering from dermatitis, eczema, &c In a certain proportion of these cases Professor Baistrocchi has called attention to the fact that "acqua madre" baths, diluted with sterilised sweet water, are not only well borne but that they frequently act most favourably upon such conditions of the skin

7 Patients who have tuberculosis of the lungs and intestines are not allowed to take the treatment at Salsomaggiore on account of the danger of importing infection It has been proposed to treat this class of cases at some distance where the waters are analogous although not as strong

8 When the baths cause debility, insomnia, and nervous irritability which do not improve under the milder, slower course of treatment, or by substituting the more sedative baths of diluted "acqua madre" (Baistrocchi), the treatment should be interrupted or suspended I believe that a continuance of these symptoms forbids the treatment, certainly at the time, and I do not believe that any future good can be predicted which would warrant such lowering of present vital force, notwithstanding traditions to the contrary in various watering places

9 Acute inflammatory conditions, such as gout, rheumatism, parametritis and perimetritis, &c, would certainly forbid these baths I am aware that there are occasional exceptions to this rule, but who can distinguish them in given cases? These exceptions therefore must be regarded as fortunate accidents rather than encouragement to rashness Acute rheumatic and gouty attacks in joints, if inevitable, are most satisfactorily located for rational and successful treatment, but formidable explosions in the brain, heart and other vital organs have been caused by attempts to abort these diseases by means of powerful saline baths There is good reason for the popular belief in "the great danger of driving these diseases in"

10 Latterly cases of nervous prostration, neurasthenia, hysteria, and other nervous maladies, with or without anæmia, have been treated at Salsomaggiore with more or less success But we have not been instructed at headquarters as to what class of these cases are appropriate for treatment Surely we have more rational and hopeful methods of treating the various nervous disorders, resulting from our terrific modern life, with its inhuman discord, intolerable tension, worry, and dissipation of vital force, than by those incalculably searching iodo bromo saline waters Where these conditions, however, follow the various specific inflammatory disorders, by removing the cause we may hope to cure the symptoms as well "Cases of cerebral exhaustion following overwork in gouty or rheumatic subjects have been rapidly benefited by these baths, when the temperature does not exceed 33° or 34° C Hot baths in these cases cause insomnia and cool baths relieve it" (Zoia)

11 Primary anæmia and chloro anæmia are, I believe, more successfully treated at ferruginous springs, such as Schwalbach, Spa, &c, or by the arsenical iron waters of Levico, Roncegno, Bourboulle, &c, but where the anæmia has been caused by certain of the inflammatory conditions mentioned Salsomaggiore by curing the one frequently removes the other Where anæmia is a complicating factor and not the result, or when it is more profound than usual, a so-called after cure is indicated at one of the iron or arsenical iron springs In some cases the tonic treatment should precede the iodo bromo saline baths In cases adapted to this treatment, however, the accompanying anæmia is usually much benefited, the hæmoglobin and red blood corpuscles increasing very rapidly There are certain unfortunate victims of hereditary tuberculous or syphilitic taint who are never very well and strong They suffer from anæmia, swollen glands, various eye troubles, chronic naso-pharyngeal and bronchial catarrh, &c. They have dry inelastic skins, defective teeth, and having passed the storms and perils of infancy and childhood often show unmistakeable signs of former rachitis. They have small power of resistance and fall easy prey to acute infectious diseases from which convalescence is prolonged They may have escaped definite attacks of the family disease because they have been better housed, better fed, and better clothed than their poorer neighbours, and have always been under skilful medical supervision For this class of patients the treatment at Salsomaggiore is very successful, not only for the subacute and chronic stages of intercurrent maladies, but also for the constitutional vice of defective blood and tissue building

12 Persistent high arterial tension, due to autotoxæmia, would demand great caution in the employment of these baths Should they continue to lower the tension after cautious trial the treatment might be beneficial, but where the tension is not influenced or even raised the treatment should be discontinued at once and other measures taken to relieve this dangerous condition Of course, when the [illegible] at the treatment should never ki [illegible]

be [illegible] eks.

This statement is published in official announcements, as well as in various special papers devoted to the discussion of Salsomaggiore and its treatment. Not only is this course *far too* short to obtain full benefit but experience, even in the milder baths, has taught that only harm can result from pushing the treatment too rapidly. It is the almost universal rule in the older northern spas, where the science of modern balneology has been gradually evolved from centuries of experience and study, that in the beginning of a course of baths it is rarely prudent to give them oftener than every other day. After careful study of the peculiarities and idiosyncrasies of a particular case, observing the behaviour of the excretory organs and blood as well as the nervous system (through frequent chemical analysis, &c.), two and even three baths are given upon succeeding days but rarely more without a day's pause between. The duration of the first bath is rarely longer than from seven to ten minutes at a temperature of 35° C. The strength of the bath solution is slowly and carefully augmented and the duration increased one minute every or every other bath. Except in the Schott Nauheim baths, which are gradually cooled for a specific purpose, the bath temperature is gradually raised ½° to 2° C. every or every other bath according to the behaviour of the blood pressure which is carefully measured. Thus a course of 21 baths would last 30 or more days, but never 21 days as is advertised at Salsomaggiore.

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[1] THE LANCET, July 12th, 1902 p 84.

I have had occasion to study the bath cards of various patients who have consulted me after their course of treatment at Salsomaggiore and to my amazement have found in certain cases that from 21 to 30 baths had been given in as many days. One patient had taken 25 baths in 26 days. His daily programme was massage, local application of the hot fango (mud) bath, and inhalation. The duration of the first bath was 20 minutes at a temperature of 35° C., and that of the last bath was 35 minutes at a temperature of 39° C. He had been very much pulled down by this treatment but he was assured that great benefit would ensue later. The promised general improvement, however, was very slow to appear and the local trouble for which he took the treatment was not relieved. Another patient took 17 baths and inhalations in 18 days. He undertook the treatment for so-called gouty pains of a vague and fugitive character. He had arterial fibrosis with a rather constant high blood pressure (140 to 160 millimetres of mercury). "The kidneys were not markedly diseased, although they had latterly lagged in their excretory functions." As might have been expected, this patient has not been as well since his treatment at Salsomaggiore, although he had previously been in fairly good health. Degenerative changes in the arteries had been accelerated and the kidneys gave grave cause for anxiety.

These cases will suffice to emphasise my contention regarding this matter. I am happy to say that not only were these and other criticisms favourably received by my Italian *confrères*, but measures had already been taken towards reform as regards northern patients. Italian invalids unfortunately lack the patience and pertinacity to undergo slower, longer courses of treatment. This is undoubtedly the cause of such an anomalous state of affairs in Italy. I was informed upon all sides that those patients who had taken the slower, milder courses of treatment were not only better satisfied with results but were more certain to return for another course.

Professor Baistrocchi, director of the sanatorium at Salsomaggiore, has introduced admirable sanitary reforms into the various establishments which have been in operation several years—viz., (*a*) disinfection of the bath tubs after each bath by means of creoline solution and corrosive sublimate when necessary; (*b*) careful disinfection of the walls, floors, and furniture by means of corrosive sublimate spray; (*c*) most careful disinfection of all apparatus used in the baths and inhalation rooms by means of corrosive sublimate and dry heat; (*d*) spittoons filled with solution of corrosive sublimate for patients and attendants; (*e*) convenient receptacles containing corrosive sublimate for disinfecting the hands, &c.; (*f*) various apparatus for sterilising all sweet water and "acqua madre" employed in the baths and all solution used for inhalation, as well as the mud for local applications and the various receptacles; (*g*) a thorough system of ventilation for bathrooms, inhalation rooms, &c.; and (*h*) most admirable methods of cleaning, disinfecting, and sterilising all linen used in the establishments, including separate protected rooms for handling soiled and surgically clean linen as well as separate receptacles for conveying the same to and fro. The rooms where the clean sterilised linen is washed and stored are most carefully disinfected and the servants employed for the work are required to observe such precautions as disinfection of the hands, clothing, &c. During more than 20 years' study of balneology at various watering places in Europe and America I have never seen such sweeping and radical sanitary measures employed elsewhere. But servants are not infallible and it seems not unreasonable to suggest in order to render this excellent system more perfect that all patients with open tuberculous lesions and all syphilitic cases whatsoever should have separate sections not only to protect those having the same disease from infection by the other but also to avoid any possible danger to the other patients. This imperative precaution has been recently adopted at the Magnaghi and doubtless will be introduced into the other establishments during the coming season. Not only is the drainage of the various hotels and establishments equal to modern sanitary requirements but frequent flushing of the waste pipes with the bath water, which is a disinfectant, provides an additional safeguard against infection.

In answer to my criticism that strict rules regarding rest after the baths and applications had not been generally enforced in Salsomaggiore, Dr. Zoia informed me that he always insisted upon an hour's rest in bed immediately after each bath, and he hoped that this wise measure would be made obligatory. He also informed me that private rooms had recently been provided for the purpose at the Magnaghi establishment. Professor Baistrocchi has also published rules regarding rest after the treatment, particularly after the inhalations. The Italian Government with wise liberality permits all physicians with unexceptionable qualifications, of whatever nationality, to practise in Italy. No doubt the great army of strangers who come every year to visit her monuments of history and works of art, contributing a vast annual income to promote general prosperity, is the direct cause of this enlightened policy. In Salsomaggiore, however, certain restrictions have been introduced upon Professor Baistrocchi's initiative—viz., the so called "Tessera" or official permission to take treatment. As this measure has caused much discussion and some heart-burning it merits a word of explanation. Only the physicians who compose the medical council have the right to issue the "Tessera" to their own and other patients after careful examination. Considering the very powerful character of the baths and the disasters that might occur through mistakes in prescribing the same, this supervision is prudent and justifiable. Of course such powers should be exercised only by well-qualified specialists with judicious impartiality. I have no doubt, however, that the matter will be satisfactorily adjusted. In view of the great value of massage and Swedish gymnastics as adjuncts to the treatment it is to be hoped that the same liberality will be extended in future towards these trained attendants as in other directions.

It must be said, in simple justice, notwithstanding the fact that these establishments have not yet paid dividends upon the large capital invested, and cannot do so at best for a long time to come, the directors have displayed liberality in promptly carrying out the numerous expensive improvements suggested by the medical council, including an abundant supply of pure and wholesome mountain water for establishments, hotels, and the town. When there is no longer room for criticism in human undertakings the millennium will have dawned. Until then our aim must ever be towards perfection. A writer makes the rather hazardous assertion that no particular regulation of the diet is necessary for those who take the treatment at Salsomaggiore. Professor Riva, however, in his illuminating paper on Subacute and Chronic Arthritis and the Waters of Salsomaggiore, emphasises the paramount importance of rigorously supervising the diet of patients taking the treatment. This he calls "dieto terapeutica," and in conclusion says: "It is so because it is so, and any cure conducted according to the demands of modern medicine cannot and dare not neglect the diet, which must always be regulated in the most careful and scientific manner. Professor Baistrocchi is equally imperative as to the necessity for carefully regulating the diet according to the requirements of each particular class of disease. He has also published a series of diet tables for patients at the sanatorium. The importance of diet in health and disease has been known since the dawn of history and doubtless was practically recognised by mankind before they invented oral and written language. Even the lower animals have wholesome instincts regarding the quality and quantity of food suitable to their condition.

I cannot refrain from expressing my appreciation of the admirable sanatorium and the excellent scientific work accomplished by Professor Baistrocchi and his well-trained assistants. The same thorough disinfection, ventilation, and cleanliness are observed here as in the bath establishments. The "luoghi commodi" (convenient places) have been constructed outside the main building but communicate with it by means of well-ventilated covered passages. These closets are furnished with every modern sanitary safeguard. The food is simple but of the best quality and is furnished even to the poorer patients in great abundance. The soup, which I tried upon Professor Baistrocchi's recommendation, was most savoury and nutritious. The curative results accomplished in the sanatorium, chiefly in scrofulous and gynæcological maladies have been so brilliant that they merit more careful study and discussion. These [illegible] treatment by massage, c[illegible] when necessary.

Pati[illegible] therefore of curative results, passionately desiring to be healed of their infirmities, with as much amusement as may be during the process. They never rise above empiricism and only glorify results, which is natural and commendable. But we must solve, if possible, the difficult problem of the *modus operandi* of these complex remedies upon infinitely more complicated organisms. In no other way can we hope to prescribe them with absolute confidence in all cases and in all circumstances. Upon the threshold of this investigation we must acknowledge that chemistry has hitherto failed to give us a complete explanation of the favourable effect of these waters. Brine baths, in conjunction with various douches, electricity, massage, applications of hot mud, &c., produce analogous but far less powerfully curative local effects than the Salsomaggiore waters employed in the same way. The cause of this more powerful and speedy action was supposed to be due to the absorption of the salts of lithia, bromine, strontium, and especially iodine (and perhaps certain organic sulphur compounds), contained so largely in the latter waters. The most careful tests, however, have hitherto failed to follow these substances from the unbroken skin through the organism, no traces of the same having been discovered in the excretions after Salsomaggiore baths of various strengths, duration, and temperatures. It has been asserted that cataphoresis would explain the supposed absorption. Elevey says that the effect of contact in mineral water baths reinforced by the natural electrical currents is more than sufficient to explain the increased tissue metamorphosis which occurs. At any rate we know that these waters, as employed at Salsomaggiore, do greatly accelerate tissue metamorphosis and that by means of various inhalations the more soluble salts are absorbed through the mucous membrane, thus contributing to enhance curative results.

Almost all varieties of inflammatory adhesions and deposits are liquefied and absorbed; ulcers, bone abscesses, suppurating glands, lupus vulgaris, and other tuberculous lesions are healed; chronic naso pharyngeal and tracheo-bronchial catarrh, and even ozæna, are greatly benefited and often cured; and various secondary and tertiary syphilitic local lesions are much relieved and frequently removed. The various dyscrasiæ accompanying these maladies are rapidly and surely corrected and the organism is placed in more prosperous relation with its environment. Certain amusements are provided at the spa in the way of music and song, light operas, and theatrical representations which help to pass the time more agreeably, although they cannot rival the beauty and charm of this interesting folk and their wonderful country.

In this picturesque section of Lombardy, with its splendid seasonable climate and radiant azure sky, every footstep discovers some trace of Roman baths or other evidence of the extraordinary intelligence and energy of that mighty classic race. Mediæval art has also left enchanting monuments upon every hand—great castles and lordly villas, here and there vast convents and monasteries crowning noble heights, and over all the indescribable atmosphere of brave old Italy, the Madonna country of the world.

A CENTENARIAN.—The Hon. David Wark, of Fredericton, New Brunswick, celebrated his 100th birthday on Feb. 19th and received the cabled congratulations of King Edward on the occasion. He is the oldest public man in the British Empire and possibly in the world. Mr. Wark was born in Londonderry, Ireland, in 1804. He went to Canada in 18?5 entered the New Brunswick Legislature in 1837, and has been a Senator of the Dominion continuously since the Confederation.

A CASE OF GANGRENE OF THE RIGHT FOOT OCCURRING IN THE NEWLY BORN.

BY DIGBY COTES-PREEDY, M.A. CANTAB., L.S.A. LOND.,
LATE HOUSE PHYSICIAN AT ST. GEORGE'S HOSPITAL.

ON August 27th, 1903, a married woman, aged 44 years, was confined of a full-term female child. She was the mother of ten children who are all alive and also had had three miscarriages. At every confinement she had suffered from rather severe post-partum hæmorrhage but otherwise she generally enjoyed good health. In June, 1903, she had a fall from an omnibus step on to her right side and a fortnight later she fell down some stairs in her house, again alighting on her right side. The confinement was superintended by an experienced midwifery student from St George's Hospital. The presentation was of the right occipito-anterior variety. Strong pains commenced at 9 A.M., the child being born at 7.10 P.M. Some difficulty was met with on account of a slight impaction of the shoulders. The umbilical cord was found to be twisted twice round the neck. The right foot was the last to be born, but there was no trace of amniotic bands around it. Owing to the deep cyanosis of the child artificial respiration was resorted to for the space of ten minutes; this restored the breathing but at no time was respiration forcible in character. The general state of the infant continuing unsatisfactory and the condition of the right foot, which is described hereafter, being such that hospital treatment was indicated, a relative was requested to take the child to the hospital for admission, but on arrival at 10.30 P.M. I found that the infant had apparently been dead for about ten minutes.

The post-mortem examination was made 38 hours after death by Dr. T. R. Whipham, to whom I am indebted for the use of the following notes. The body was fat, well developed, and of rather large size. The skin of the lower half of the right leg in front, of the dorsum of the foot, of the dorsal aspect of the first toe, of part of the dorsal aspects of the second, fourth, and fifth toes, and of the inner half of the under surface of the foot, including that of the great toe, was intensely red and devoid of its epidermal structures, being, in fact, in a state of early gangrene. On the dorsum of the foot the area corresponding to the cutaneous distribution of the anterior tibial nerve was specially affected. The gangrene, which was moist, affected only the skin and subcutaneous structures, the deeper parts being healthy; its line of demarcation was sharply defined. No macroscopic cause for the condition was found; there were no pressure on the arteries or nerves, no blocking of the vessels of the limb from the aorta to the foot, and no change to the naked eye in either the anterior or posterior tibial nerves. Microscopically, the posterior tibial nerve was normal. A portion of what was removed as the anterior tibial nerve proved to be the artery. This also was normal. The outline of the gangrene was so irregular that it seemed hardly likely to have been caused by intra-uterine pressure. The umbilical cord was attached and healthy. There were neither external signs of injury nor fractures of the bones. There was no fracture of the cranium. At the base of the brain on the left side there was considerable hæmorrhage under the dura mater but the source of the bleeding could not be determined. The brain weighed 12 ounces. All the vessels on the surface and in the substance were congested but nothing else abnormal was found. The lungs *in situ* were not fully expanded. The edges of both were very emphysematous and in places there was partial atelectasis, small pieces cut from both only just floating in water. The right side of the heart was slightly dilated, otherwise the viscus was normal. The other organs of the body showed no abnormality.

This case I have deemed of interest owing to its rarity. A search through many works has elicited nothing to explain adequately the cause of the gangrene—even Ballantyne's Ante Natal Pathology afforded no assistance. Several theories have suggested themselves, such as amniotic bands, pressure effects produced in utero, the action of bacteria, and, lastly, the increased blood pressure produced by the excessive contraction of the womb during the labour which the minute blood-vessels were unable to cope with—this reason I gave to the deputy coroner (Mr. R. Henslowe Wellington, M.R.C.S. Eng.) in order to account for the subdural hæmorrhage—but they cannot be substantiated sufficiently by the facts at my disposal. The two accidents experienced by the mother prior to the birth of the child seem to offer the only clue to the explanation of a condition which on account of its rare occurrence deserves to be recorded.

I have to acknowledge the kind permission of Dr. A. F. Stabb to publish this case.

Croydon.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF (?) TUBERCULOUS MENINGITIS.

BY WILLIAM R. BATES, L.R.C.P., L.R.C.S. IREL.

THE following case is, I think, of sufficient clinical interest to be recorded. The patient, who was a female, aged 19 years, was first seen by me at my house on Dec. 4th, 1900. She complained of feeling weak and tired, her appetite was capricious, there had been a gradual loss of flesh all the summer with increasing debility, and she had a large, painful, lymphatic swelling on the right side of the neck. Her temperature, taken in the mouth, was normal, her heart sounds were healthy, and there were no abnormal physical signs in the chest or the abdomen. She was ordered to paint the neck with a combination of collodion and belladonna and a pill containing arsenate of iron, nux vomica, and reduced iron was given.

I was called in to see her on Dec. 13th. She had been in bed from the 9th; intense headache commenced on the 10th but she had tried to get up on the 12th and was obliged to return to bed at once; vomiting commenced about 11 A.M. on that day. When seen by me her temperature was 103° F. and her pulse rate was 72; her respirations were quick; she had intense headache and intolerance of light with frequent vomiting; the pupils were equal and dilated; the bowels were constipated; there was no retraction of the abdomen. Her mistress was told that the illness was most probably meningitis and the girl was removed to her own home which, fortunately, was not far distant, where she could be well nursed. A powder containing ten grains of phenacetin and six grains of mercurous chloride was given. On the 14th she was worse. There was constant meningeal cry with marked retraction of the head; the vomiting still continued and occasional delirium was noticed. The patient's head was shaved, a large blister was applied to the nape of the neck, iodide of potassium in ten-grain doses with 15 grains of bromide of potassium was given every four hours, and mercurial ointment was rubbed into the axillæ and the groins night and morning. Her temperature ranged between 101° and 103° and the pulse was markedly slower. On the 15th the patient's condition was much the same but the pupils were sluggish in acting; her temperature was about the same and her pulse rate was 56; sobbing respiration was also noticed. On the 16th there was paralysis of the external rectus of the right eye. The discs were examined and marked neuritis was found but *no* tubercle was seen in the choroid. Vomiting still continued but was not so incessant. Tache cérébrale was well marked. On the 17th she was seen by me in consultation with my friend Dr. J. N. Richardson who agreed as to the diagnosis of meningitis, most probably of tuberculous origin, and an unfavourable prognosis was given. There was marked diplopia and both external recti were now affected; the pyrexia continued and the acuteness of vision was distinctly lessened. On the 18th the girl's condition was pretty much the same and it continued so through the 19th. On the 20th her temperature was normal in the morning, there was much less headache, and the vomiting which had gradually been subsiding for two or three days now ceased. In the evening her temperature was 99·4° and thereafter she steadily improved and gained flesh. From this time there was practically no pyrexia but double vision lasted for more than a fortnight and the squint did not quite disappear until May, 1901, when the girl was well enough to pursue her occupation.

What was the condition which gave rise to this train of symptoms? There can hardly be any difference of opinion as to some form of meningitis having been present. As there was no history of injury, middle-ear disease, or influenza the most probable varieties would be either (1) a septic form occurring in the course of some concurrent disease which I think need not be further considered, or (2) a specific form of the disease as the syphilitic or tuberculous. Against the first of these two causes is the objection that by the most careful examination and minute inquiries as far as they could be made without hurting the patient's feelings or those of her friends no evidence of primary sore, secondary trouble, or congenital affection could be found and I am left to fall back on the theory that the exciting cause of the illness was the tubercle bacillus. The history of increasing debility, the gradual loss of flesh, the affected lymphatic glands of the neck, and the age of the patient incline me to take this view, although it may be argued that from the manner in which the disease gave way to the treatment by mercury and iodide of potassium the case was one of specific disease.

The question of recovery from tuberculous meningitis is one *in which I am much interested, as more than 20 years* ago I attended a case which was then diagnosed as tuberculous and in which also there was an affection of the apex of the left lung, and this patient, who was a boy, got well and is now working with his father as a blacksmith. The absence of tubercle in the choroid is not sufficient to negative the diagnosis, as it is only present in a small percentage of cases which are indubitably proved by post-mortem examination to be tuberculous.

Ilkley.

THE LIFE SPAN OF THE GUINEA-WORM.

BY S. ARTHUR POWELL, B.A., M.CH. R.U.I.,
SURGEON TO THE POLICE HOSPITAL; PROFESSOR OF BIOLOGY, GRANT MEDICAL COLLEGE, BOMBAY.

A PAPER on this subject by Sir Patrick Manson appeared last July.[1] In Sir Patrick Manson's cases the time of possible infection extended from February to June. In the cases under consideration the period of exposure in the endemic area was only two days. I am indebted for the particulars to Mr. M. Cursetjee and Mr. Fazalbhoy Chinoy. A party of 16 gentlemen with five servants, all residents of Bombay, a city with a good artificial water-supply, where guinea-worm is only seen in patients from the country, chiefly from the Deccan, left Bombay and reached Mahad on April 20th, 1902, where they all stayed for two days, drinking the water from a well without filtering it. They returned to Bombay on April 22nd. On April 2nd or 3rd, 1903, the first worm made its appearance in the leg of one of these gentlemen. Up to the first week in July worms to the number of nine continued to be discharged from his body. Doubtless, owing to injection with perchloride of mercury, the exit of some of these worms was delayed, as they were killed, and considerable cellulitis and suppuration ensued. The next patient was delivered of a worm on May 1st, 1903, and five other patients between that date and May 20th. Seven patients in all were attacked, six of the party of 16 and one of the five servants. Nineteen worms in all were extracted. None had come out since the first week in July up to Oct. 3rd. The shortest period in these cases was 345 days and the longest 435. The great majority of the worms appeared a year and two or three weeks after the date of infection.

The estimation of the life span of this worm in its human host is a matter of importance in prognosis in the case of persons exposed to infection. Thus I had no hesitation in informing the ten gentlemen who have not yet suffered that they have little reason to fear the appearance of worms, a matter of considerable apprehension to some of them. Inquiries were made among the inhabitants of Mahad as to the prevalence of this worm in the district. The replies indicate that about half the population suffered from guinea-worm during 1903

Two points of interest in connexion with this parasite may be mentioned here. There is frequently a considerable fever *a few days before the worm* becomes palpable. Two of those cases suffered from fever with swelling of the face and hands. The sensation of swelling and tension to the patient is greater than the appearance to the surgeon seems to warrant. This swelling of the face and hands I have frequently observed when the worm was in the lower extremities and seems independent of the situation of the parasite. The origin of this fever may be suspected from the absence of malarial parasites and an increase in the proportion of the eosinophile corpuscles in the blood. In a paper[3] read before the Bombay Medical and Physical Society I described six cases of guinea-worm infection in which examination of the blood showed 4·75, 5·5, 7·5, 7·5, 8·0, and 12·25 per cent. of eosinophile corpuscles respectively. The pus from one sinus contained 19 per cent. of eosinophiles.

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[1] Brit. Med. Jour., July 4th, 1903, p. 10.

Bombay.

SEVERE CASE OF ERYSIPELAS OF LEG FOLLOWING ULCERATION TREATED BY ANTISTREPTOCOCCIC SERUM; RECOVERY.

BY E. H. BLAKE, L.R.C.P. IREL., L.S.A.

THE patient whose case is now described was a single woman, aged 54 years. I was first asked to see her on Jan. 4th, 1904. On my arrival I found that she had been vomiting for some hours and as her history was an alcoholic one I prescribed a mixture containing carbonate of bismuth with bicarbonate of sodium and hydrocyanic acid. The next morning she seemed better but her sister, who was looking after her, asked me to see her leg. On the right leg was a large varicose ulcer which had not been dressed for some days and which smelt most offensively. Hot boric fomentations were ordered and the assistance of trained nurses was obtained. On the next morning erysipelas had commenced at the seat of the ulceration and quickly extended up the leg to the thigh. The patient now got rapidly worse in spite of treatment and on the evening of Jan. 8th her condition was desperate. The temperature was 105° F., the tongue was dry and brown, the pulse was feeble and irregular, and the patient was delirious. Antistreptococcic serum (from the Lister Institute of Preventive Medicine) was now injected. On the next morning the temperature was 100° and the patient seemed much better. Another injection of the serum was given. Since then the patient has made an uninterrupted recovery and is now convalescent.

Upton, B.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Observation on Metabolism in the Febrile State in Man.

A MEETING of this society was held on Feb. 23rd, Mr. ALFRED WILLETT, the President, being in the chair.

Dr. G. C. GARRATT read a paper on Metabolism in the Febrile State in Man. The paper reviewed the literature of the subject and gave the results of analysis of the urine of febrile patients carried out during seven years' residence at the London Fever Hospital. The cases studied formed a long series, unusually uniform as regards age, sex, and condition; moreover, the diet during pyrexia was the same and contained no nucleins. In the absence of pyrexia the above diet was found to cause in persons kept in bed no retention of sodium or chlorine and a small loss of nitrogen. A study of the literature resulted in the conclusion that the reduced excretion of urinary water was merely the result of increased loss by other routes, often preceded by earlier diuresis and accompanied by diminished intake by the mouth. Dr. Hutchison's analyses, which showed little excess of water in febrile tissues, were confirmed by Dr. Garratt, who also pointed out that Leyden's work showed no absolute retention of water, but quite the contrary, and that others had greatly underestimated the insensible loss. Passing to sodium and chlorine, it was pointed out that reduced excretion of chlorine accompanied nearly all acute fevers except malaria, further that retention of chlorine might continue far into convalescence and bore no relation to retention of water. Again sodium and chlorine, given in combinations other than sodium chloride, were nevertheless retained and the return of the one did not necessarily coincide with that of the other. Dr. Garratt considered that no satisfactory explanation of the phenomenon had been produced, but inclined on the whole to that which assumed the chlorine to be retained in combination with albumin. He had, however, failed to find chlor-albumins in muscle after fever. Estimations of urea showed the usual increase resulting from fever and there was also a similar increase of uric acid. Further, it appeared that no close relation could be traced between this excretion and that of phosphates. In fact, while the uric acid was increased more than urea the phosphates showed on the average no increase at all. The conclusion drawn was that endogenous uric acid came from proteids rich in nitrogen and sulphur and poor in phosphorus. Excretion of ammonia was considered in special relation to that of acids and bases and Dr. Garratt concluded that, while more work on this subject was necessary, the evidence that acids caused the increased production was not convincing. The excretion of phosphorus and free acid tended to run parallel but while there was on the average a slight increase of the latter there was none of the former. It might be that more than usual was lost by the bowel, nevertheless Dr. Garratt concluded that the total output in the cases studied was not greatly augmented. Further there was no evidence that retention of phosphates occurred. The estimation of sulphuric acid exhibited an increase which was out of proportion to that of urea. Potassium was also increased but less so than urea; it showed a certain parallelism with phosphoric and also with sulphuric acid and played the principal part in combining with these acids. Dr Garratt suggested that some of the increase did not, therefore, represent metabolism of potassium holding tissues and that the output of phosphoric acid was a better guide thereto. The organism in these fevers appeared, in fact, to possess the power of selecting what proteids it would consume and to choose those rich in sulphur and nitrogen and to spare those rich in phosphorous and potassium. Calcium resembled chlorine, being excreted in abnormally small amount during fever. Magnesium was much reduced at first but increased later.

Dr E. I. SPRIGGS said that while working in association with Dr A. P. Beddard on metabolism in diabetes they had found a considerable increase in the acidity of the urine. Similarly in a case of acute rheumatism the acidity increased during the fever but fell directly the fever was over. The increase might be due to the excessive formation of acid or to an excessive nitrogenous metabolism. It seemed probable that the excessive nitrogenous metabolism played an important part, since if a healthy man was fed on a diabetic diet the acidity of the urine increased while he was on such a diet but subsequently became alkaline. When a man was breaking down a large amount of nitrogenous material a considerable quantity of acid was formed. The acidity was therefore probably not due to the fever but to the nitrogenous diet. Fever patients were in the main living on proteid. The ammonia present in the urine, as Dr. Garratt had shown, did not vary with the acidity of the urine and the ammonia was not produced in order to neutralise the acid. Dr. Spriggs propounded the following theory to explain the presence of the ammonia which could always be found in the urine. Ammonia was a normal product of cell metabolism in the body which became converted into urea in its passage through the liver. Such blood as did not pass through the liver would lose the ammonia it contained during its passage through the kidney. During febrile states the liver cells only in part converted the ammonia salts into urea and the unconverted ammonia would be excreted by the kidney. Such a theory would account for the variation in the amount of ammonia and the fact that even in health a small amount of ammonia was always present in the urine.

Dr. R. HUTCHISON, after speaking in the highest terms of the work which had been carried out by Dr. Garratt, said that he had worked especially at the excretion of chlorides in pneumonia. He had expressed the opinion that chlorides were retained in the fixed tissues. The work which Dr. Garratt had carried out showed that this was improbable but he thought that the chlorides might be retained in some combination with the albumins. Dr. Garratt's work also showed that the sodium might be retained not as sodium chloride but in some other combination. He had expected that the uric acid and phosphoric acid would, as the result of breaking down of nuclein, have run parallel, but, as Dr. Garratt had shown, this was not the case. The whole paper showed the extreme difficulty of estimating metabolic processes from examination of the products excreted.

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[3] Examination of the Blood in 3400 Cases of Fever, Transactions of the Bombay Medical and Physical Society, September, 1903.

Dr. GARRATT replied.

MEDICAL SOCIETY OF LONDON.

Progressive Paralysis of the Insane.—Brachial Neuritis.

A MEETING of this society was held on Feb. 22nd, Dr. F. DE HAVILLAND HALL, the President, being in the chair.

Dr. T. B. HYSLOP read a paper on the various Progressive Paralyses met with in the Insane. After dealing with the subject of general paralysis of the insane and criticising many of the views which had of late years been put forward to support the theory that general paralysis was a clinical and pathological entity he proceeded to differentiate some of the more important of the progressive paralyses associated with insanity which were apt to be mistaken for "general paralysis of the insane." The following types of progressive paralysis as met with in the insane were then described: (1) those of toxic origin (alcoholic, syphilitic, febrile, uræmic, and poisons); (2) types due to lesions of the cerebral cortex, as in acute dementia, stupor, katatonia, hebephrenia, and atrophy; (3) types associated with various system lesions—viz , locomotor ataxy, spastic paraplegia (and other spinal lesions), hæmorrhagic focal lesions, and tumours; and (4) types of paralysis due, for instance, to injuries or sunstroke. With regard to alcohol he gave many arguments and clinical data in support of the view that alcohol *per se* did not produce a paralysis of the progressive type like so-called general paralysis. The various relationships of syphilis to progressive paralyses were then discussed and Dr. Hyslop differentiated the following types: (1) terminal syphilitic paralyses; (2) parasyphilitic progressive paralyses; and (3) congenital parasyphilitic progressive paralyses. He believed that syphilis alone was not accountable for the so-called parasyphilitic affections. These terminal progressive paralyses did not exhibit the lesions of syphilis, antisyphilitic medication was useless, and these paralyses were comparatively infrequent in the female sex. The Chinese and negroes were races in which syphilis was prevalent and yet they had hitherto proved to be almost free from tabes and progressive paralyses. These and many other considerations led him to seek other factors of causation than those which might fairly be regarded as syphilitic and evidence was fast accumulating which went to show that the defensive nervous mechanism was at fault in the terminal stages of syphilis. The rôle of stress and strain and the toxic influences at work as terminal infections were then discussed and the paper concluded with an outline of the various paralyses due to uræmia, cortical lesions, system lesions, and traumatism.—Dr C. E. BEEVOR remarked that the cases he had seen were of an earlier stage than those met with in an asylum. It was necessary to look for a group or combination of symptoms as an aid to diagnosis rather than individual symptoms, such as pupillary signs, alteration of the patellar reflexes, tremor, movements of the corrugator supercilii, and alteration of character (exaltation did not occur until the later stages). He agreed with Dr. Hyslop that alcohol *per se* was not a cause of general paralysis. Syphilis was very often in operation but not necessarily in every case. —Dr. E. MARRIOTT COOKE agreed that a great many diseases were confused under the term "general paralysis of the insane." The diagnosis was often very difficult in the early stages but not if the case was followed for some time. He agreed with the view of the French school that the disease was always grafted on a syphilitic basis. But there was always a superimposed cause, such as alcohol or sexual excess. —Dr. SIDNEY P. PHILLIPS asked for more information concerning the treatment of such cases with mercury or with iodide of potassium. The effect of these remedies would throw light on the causation.—Dr. J. VINCENT BELL remarked concerning those cases which started with a decay of the moral sense —Mr. J. PEEKE RICHARDS congratulated Dr. Hyslop in calling attention to the popular error of including a great many conditions under the name "general paralysis of the insane." He thought it was quite possible that in some cases the mental symptoms might be due to the too prolonged treatment by antisyphilitic remedies.—Dr. HYSLOP replied.

Dr. C. W. BUCKLEY (Buxton) read a paper on Brachial Neuritis. Pain was the most marked symptom, generally slight at first but becoming constant and severe, with paroxysmal exacerbations. The majority of cases seemed to arise from an injury which was often very slight, but the neuritis might not show itself until two or three weeks afterwards when the other symptoms had subsided. There was then a gradual recrudescence of pain with marked tenderness over the affected nerves and the usual features of a neuritis. Trophic changes in the joint often resulted. Gout and rheumatism were common causes and the cases having these origins might commence with an acute inflammation of the fibrous structures of the muscles which spread to the other fibrous tissues in the neighbourhood, and as the acute symptoms subsided the existence of a neuritis became obvious and generally ran a chronic course. A chill in a gouty subject was liable to give rise to such a condition but cases of gradual onset and extremely chronic course were also attributed to gout. Cases arising in women at the menopause were not uncommon and while some of these were gouty in origin the majority were probably toxæmic and belonged to the same type of neuritis as that occurring in pregnancy and the puerperium. Reflex causes were sometimes responsible, such as aneurysm, or a lipoma in the area of distribution of the plexus. The duration was probably never less than three or four months; it might extend over years and relapses were not infrequent. The keynote of treatment must be complete rest as long as any actual inflammation of the nerves (as shown by tenderness) was present. At first specific treatment for gout or rheumatism might be indicated; in cases of inflammation of the fibrous tissue the combination of aspirin with phenacetin was useful and the coal-tar analgesics were generally preferable to opium. Hot applications relieved the pain and galvanism had also an anodyne effect, but Dr. Buckley found the free use of blisters along the course of the nerves most useful. Massage must not be used as long as any marked tenderness existed. The high-frequency current had been found beneficial by some observers in chronic cases but it seemed probable that these were cases of neuralgia persisting as a habit after the disappearance of the nerve lesion. Hydro-therapeutic treatment by means of hot douches and vapour baths was often very effectual and the mineral baths of Bath or Buxton were of the utmost value, especially in rheumatic or gouty cases.—Dr. PHILLIPS remarked that swelling of the limb might occur in such cases and hyperæsthesia might be very marked and associated with effusion of the joints. Some cases started with influenza. Salicylates were useful in some cases but not in all. Aspirin was useful. The ice-bag was a most efficacious remedy, especially if applied to the spine. Massage was most injurious.—Dr. WILFRED HARRIS observed that cases of arthritic atrophy of the deltoid muscle might easily be mistaken for neuritis of the circumflex muscle and suggested that a traumatic lesion of the shoulder-joint might explain some of the cases referred to.—Dr. F. J. POYNTON, while doubting the existence of the reflex arthritic amyotrophy of older authors, suggested that cases of so-called brachial neuritis were sometimes due to rheumatic or gouty joint affections.—The PRESIDENT remarked that the coal-tar derivatives often failed to relieve the pain, morphine and atropine being the only efficacious remedies.—Dr. BUCKLEY replied.

OPHTHALMOLOGICAL SOCIETY.

Gonorrhœal Conjunc [illegible] Peroxide.—Congenital Anterior [illegible] of Cases and Specimens.

A MEETING of this society was held on Feb. 11th, Mr. JOHN TWEEDY, the President, being in the chair.

Dr. ADOLPH BRONNER read notes of a case in which a woman, aged 32 years, had had her Eye Inflamed for two days before being seen by him. The lids were swollen and a profuse discharge was present in which gonococci were found. Perchloride of mercury was used as a lotion as well as protargol (5 per cent.) to the lids and drops of 3 per cent. hydrogen peroxide were used every four hours. On leaving off the peroxide the cornea rapidly became ulcerated but on recommencing it the ulcer at once

ceased spreading and healed, leaving remarkably little scar behind. Excellent vision was obtained and Dr. Bronner had
never sc
covery.
said tha
hypopyon ulcer but had not tried it for purulent ophthalmia. The ulcer healed very well indeed without perforating or scarring.—Mr. GUSTAVUS HARTRIDGE said that years ago all cases of purulent ophthalmia at the Royal London Ophthalmic Hospital were treated with it but that for some reason or other it had been given up. He thought that protargol of weaker strength than 20 per cent. was of very little use.—Mr. W. T. HOLMES SPICER said that some years ago he published a large number of cases of purulent ophthalmia treated at the Royal London Ophthalmic Hospital and he found that those treated with silver did much better than when treated only with peroxide.—Dr. BRONNER, in reply, said that he did not at all advocate the use of hydrogen peroxide to the exclusion of silver and other remedies but in combination with them he was much impressed with its utility.

Mr. J. HERBERT PARSONS read a paper on Congenital Anterior Staphyloma. A girl, aged three days, was admitted to the Royal London Ophthalmic Hospital, under the care of Mr. J. H. Fisher, with an anterior staphyloma of the left eye. The condition was noticed at birth. The mother was healthy and the confinement was normal; the child was born immediately after rupture of the membranes; there was no other deformity. There were a very slight mucous discharge and a complete anterior staphyloma with no anterior chamber. The iris was adherent to the pseudo cornea which was very thin and almost transparent. Pathological examination showed the usual features of an anterior staphyloma, the lens being *in situ* and the whole eye in an early stage of panophthalmitis. The posterior chamber was full of polymorphonuclear leucocytes which were also present in the vitreous. The true cornea at the sides showed dense infiltration; the epithelium and Descemet's membrane were present here only. The anterior capsule of the lens was ruptured; the lens was cataractous but there was no anterior capsular cataract. Nine previous cases of congenital anterior staphyloma with pathological examinations had been reported. All the cases showed exactly the same features as were found when the condition developed in the usual manner after birth. It was probable that the intra-uterine cases were due to the same cause—namely, perforation of the cornea. Endogenous infection was improbable owing to the absence of blood-vessels in the fœtal cornea. Exogenous infection through the amniotic fluid was more probable. It was almost impossible to explain the cases on the theory of maldevelopment.—Mr. E TREACHER COLLINS and Mr. EDWARD NETTLESHIP discussed the case.

The following cases and card specimens were shown:—

Dr. A. OGILVY and Mr. SYDNEY STEPHENSON: Specimens of Epithelioma of the Ocular Conjunctiva.

Dr. ARNOLD LAWSON: Traumatic Aniridia.

Mr. N. BISHOP HARMAN: Nose-blinking movements.

Mr. HARTRIDGE: Unusual Opacity of the Posterior Part of the Lens and Capsule.

Mr. G. W. THOMPSON: (1) Double Kerato-iritis in an infant; and (2) Peculiar Changes of, and around, the Disc.

Mr. M. S. MAYOU: Two cases of Cerebral Degeneration from the same family associated with macular changes.

Mr. W. H. H. JESSOP: Epibulbar Tumour.

LIVERPOOL MEDICAL INSTITUTION.

Perforating Ulcer of the Stomach.—Perforating Ulcer of the Duodenum.—The Treatment of Malarial Fever.—The Treatment of Placenta Prævia.

A MEETING of this society was held on Feb. 18th, Dr. JAMES BARR, the President, being in the chair.

Dr. R. J. M. BUCHANAN and Mr W. THELWALL THOMAS related a case in which an operation had been successfully performed for Perforated Gastric Ulcer. The patient was an anæmic girl who was suddenly seized with acute abdominal pain for which she was admitted into hospital The diagnosis was at first doubtful; the continued elevation of temperature and a marked leucocytosis suggested the possibility of typhoid fever. The subsequent progress of the case, however, revealed a localised peritonitis which was thought to be most probably due to a perforated gastric ulcer. On the twelfth day of the illness Mr. Thelwall Thomas operated. The stomach and the liver were adherent to the abdominal wall and on separating these adhesions a localised abscess was opened and a distinct hole was seen in the stomach. An unsuccessful attempt was made to close the perforation with stitches and finally the abdominal wound was left open and packed with gauze. Convalescence was prolonged but the patient ultimately made a satisfactory recovery.

Mr. DAMER HARRISSON related a case in which he had successfully operated upon a man, 45 years of age, for Perforating Ulcer of the Duodenum. There had been no previous gastric symptoms. The patient was suddenly seized with acute abdominal pain which he referred more especially to the right iliac fossa An operation was performed 11½ hours after the onset; a perforated ulcer of the duodenum near to the pylorus was found and was closed with sutures.—Mr. T. C. LITLER JONES referred to a case in which perforation of a gastric ulcer had occurred at midnight; the patient finding that the pain was relieved by the knee-elbow position remained in that posture all night. At the operation next day there was an anterior perforation of the stomach with little, if any, extravasation but fair adhesions —Dr. E T. DAVIES, Mr. G. P. NEWBOLT, Mr. GEORGE G. HAMILTON, Dr. W. CARTER, and Dr. C. J. MACALISTER took part in the discussion on these cases.

Dr. CARTER read a note on the treatment of some cases of Malarial Fever. Four cases had come under his care during 1903 and they all more or less resembled each other. They were cases of obstinate continuance of fever and in spite of all the ordinary remedies there were complete breakdown of the general health and loss of weight. In every instance a complete and apparently permanent relief of all symptoms had followed upon the administration of Warburg's tincture. In one case the patient had suffered from frequent attacks of malarial fever during the last three years and during the last attack, in spite of the administration of large doses of quinine, the temperature rose to 106° F., but after a few doses of Warburg's tincture the temperature fell to normal, the general health markedly improved, and apparently permanent relief had followed.

Dr. H BRIGGS read a paper on the Treatment of Severe Cases of Placenta Prævia. By severe cases were understood one considerable or two or more recurrences of hæmorrhage, regardless of the degree of placenta prævia. The paper was mainly based upon the more modern means of treatment which promised to improve the results obtainable in the management of these cases. Dr. Briggs first alluded to the bag devised by Champetier de Ribes which, together with its forceps, presented an inconvenient and cumbrous appearance; hence possibly the comparative rarity of the use of the bag in the treatment of severe cases of placenta prævia. Its use could be rendered easy by preliminary dilatation of the cervix by the finger or by Bossi's method in the rare instances in which the latter was required. The 22 cases tabulated and the conclusions formulated in a paper by Dr. G. F. Blacker in the Transactions of the Obstetrical Society for 1897 were freely used by Dr Briggs. Dr. Briggs cited two severe cases of placenta prævia as illustrating the value of the treatment which he advocated: (1) in the twenty-eighth week of gestation when the cervix was closed, the bleeding was free, and labour pains were absent; and (2) a full-term labour with copious hæmorrhage In both the bag was used and in the former preliminary dilatation was effected by Bossi's instrument, which enabled the medical attendants to complete what had been a presumptive diagnosis and to introduce the bag of Champetier de Ribes, which served its purpose by controlling the bleeding and inciting and completing labour in eight hours. In the second case labour had commenced and was completed with a living child in the first vertex position in two and a half hours after the bag had been introduced. Dr. Briggs then referred to de Paoli's 19 cases of placenta prævia treated by Bossi's method, com-
pleted in from five to 25 min
cervix and with a death-rate of
Dr. Briggs expressed his opinic
of placenta prævia was becomi
He cited his own experience in six cases in which for grave maternal conditions he had used Bossi's method. As to the use of the bag, its great value consisted in its easy introduction, its standing boiling, and its perfect control of the bleeding, forming, as Dr. G. E. Herman had stated, a better hæmostatic wedge than the half-breech of the child after

turning. From his own experience of 30 cases treated by version he concluded that forcible delivery was rarely necessary, for in all these cases the bleeding had been controlled and without exception traction on the child was not required to check bleeding. It was probable that in many cases hæmorrhage from laceration of the cervix during podalic version was a source of bleeding due to the treatment adopted. The interests of the child were improved by the use of the bag of Champetier de Ribes and whenever the bag was available it ought to be used in the treatment of placenta prævia.—Dr. JOHN E. GEMMELL said that most cases of placenta prævia were of the marginal type and in these the use of the bag was not necessary. Further, the introduction of the bag necessitated the presence of a second medical attendant to administer an anæsthetic, which would render its general employment impracticable.—Dr. LLEWELLYN A. MORGAN relied upon tight packing as a routine treatment in cases of severe hæmorrhage.—Dr. F. HEATHERLEY, Dr. DAVIES, Dr. MACKAY, Dr. W. BLAIR BELL, and Dr. LITTLE also took part in the discussion and Dr. BRIGGS replied.

EDINBURGH OBSTETRICAL SOCIETY.

Hebotomy.—Nephrectomy and Exploratory Nephrotomy.

A MEETING of this society was held on Feb. 10th, Dr. N. T. BREWIS, the President, being in the chair.

Dr. D. BERRY HART read notes on a case of Hebotomy (lateral section of the os pubis). He said that the aim in obstetric practice was to find in difficult cases a satisfactory operation safe for mother and child. Thus in flat pelvis when forceps or turning failed, as when the conjugata vera was below three and a half inches, then it was expected that symphysiotomy would be resorted to down to two and three quarter inches. After that only Cæsarean section or craniotomy would be available. Objection was made to symphysiotomy on the ground of the difficulty of insuring asepsis, the possibility of injury to the neighbouring structures, and the risk of the resulting union not being immoveable. Hebotomy was the lateral section of the body of the os pubis avoiding the symphysis; the objections to symphysiotomy affected this operation in much less degree. It had been recently revived by Gigli of Florence who used a special wire saw for the operation. An oblique incision was made through the soft parts down to the os pubis; a director was passed behind the body of the bone, keeping close to it, and afterwards the special wire saw. The saw divided the bone rapidly and easily. Any bleeding was readily controlled by pressure. After the section the pelvis opened out and permitted of an easier passage of the child. The periosteum was then stitched together and afterwards the skin wound. Dressings were applied, a binder was firmly fixed, and sand-bags were arranged at the sides of the pelvis. Dr. Hart gave details of a case where in a woman's first confinement craniotomy was performed; in the second labour hebotomy was tried and the child was easily delivered with forceps. The patient unfortunately died on the third day from exhaustion with no local symptoms. The necropsy seemed to show acute fatty degeneration of the tissues, probably the result of the chloroform. She had suffered severely from chloroform sickness both after the previous and this labour. The death-rate at present was about 6 per cent. The amount of space gained was three fifths of an inch for two and a half inches of divergence.—Professor A. R. SIMPSON, Dr R. C. BUIST, Dr. A. H. F. BARBOUR, and Dr. F. W. N. HAULTAIN made remarks on the paper.

The PRESIDENT described four Renal Cases. The first of these involved the removal of a large pyonephrotic kidney weighing 45 pounds and having the following dimensions, greatest circumference four feet, greatest diameter 15 inches, and greatest thickness ten inches. On section of the tumour no kidney substance could be distinguished with the naked eye but the organ appeared to be converted into a loculated cyst containing liquor puris and pus cells. The main cyst was divided into several loculi which were distinct but communicated with the renal pelvis by small rounded openings in which three rough calculi were present. A large calculus obstructed the ureter. The patient was known to have a renal swelling for 25 years. In 1875 she was known to have had a floating kidney and in 1888 a renal tumour. She could neither lie down nor sit on account of the great size of the tumour. Dr. Brewis performed [illegible] patient was now in good health. The second case [illegible] of tuberculous kidney and ureter and nephro-ureterectomy was performed. On examination the enlarged [illegible] and ureter were easily felt. Both ureters were [illegible] The urine from the right ureter contained tubercle [illegible] but none were found in the sample from the [illegible] bladder was healthy except in the region of the [illegible] ureteric orifice. The freezing point of the blood was normal. The kidney and ureter were removed. The ureter just below the renal pelvis had a circumference of four inches and was adherent throughout its whole extent. When the patient left the hospital no tubercle bacilli could be found in the urine. She was now well and strong. [illegible] the third case there was adenoma of the suprarenal body. The patient, who was 41 years of age [illegible] six times, had observed [illegible] years and had lost two stones [illegible] years. She had had four [illegible] abdominal swelling had [illegible] removed and the kidney with [illegible] In the fourth case exploratory [illegible] performed. The patient, who was 43 years of age, had been pregnant eight times, first noticed blood [illegible] urine four years ago; during the last four months the bleeding had been frequently very profuse. With the cystoscope blood was seen coming from [illegible] the urine from the right ureter was [illegible] President cut down on the left kidney and found it to be universally adherent and uniformly enlarged. He made a longitudinal incision in the middle [illegible] substance of the kidney, dividing [illegible] Nothing abnormal was found in the [illegible] presented the appearance of chronic [illegible] The two halves were stitched together [illegible] catgut sutures and the kidney was returned. The patient recovered and had had no hæmaturia since.—Professor SIMPSON, Dr. HART, Dr. HAULTAIN, Dr. J. W. BALLANTYNE, and Dr. W. FORDYCE discussed the paper.

GLASGOW NORTHERN MEDICAL SOCIETY.—A meeting of this society was held in the Western Infirmary on Feb. 19th, Dr. J. G. Connal being in the chair.—Dr. D. J. Mackintosh showed ten patients who had been under [illegible]ment in the electrical department. Some of them had been treated by the x rays alone and some by the x rays combined with Finsen's application of light. Six of them suffered from lupus, one from rodent ulcer, one from epithelioma, and two from tuberculous disease of the hand. In two cases the lupus was quite healed and in six of the others there was more or less improvement.—Mr. J. Walker Downie gave a demonstration on Suppurative Affections of the Accessory Sinuses of the Nose, illustrated by lantern slides, patients, and specimens. He said that these sinuses were divided into an anterior and posterior set, the anterior set consisting of the frontal sinus, the anterior ethmoidal cells, and the antrum of Highmore, while the posterior set consisted of the posterior ethmoidal cells and the sphenoidal sinus. The antrum of Highmore might become the seat of simple catarrhal inflammation with secretion of mucus. This condition was frequently associated with [illegible] catarrh and tended to spontaneous recovery if the [illegible] but if it became blocked suppurat[illegible] suppurative condition might also ari[illegible] of the nose or from influenza. In such [illegible] plained of pain over the cheek and [illegible] intermittent, unilateral discharge and [illegible] of the cheek. A unilateral purulent [illegible] the adult was probably due to an antra[illegible] child such a discharge was generally due to a foreign body. In these cases an odour was complained of by the patient which was not perceived by those around, whereas in ozæna the patient, owing to the sense of smell being blunted, did not notice the odour which was marked and offensive. Pus in the middle meatus might come from the frontal sinus, the anterior ethmoidal cells, or the antrum. In order to arrive at a diagnosis the meatus should be wiped out and the postural method tried; the meatus should then be again examined and if the pus came from the antrum a bead of it would generally be seen at the ostium. [illegible] method of diagnosis was by transillumination, performed with a lamp in the mouth, with the lips closed, in a darkened room. If the antrum was healthy it was generally fairly translucent, whereas if it contained pus it was opaque. The diagnosis might be completed by tapping the cavity through the nasal wall, the canine fossa, or an alveolus after extraction of a tooth. In acute cases the treatment consisted in the use of hot fomentations, soothing steam inhalations, and intranasal applications to reduce turgescence and to cleanse the surfaces. When these failed to relieve the cavity it might be tapped. In chronic cases all sources of intranasal obstruction, such as polpyi, hypertrophied bone, and mucosa, should be removed. If the discharge persisted Mr. Downie recommended the performance of a radical operation through the canine fossa under a general anæsthetic. He spoke against the common practice of tapping and *draining through an alveolar opening*. He next described the frontal sinuses and gave full details of the operation for exposing the sinus in cases of frontal sinusitis after all intranasal lesions had been rectified. In conclusion, he referred *shortly* to suppurative affections of the ethmoidal cells and of the sphenoidal sinus

Midland Medical Society.—A meeting of this society was held on Feb. 17th at the Medical Institute, Birmingham, Dr. W. G. Lowe of Burton-on-Trent being in the chair.—Mr. L. P. Gamgee showed a woman, aged 46 years, who in October, 1901, suffered from a severe attack of Right Hypochondriac Pain accompanied by Jaundice. This passed off and she was then free from symptoms for a year and ten months During August and September, 1903, she had numerous attacks of pain and was continually jaundiced, the degree of the jaundice varying. At the beginning of October she had great tenderness on pressure

between

swelling

position.

On Oct. 18th the abdomen was opened and the biliary apparatus was explored. No calculus was found and no obstruction to the ducts could be made out. The head of the pancreas was hard and markedly enlarged. The gall-bladder was stitched to the skin and a fistula was maintained for three months. At the present time some fulness could be felt in the old position but there was no distinct swelling and the tenderness had almost disappeared. The attacks of pain and jaundice had not recurred. The case was presumably one of chronic inflammatory enlargement of the head of the pancreas.—Dr. O. E. Purslow showed a Cystic Tumour of the Uterus. The patient, who was 24 years of age and married, with one child, was admitted to the Queen's Hospital, Birmingham, on Nov. 12th, 1903, with a cystic swelling of the abdomen reaching to two inches above the umbilicus and *presenting* all the physical signs of an ovarian cystoma. The swelling had been first noticed six weeks previously and both the patient and the medical man under whose care she had been thought that it was growing rapidly. *Abdominal section* was performed. The cyst when exposed had the appearance of an ovarian cyst. It was tapped and a large quantity of thin yellow fluid escaped from two separate locules. On commencing to remove the cyst it was seen to be growing from the fundus uteri, spreading out widely into each broad ligament and having extensive adhesions to omentum and intestine. The operation was difficult and prolonged; it was found necessary to amputate the uterus at the level of the internal os. The patient made an excellent recovery.—Mr. H G. Barling read a paper entitled "Notes on Gastro-jejunostomy, with a Comparison of Various Methods." The posterior operation was recommended, the jejunum being taken up through an opening in the transverse mesocolon. Mr. Barling based his experience of this operation upon a record of 18 cases, of which 16 recovered. The methods of union by Murphy's button, by Robson's bone bobbin, and by suture were discussed and the last was advised as providing a wider opening than either of the others.

British Gynæcological Society.—A meeting of this society was held on Feb. 11th, Professor John W. Taylor, the President, being in the chair.—Dr. William Duncan read notes on a case of Early Rupture of a Tubal Gestation and with the epidiascope illustrated the mode of the imbedding of the ovum by microscopical sections which showed that the gestation sac was separated from the lumen of the tube by muscular tissue. We publish this paper *in full* at p. 563 —*After discussion*, in which the President, Dr. J. J. Macan, Dr. Herbert Snow, Mr. W. D. Spanton, Mr. Christopher Martin, and Dr. H. O. Pope took part, Dr. Duncan explained his preference for suture of the *abdominal wound in layers, which in ordinary circumstances* did not take more than a couple of minutes, and pointed out that the ovum not merely found its way into the musculosa of the tube but its port of entry completely closed up.—Dr. H. Macnaughton-Jones showed an Aseptic Cap for the Mouth and Nose supported on a spectacle frame and devised by himself, which he thought equally effective and less cumbersome than others recommended. He read notes of a case of General Vesicular Eruption following a dressing of Iodoform and pointed out that an idiosyncrasy against that drug might exist and should be ascertained —Dr. Snow read notes on a case of a Cyst *simulating Femoral Hernia*, and Mr. *Spanton made a short* communication on Woollen Fibres as a cause of Bladder Irritation in Girls, relating three cases in which such trouble had been due to the wearing of coarse woollen under-garments *the fibres of which were detected in the* urine.—The President, after thanking Dr. Snow and Mr. Spanton for their interesting communications, proceeded to read his Inaugural Address, an abstract of which was published in our columns last week.

Medico-Legal Society.—A meeting of this society was held on Feb 9th, Sir W. J. Collins, the President, being in the chair.—A paper was read by Mr. J. H. Targett on Homicide by the Introduction of Foreign Bodies Specimens were shown in a recent case where a man confessed after some ten years to having murdered his child, aged ten months, by pushing three corks into the back of the mouth, two of which were found, as seen in the specimen, in the stomach; the third, a larger one, was impacted in the upper end of the œsophagus —This led to an interesting discussion in which Earl Russell, Dr. F. J. Smith, Dr. F. J. Wethered, and others joined. It appeared that in parts of the Midlands there was a practice of placing pieces of cork and sponges in the food of cats with a view to causing obstruction of the bowel and death —A second paper was
read by Professor A.
by Drugs, especially
also read by Dr. S.
cussion upon which was postponed until the meeting on April 19th —Nine new members were elected, amongst whom was Sir Joseph Walton, one of the judges of the High Court.

Æsculapian Society.—A meeting of this society was held on Feb. 19th, Dr. Leslie Durno, the President, being in the chair.—Dr. H. P. Miller gave a demonstration of Eye Diseases, including interstitial keratitis; iritis with punctate keratitis; coloboma of irides and of one lens; a boy with normal vision whose cornea, iris, and lens had been pierced accidentally by a piece of steel and surgically removed; opaque nerve fibres in a myope; congenital rhythmic semiclosure of the left orbicularis oculi in a girl, aged nine years, associated with mastication; and orbital tumour with proptosis in a rickety child aged 18 months. A diagnosis of hæmorrhage was made.—Dr. David Ross showed a man, aged 20 years, who a year ago began to pass an Excess of Urine He passed now on an average 22½ pints of urine and drank 20 pints of liquid in 24 hours He was losing weight, strength, and appetite The urine was clear, with specific gravity 1001, and contained neither sugar nor albumin. The rarity of the state was noted.

Hunterian Society.—The annual meeting of this society was held on Feb. 10th, when the following elections were made Council:—President: Dr. Frederick J. Smith Vice Presidents: Mr. John Adams, Mr J. H. Targett, Dr. John W Oliver, and Dr. T. H. Arnold Chaplin. Treasurer Dr. R Hingston Fox. Trustees: Mr. F. M. Corner, Mr. F. Gordon Brown, and Mr. R. Clement Lucas. Honorary Librarian: Dr. William Rawes. Honorary Secretaries: Dr. T. Glover Lyon and Mr. Harold L Barnard. Dr. H. Russell Andrews, Dr. S. H. Appleford, Dr. Arthur T. Davies, Mr. W. H. Best, Dr. J. H. Bryant, Dr. R. Fortescue Fox, Dr. W. J. McCulloch Ettles, Mr. A. W. Galloway, Mr. F. Rowland Humphreys, Dr. W. Henry Kelson, Dr. Herbert V. Hickman, and Dr. William A. Dingle. Editorial Secretary: Dr. Edward W Goodall. Auditors: Mr. Brown, Dr. Davies, Dr. G. Newton Pitt, and Dr. Smith

Reviews and Notices of Books.

Clinical Pathology of the Blood: a Treatise on the General Principles and Special Applications of Hæmatology. By JAMES EWING, A.M., M.D., Professor of Pathology in Cornell University Medical College, New York City. Second edition, revised and enlarged. Illustrated with 43 Engravings and 18 Coloured Plates drawn by the Author. London: Henry Kimpton. 1904. Pp. 495 Price 21s.

IN our review of the first edition of this work we spoke favourably of the scope of the book and of the manner in which Dr. Ewing had carried out his labours. We have no reason to alter our views after a perusal of the second edition. During the two years which have elapsed between the publication of the volumes the contributions to the knowledge of the blood in both its clinical and its pathological aspects have been very numerous and in many instances of fundamental importance. Dr. Ewing has succeeded in incorporating the results of these recent studies in a form which is useful and available both for the medical practitioner and for the student of hæmatology. Considerable additions have been made to the chapter on Technics. A full account is given of the "medico-legal serum diagnosis of blood." Dr. Ewing asserts that one fruitful result of the recent trend of study of the mechanism of immunity has been the discovery of a delicate and fairly trustworthy method of distinguishing human blood from that of the lower animals. The first step in the elaboration of this method of serum diagnosis consisted in the discovery by Tschistowitsch that the serum of an animal treated by injections of defibrinated blood or of serum from another species of animal develops the power of agglutinating and dissolving the red cells or of causing a precipitate in the serum of the second animal. Investigations by other observers have shown that this principle can be applied to the identification of blood for medico-legal purposes and that it is possible thereby to determine the origin of old blood stains. The mode of preparing the necessary serum is minutely described but the process is an elaborate one. The delicacy of the test, however, seems to be very great, a reaction having been obtained in solutions of blood too weak to give the absorption spectra and in solutions of 1 of serum to 50,000 of blood. After reading Dr. Ewing's remarks we agree with him that there are many difficulties in applying this test and that an absolutely faultless technique is required The proceeding is one which should be carefully investigated, as if satisfactory results can be obtained a great step in advance will have been made in the requirements of forensic medicine.

A paragraph in the first chapter is devoted to the subject of Cryoscopy. It has been shown that certain clinical deductions can be drawn from the determination of the freezing point of the blood. The results arrived at by various observers are here recorded. The apparatus employed in applying the test is described as is the method of using it. Dr. Ewing quotes Dr. Carrara who found cryoscopy of the blood serum the most trustworthy test for the medico-legal diagnosis of death by submersion. Dr. Carrara maintains that the absorption of fresh water through the lungs, gastro-intestinal tract, and skin raises the freezing point of blood serum, while salt water lowers it, in each instance more markedly in the left than in the right side of the heart.

In Chapter III., on the Morphology and Physiology of Red Cells, much new matter has been added. An excellent account is given of the varieties of the red cells and the pathological changes which they may undergo. Especially worthy of note are the remarks on the influence of therapeutic measures on these cells. The changes produced in them by the absorption of iron, arsenic, mercury, and lead are discussed in detail.

In no other department is the examination of the blood to be interpreted with greater certainty in one case or with greater reserve in another than in its application to the various types of leukæmia, and the chapter on this condition now includes the most noteworthy additions to medical knowledge on this subject. Under certain conditions the changes in the blood may yield positive diagnostic signs of leukæmia, whilst in other circumstances the changes may justify only a probable diagnosis. The occurrence of intercurrent infections seems to have a considerable effect in preventing an absolute diagnosis being possible. Again, in some stages of leukæmia the blood may fail to furnish indications of the nature of the disease which may then be overlooked. Most writers seem to agree that the early stages of the disease often escape detection and also that many spurious cases have appeared in medical literature, a false diagnosis having been arrived at.

In the chapter on the Leucocytes and Leucocytosis the essential features of Ehrlich's theories on immunity have been presented but Dr. Ewing points out that the limits of the volume do not permit full discussion of this subject.

Part II. of the work, which is devoted to the Special Pathology of the Blood, contains a vast amount of interesting information. The condition of the blood in the various acute specific diseases is carefully considered and the latest views are incorporated. The criticism of Widal's test for typhoid fever will be read with interest, as this diagnostic measure is now very extensively used. Dr. Ewing asserts, and the majority of medical practitioners who have had experience of the test will doubtless agree with him, that the difficulty in determining the value of the test in diagnosis arises principally from the divergent opinions regarding the essential features of a complete reaction. The belief in the specific quality of Widal's reaction has been almost abandoned; but, nevertheless, we agree with Dr. Ewing that the test remains an extremely valuable diagnostic procedure under several conditions. As in the case of other bacteriological tests used for clinical purposes—e.g, the search for tubercle bacilli in the sputum—a negative result is of little import unless obtained during the height of the disease (from the third to the fifth week) and on repeated examinations. In the great majority of cases the reaction disappears within a few weeks after convalescence. We can confirm Dr. Ewing's assertion that authentic cases, some of them fatal, have not given a positive reaction at any time during their course.

Dr. Ewing's work is a valuable contribution to the knowledge which at present exists with regard to the clinical pathology of the blood and we can cordially recommend it to our readers as a trustworthy book of reference.

First Dressing on the Battlefield. By Colonel NICHOLAS SENN, M.D., Ph.D., LL.D Chicago, Ill., Surgeon General of Illinois; Lieutenant Colonel and Chief of the Operating Staff with the Army in the Field during the Spanish-American War; Professor of Surgery, Rush Medical College. Reprint from the *Journal of the Association of Military Surgeons of the United States.* Carlisle, Pennsylvania: The Association of Military Surgeons. 1903 Pp 40.

THIS is a publication which may be read with profit and interest by civilian and army surgeons alike. It gives a brief history of the subject of which it treats, with the views and opinions that have been expressed by different authorities, together with those which have commended themselves to the author after having been carefully thought out by him and tested experimentally on the battlefield. As to the value of a first-aid dressing in war in preventing infection of wounds there can be no doubt. Ample experience has been accumulated in proof thereof and it has become generally recognised that the first and most important thing to be done for a soldier in the fighting line is to provide him when wounded with an early and secure application of a first dressing. It is mainly in regard to what is the best and most effective system and method of doing this and as to various points of practical detail that any difference of opinion or practice can be said to exist. During the Spanish-American war it was found that many of the dressings became displaced before the wounded reached the field hospitals and infection could often be traced to this. The necessity of providing a means of direct fixation of a dressing as an essential component part of the first-aid package consequently became apparent. This was met by including some strips of rubber adhesive plaster of American manufacture in the package. After varied observations and experience in the Greco-Turkish and Spanish-American wars Colonel Senn formed very definite conclusions—which it is the purpose of this pamphlet to set forth—in reference to what a field dressing should contain and what may be expected from it by a timely resort to its use in the field. It goes without saying that the package must be as light and small as possible, simple in its make-up and application, and yet containing everything essential to protect the wound against subsequent infection. He recommends the employment of boro-salicylic powder as the antiseptic to be relied upon and in the course of a few pages, beginning at page 17, there is a full and illustrated description of the package and dressings devised by Colonel Senn showing the manner of their application with gauze roller and adhesive plaster. We need not accompany the author throughout his observations and comments which strike us as, speaking generally, practical and sound. At the end of his pamphlet he sums up these in 25 conclusions. If any of our readers cannot peruse the pamphlet as a whole (as we advise them to do) they might at any rate consult these conclusions with advantage.

Handbuch der Geburtshulfe. (*Handbook of Midwifery.*) By Numerous Writers. Edited by Professor F. VON WINCKEL. Vol. I, Part 1. With numerous tables and illustrations. Wiesbaden: J. F. Bergmann. 1903. Pp. 657. Price 13 60 marks.

WHEN we remember the position which Professor von Winckel holds in the profession, the numerous writings which have appeared from time to time from his pen, and above all his excellent "Lehrbuch der Geburtshülfe," one of the best text-books on midwifery, we are delighted to see that he is responsible for the editing of the new "Handbuch der Geburtshulfe." The numerous advances which have been made in all branches of obstetric medicine during the last few years, and especially in the science of obstetrics, render the publication of such a work doubly welcome. The names of the large number of well-known authorities whose coöperation Professor von Winckel has secured are a sufficient guarantee that when finished this treatise will be a most complete and authoritative work. A book of this character, containing all the newest facts and theories in the science and art of obstetrics and a complete bibliography of recent writings, cannot fail to be of the greatest assistance to all those engaged in this special branch of medicine.

The first volume opens with a most interesting survey of the history of midwifery from the earliest times to the end of the nineteenth century. This is contributed by the editor himself and is illustrated by an interesting series of engravings of celebrated obstetricians from Hippocrates onwards. The rest of the volume is devoted to a consideration of the anatomy, physiology, and symptomatology of pregnancy. The first two chapters by Strassmann are concerned with the beginning of pregnancy, including an account of menstruation and ovulation and dealing with the changes in the ovum consequent on impregnation and the early stages of its development. The third chapter, one of the most interesting in the book and exceedingly well written by Pfannenstiel, is on the Changes in the Uterus consequent on Pregnancy, the Imbedding of the Ovum, and the Formation of the Early Placenta, Membranes, and Cord. The subject is very completely and fully discussed, occupying some 100 pages, and is elucidated by a number of most excellent drawings. The succeeding six chapters are devoted to an account of the anatomy of the fœtus, the placenta, and the liquor amnii and of the changes taking place in the maternal organism during pregnancy, and are written by von Rosthorn. He also describes the changes in the pelvic organs occurring during pregnancy. Under the Symptomatology of Pregnancy Goenner writes a description of the uterus and its contents during the various months of pregnancy, the minor disorders of this condition, and the position of the child in utero. The last two chapters are by von Winckel and deal with the subjects of Auscultation and the Duration of Pregnancy. It is impossible in the space at our command to consider these articles in detail. They are all of the greatest excellence and the work is likely to be a classic on the subject for some time to come. The volume contains numerous illustrations and tables and the whole is worthy of the high reputation of its editor.

LIBRARY TABLE.

Health, Wealth, and Wisdom. London: Methuen and Co. Pp. 212. Paper covers. Price 1*s.* net.—The names of the authors of this book are not given but we are told in a note that Part I.—that on Health—is by a "medical writer," presumably, therefore, by a medical man (but this, though implied, is not distinctly stated), and that Parts II. and III., those on Wealth and Wisdom, are written "by another hand." The first part is the one which would have naturally most appealed to us but the publishers directed our attention specially to the other two sections—possibly to divert us from the first, for who can fathom the thoughts of a publisher?—and by chance it happened that we first read the sections on wealth and wisdom. Now although the members of our profession excel in the latter quality they lack often wealth and on the whole probably the members of no profession, with the possible exception of the clerical, are more careless in matters of business. The part of this little book which refers to wealth is really very suggestive and quite entertaining. The wisdom of Solomon and the platitudes of the late Dr. Parker are here strung together with a lively commentary. The mistakes of Mr. Joseph Chamberlain of Birmingham, of Mr Seddon of New Zealand, and even of Rudyard Kipling himself are shown up impartially, and the teachings of Socrates and of the late Mr. Matthew Arnold are quoted and praised on occasion. There is a healthful and easy breeziness about the writing which is quite inspiring in a critical age and those who have the industry to read through this part of the book with the satisfaction of thinking they knew it all before will possibly not be able to say with equal assurance that they carry out all the maxims which it contains. They will admit that many well known facts have been brought before them in a new light and not a few may feel that if they did really know these things it would be the better if they had done them. Briefly, much good advice is pleasantly given. To the medical man the chapter on Health will be amusing rather than instructive "A question that everyone should at times ask himself is, Am I healthy?" So the author teaches (p. 10) and everyone should ask himself, "Am I making the best of life?" However old or young you may be, says the writer, your health is not up to the mark if amongst other things you are "gloomy and depressed" or are "capricious in temper" or have "uneasy feelings of any sort." In any such case you should consult a physician. "The question of cleanliness brings us face to face with the microbe" (p. 13). (This seems to demand illustration.) Concerning microbes, there is an improving conversation between the learned author and an old lady. *Apropos* of baths, the author introduces his own personality for which he observes he may be pardoned. We may pardon him because of his modesty. Having coughed up blood three weeks previously and being as "weak as a weasel" on a foggy December day he felt disinclined for a "cold tub." But his second self whispered that he was a Scot and he must not be afraid. "So the man stripped"—and here we may leave him. The industrious reader may learn from these pages that we must if we would be healthy have flowers in our bedrooms, but the same flowers should not be kept for more than a fortnight (p. 36); that cheese should be taken at the beginning, not at the end, of dinner (p. 42); that honey is a tonic (p. 53); and other strange things. Our bold Scot likes "to see a prettily dressed girl, even although she does tight lace a bit" (p. 37). "Half a tankard of good ale is preferable," he says, "to the best wine in the world" (p. 43). There is no indication as to the source of "the best wine in the world" or as to where the happy author found it. We ought not, perhaps, to assume that it is the "speck of Scotch" alluded to elsewhere in the book

Banks and their Customers: a Practical Guide for all who keep Banking Accounts from the Customer's Point of View. By HENRY WARREN. An entirely new and enlarged edition (the seventh). London: Effingham Wilson. 1904. Pp. 155. Price 2*s.* net.—Although many people have a banking account it is astonishing how little the average man knows about the banking business. That a book on this subject was wanted is abundantly proved by the fact that the present volume represents the seventh edition of one published by the author. We say represents, rather than is, the seventh edition because little remains of the original work and some of the chapters now printed for the first time are entirely new. It is certainly not too much to say that most people who have anything to do with bankers are sure to find in this volume a good many things which it is well for them to know and which will remove at once and for ever the undue respect which many of them have for moneymongers, to use the title bestowed upon them by Kinglake in "Eothen." Some of the customs of the trade seem hardly, according to the author, to commend themselves on the score of honesty. The chapter on Recent Bank Robberies is amusing as well as valuable and one on the Choice of a Banker will be found generally useful.

The Care of Infants. By Dr. SOPHIA JEX BLAKE. Second edition. Edinburgh: George A Morton. London: Simpkin, Marshall, and Co., Limited. 1903. Pp. xiii.–109. Price 1*s.* net.—This is a little book written by a lady doctor for the benefit of mothers. The guiding principle which has actuated the authoress throughout her work has been that prevention is better than cure and doubtless much illness and subsequent disappointment would be avoided by mothers if even a fractional part of the very sensible advice offered in these pages was conscientiously followed. In Chapter I. the importance of breast-feeding is emphasised and the indiscriminate use of drugs is deprecated, and even the early dose of castor oil with which most children are ushered into the world is stigmatised as a meddlesome proceeding "which anticipates the gentle work of nature by an hour or two at the cost of gripes and cries." In those cases in which breast-feeding is inapplicable or impossible cow's milk, diluted with water and sweetened with sugar, is recommended and, further, for those cases in which casein is found to disagree it is suggested that the excess should be removed by the "Frankland method." This is an antiquated method and an unsatisfactory one because to insure the removal of the casein the milk has to stand for 12 hours and its natural qualities are further interfered with by artificial coagulation with rennet. Although we regard the authoress's condemnation of artificial foods for young infants as justified by experience we cannot agree with her that gruel made with fine oatmeal "is excellent" for infants of the age of five or six months. The indigestible cellulose which it necessarily contains exercises an irritating action on the bowel of older children not to speak of those of infants of such a tender age. A chapter is devoted to vaccination and its advantages are eloquently advocated. Another chapter is occupied with minor ailments of children with their appropriate treatment, which, by the way, is little concerned with drugs. Clothing and baths are also adequately described in independent chapters. "The Care of Infants" is a perfectly safe guide to put into the hands of young mothers and there is no encroachment on the just domain of the family medical adviser; indeed with the exception of certain recommendations for feeding we are in agreement with most of the advice which the authoress has incorporated in her very readable little book.

The Guide to South Africa, 1903–1904 Edition. Edited annually by A. SAMLER BROWN and G. GORDON BROWN for the Union Castle Mail Steamship Co., Limited. London: Sampson Low, Marston, and Co., Limited. Cape Town, Port Elizabeth, and Johannesburg: J. C. Juta and Co. Pp. 474. Price 2*s.* 6*d.*—This work, for the use of tourists, sportsmen, invalids, and settlers, contains a vast amount of information and many good maps. The historical chapters are most interesting reading but we see that an error to which we called attention in our review of the 1902–03 edition still remains. We refer to the passage on p. 260: 'Three species of ibis are found, including the sacred red ibis (ibis Æthiopica)." As we said before, the sacred ibis is not red but black and white. Moreover, the red ibis (eudocimus ruber) is only found in America. This mistake should be corrected.

JOURNALS AND MAGAZINES.

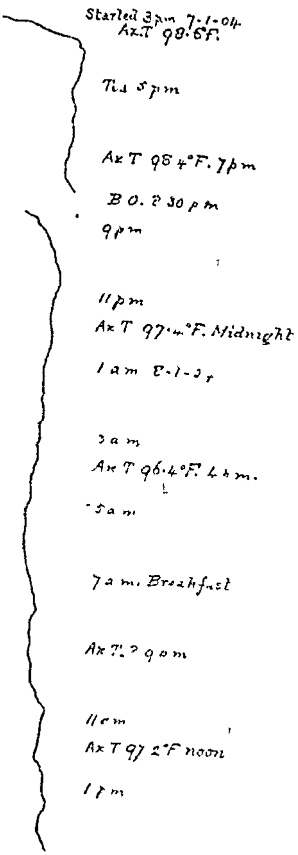
Technics.—This is a monthly magazine which Messrs. George Newnes of Southampton-street, Strand, London, W.C., have just commenced to publish. The first two numbers—i.e., those for January and February—contain articles which will be likely to interest many of our readers. The paper on the Diagrammatic Illustration of Class Lectures, of which Parts I. and II. have appeared, will supply useful hints for lecturers and authors of papers to be read before societies. The New Chemical and Physical Laboratories of the Royal College of Science, South Kensington, form the subject of articles by Professor W. A. Tilden and Sir Arthur Rücker. The Bacteriology of Brewing will be treated in a series of articles by Mr. James Grant, F.C.S., of which Part I. has appeared. A variety of electrical subjects are treated by well-known authorities on electrical physics, such as Professor W. H. Barrett, Mr. W. Brown, Mr. James Swinburne, Mr. H. M. Hobart, and others. Each of the first two parts contains rather more than 100 pages and is profusely illustrated.

THE GENERAL HOSPITAL, BIRMINGHAM.—On Feb. 12th a presentation was made to Dr. E. Malins by the governors of the hospital to commemorate his services of 25 years as the first obstetric officer to the institution. The subscribers were 152 in number with Sir John Holder as chairman. The memorial consisted of a stained glass window placed in the chapel of the hospital by the wish of Dr. Malins. There was in addition a valuable collection of silver plate with an illustrated bound copy of the resolution passed by the board on the resignation of Dr. Malins. The gift also included a gold brooch set with a large opal surrounded by diamonds for Mrs. Malins.

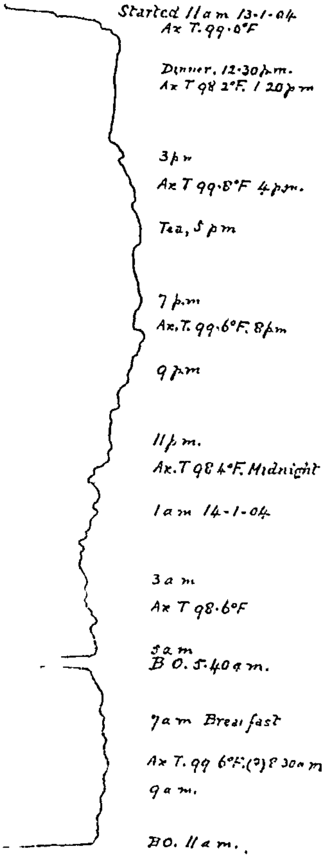
New Inventions.

THE PLATINUM THERMOMETER AND CALLENDAR ELECTRIC RECORDER FOR OBTAINING CONTINUOUS CLINICAL TEMPERATURE CHARTS.

HAPPENING to read some time ago of Professor Callendar's apparatus for obtaining continuous records of varying temperature, I conjectured that it might prove as useful for clinical work as it had done for scientific experiments and for factories. The Cambridge Scientific Instrument Company (Carlyle-road, Cambridge) was kind enough to lend me the apparatus and Dr. W. B. Warrington, of the Northern Hospital, Liverpool, very kindly placed his patients at my disposal for the trial, and I am now venturing to publish two complete 24-hour records of two cases. One was a case of granular kidney, cerebral hæmorrhage, and left hemiplegia, and the other was a rare case of osteo-arthropathy (probably tuberculous); the charts, however, are not given for any intrinsic interest but as examples of the utility and delicacy of the instrument in such work. So far as I can ascertain they are the first charts of the kind published, but I should add that, according to the Cambridge Scientific Instrument Company, Dr. C. H. Reissman, of the Middlesex Hospital, formerly made some experiments in the same line. I hope that Dr. Warrington will be able to continue the observations and believe that the apparatus is not only likely to prove clinically useful in many ways but may make interesting disclosures regarding the temperature both in health and in disease.



Case 1.—Hemiplegia



Case 2.—Osteo arthropathy

The platinum thermometer employed is of about the size of an ordinary clinical thermometer and is connected by long flexible wires to the recorder. In the two cases mentioned it was kept in the rectum for the 24 hours, the recorder being placed on a table at the bedside. Within the recorder a style charged with ink inscribes the temperature of the rectum on a chart fixed to a cylinder which revolves by clockwork once during the period. The nurses in charge of the cases made pencil notes from time to time on the same chart in a line with the style, regarding the axilla temperature (taken by an ordinary thermometer), the meals, and so on, being careful to record also the time at which the note was made. This process enables us to dispense with the previous standardising which would otherwise be necessary and also serves as a check. It will be observed that the record is interrupted when the bowels acted, the thermometer taking some time to become warm again after removal. The delicacy of the instrument is demonstrated by the wide amplitude of the curve, even with such small fluctuations (amounting only to about 2° F.) as occurred in the cases.

The Cambridge Scientific Instrument Company has also supplied a thermometer for use in the axilla. The clock-work cylinder can be made to revolve more rapidly than once a day. Of course, the charts here given are reduced in size, the actual dimensions being 12$\frac{1}{2}$ by 8$\frac{1}{2}$ inches. Too great a correspondence between the records of the nurses and of the instrument must not be expected.

RONALD ROSS, C.B., F R C.S. Eng., F.R.S.,
Professor of Tropical Medicine, University of Liverpool.

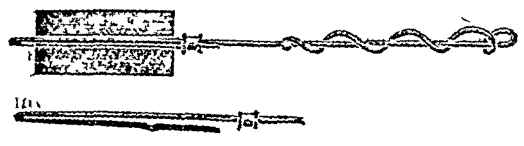
A TRIPLE-WICK CANDLE.

AT a patient's house it is generally difficult, and often impossible, to obtain a suitable light for making observations. This is especially the case when a light for the ophthalmoscope is needed. An ordinary electric lamp simply gives the image of the incandescent wire on the retina unless the lamp glass is ground to a degree that dims the light. A common candle throws only its own small image on the fundus. Every efficient portable electric lamp is heavy and uncertain in its action, and the best lamp of all—a paraffin lamp with a broad wick—is not only cumbersome but soils whatever is near it to a degree that is at last insupportable. A serviceable light I have often obtained by cutting away with a knife one side of two pieces of candle, so as to bring their wicks near enough together for the flames to blend. This suggested the idea of a three-candle wick. After a good many trials the most serviceable is found to be a wax candle, oval in section, 1$\frac{3}{8}$ inches wide, with the three wicks a quarter of an inch apart. The flames of these blend, forming a flat flame $\frac{15}{16}$ths of an inch wide, which is a practically adequate illumination. Experiment shows that the light is steadier and better without any form of chimney or lantern. The oval candle (as supplied) is inclosed in a tin tube of corresponding size and shape, with tubular caps to fit on each end to prevent the tops of the wicks being broken. The "wax" is hard and soon sets after the flame has been blown out or extinguished by the cap The metal casing prevents any "guttering," and the candle when burned down can easily be pushed up from the lower end by the fingers. The dimensions of the outer case are 5 inches long, 1$\frac{1}{2}$ inches wide, and $\frac{7}{8}$ths of an inch thick, a sufficiently small size to prevent consciousness of its presence in the pocket. It is made by Hawksley, 357, Oxford street, London, W. If a condensed light is desired it can be obtained by a lens on a rod hinged to a metal band to slip over the case.

Queen Anne-street, W. W. R. GOWERS, M.D. Lond.

UTERINE "FLAG MOP."

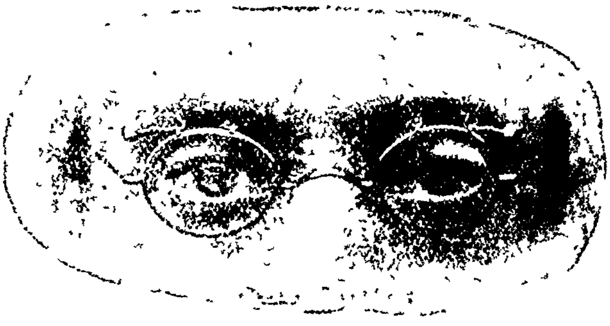
THIS little instrument is designed to serve as a substitute for the instrument known as Playfair's probe and I think will be found convenient for all the cases where that instrument is useful, the great point which always struck me as against the latter being the difficulty of removing the wool after use. In my little instrument it is, at any rate, quite easy to replace the lint, wool, or gauze by a clean piece in a moment; in fact, it is the application of the principle of ordinary sponge-holder to an instrument which is intended to be used in cleaning out or making applications to the interior of cavities for which the ordinary sponge-holder is too bulky. The instrument has been made for me by Messrs Reynolds and Branson of Leeds in aluminium, and either strips of lint or pieces of bandage or ribbon gauze can be used with it very conveniently, and these may be inserted either in the form of a broad strip placed between the serrated portion, so that the metal grips the material like the midrib of a leaf, or by the edge, so as to make a flag. Turning the instrument round in the hand the material is easily rolled around to make a convenient mop, and is equally easily undone and replaced when soiled by use. If it is thought advisable to protect the tip of the instrument (which, however, is blunt), a narrow strip of gauze or lint can be inserted between the serrations near the top, carried over the top, and then wound spirally round as in bandaging a finger, and fastened off where required by the moveable collar, which brings the serrated surfaces together. The instrument is sufficiently rigid for use, but can be bent in easy curves to suit the shape of the uterus or any other cavity; and as there is a little projection at two and a half inches from the point it can be used as an ordinary uterine sound if desired.



Harrogate. E SOLLY, M.B. Lond., F.R C S.Eng.

SPECTACLE FRAMES FOR PTOSIS.

Messrs. W. F. Stanley and Co. of Railway-approach, London-bridge, have sent us a spectacle frame intended for the relief of ptosis without operation. To the upper borders of the lens frames are fitted small spring supports which will obviously keep up the drooping eyelids. We doubt the comfort of the apparatus, but to those persons who dread anything in the way of an operation the spectacles will very possibly appeal. The illustration shows the spectacles in use.



ELEVENTH ANNUAL REPORT (FOR 1902) OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON.

III.[1]

AMONG the official publications of medical officers of health Mr. Shirley Murphy's present report is quite exceptional in this respect, that it contains particulars of the behaviour of chicken-pox in a vast urban community side by side with those of a concurrent epidemic of small-pox. We have previously learnt that in the early days of the recent epidemic the spread of small-pox in London was accelerated by the circumstance that in some cases there had been failure to distinguish between chicken-pox and small-pox. Accordingly the Council, acting on the advice of the medical officer of health, most prudently resolved to require the compulsory notification of chicken pox to the local sanitary authorities of the metropolis under the provisions of the Public Health Act. Although the primary object of this expedient was obviously the arrest of small-pox, it nevertheless incidentally enabled Mr. Shirley Murphy to prepare unique statistics concerning not less than 25,000 cases of varicella, and these he has analysed with every needful detail, not only with regard to the age and sex incidence of the attacks but also with regard to their distribution in relation to locality and to time. It is common knowledge that varicella is but rarely a fatal disease. At any rate, only a few deaths annually have been attributed to this cause in the returns of Somerset House and probably most of these have really been cases of unrecognised small-pox. Considerations of space prevent our following Mr. Shirley Murphy, as we should have liked to do, in his careful and lucid examination of the local incidence of varicella. We would, however, especially direct the attention of the profession to this portion of his report, feeling assured that it will be found interesting and helpful to busy practitioners in their treatment of what is sometimes a very perplexing complication of graver diseases.

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[1] Nos. I. and II. were published in THE LANCET of Feb. 6th (p. 385 and 13th (p. 456), 1904, respectively.

Measles in 1902 appears to have been somewhat less fatal than usual in London, accounting for the deaths of 51 per 100,000 of the population at all ages, as compared with 58, the average rate in the preceding ten years. In the metropolis it was more fatal in 1902 than in any of the great English towns except Bristol, Bradford, Hull, Salford, and Newcastle. Measles mortality is important mainly in early childhood, for more than nine-tenths of the deaths occur at ages under five years. Above this age the deaths from this disease in London are less than 160 a year on the average. Ignorance among parents concerning the infectiousness of measles and their unwillingness or inability to take the necessary precautions are the chief causes of the almost universal prevalence of the disease; and the fact of its high infectiveness for about three days before the rash militates greatly against the success of public efforts to limit its spread. Varying temporary success has attended the action of local medical officers of health in excluding possibly infective children from school. In spite of every precaution the disease in London recurs with increasing severity every two or three years, attacking the susceptible children who have accumulated in the intervals. "It is not probable," says Mr. Shirley Murphy, "that efforts made to limit the spread of measles will do more than postpone the age of attack, but it may be expected if this result can be attained that the mortality of measles would be diminished." The County Council has, with the consent of the Local Government Board, applied to measles those sections of the Public Health Act which prohibit the exposure of infected persons and things and their transmission from place to place without reasonable precautions and also those sections which provide for the disinfection of houses and clothing and for the disposal of bodies dead of dangerous infectious diseases. The county medical officer suggests the trial, at any rate, of hospital accommodation as a means of checking the present excessive mortality of measles. Pulmonary diseases are well known to be the most frequent and fatal of the complications occurring in measles—complications, moreover, against which the poor have the least adequate means of contending. It is therefore worthy of consideration whether the hospital treatment of measles cases should not be tried, on a limited scale, with a view of testing its value in reducing the fatality of the severer attacks of that disease.

Scarlet fever in London does not appear to have varied greatly, either in prevalence or in fatality, during the last two years. But if the last decade be compared with the first decade included in the table—namely, that terminating with 1868—the mortality to which it gave rise is seen to have decreased enormously. Diagram IX. in the present report shows this clearly. Thus, the mortality in the ten years 1859-68 is shown to have ranged from 10 per cent. below to as much as 235 per cent. above the mean rate for the whole period, whilst in the ten-year period just completed it has fallen from 30 per cent. below to 85 per cent. below the mean. The incidence of reported attacks is well shown in Diagram XI. which gives the relative incidence of scarlet fever cases in each month since 1891, the first year in which notification in London was compulsory. Taking the first quinquennium after this year it is seen that the reported cases were in the proportion of 5·9 per 1000 of the population at all ages, whilst in the more recent quinquennium the proportion fell to 3·8 per 1000. It is further to be noted as a probable factor of this decrease that since 1890 the admissions for scarlet fever to the hospitals of the Metropolitan Asylums Board have steadily increased from 40 per cent. to 78 per cent. of the total cases known to have occurred in the metropolis. In 1902 scarlet fever mortality was lower in London than in any of the great English towns except Leeds, Nottingham, Hull, and Leicester, but it was higher than in any of the chief continental and foreign towns except St. Petersburg, Berlin, Vienna, and New York.

In regard to the preventive efforts of the County Council respecting scarlet fever we notice with regret that although in 1902 that authority sought to obtain parliamentary [illegible] the distribution of infected milk [illegible] the right to require from milk [illegible] omers and information as to the source of their milk, nevertheless, these powers were rejected by Parliament, so that a highly important measure, obviously necessary for the protection of the people of London against infectious disease, is still wanting.

During the last four years there has been in London a steady decline in the fatality of diphtheria as compared with its average in the four years immediately preceding—a decrease represented by a fall in the average death-rate of more than one-third. It is further worthy of note that during the last 12 years there has been also a decline in the case mortality of this disease, the mortality among the notified attacks having fallen from 22·5 per cent. in 1891 to 10 per cent. in 1902. In the year 1902 diphtheria was less fatal in London than in any of the great English towns except Manchester, Birmingham, Leeds, Nottingham, Leicester, and Newcastle-on-Tyne, whilst if the figures are to be trusted it was more fatal in London than in any of the chief foreign and continental towns except Paris, St. Petersburg, Vienna, and New York.

Typhus as an endemic disease has now practically ceased to trouble us in London, although it still continues to "breed true" in parts of Ireland and occasional cases of the disease are from time to time imported thence into certain parts of this country. Not many years ago typhus was, perhaps, next to small-pox, the most dreaded pestilence that infested the slums of our great commercial centres and we well remember the time when it contributed almost as largely as enteric fever to the death toll of the metropolis. But now, happily, this is no longer true; in the year 1902 not a single death was attributed to typhus and the death-rate therefrom in the last ten years has averaged less than 1 per 1,000,000 of the population. The virtual extermination of typhus is doubtless peculiarly gratifying to the county medical officer of health who in past years, both in the fever hospital and in the slums, devoted so much personal attention to the study and prevention of that disease.

Enteric fever has occurred in London during the last two years in the proportion of 70 per 100,000 of the population. If the period since 1869 be divided into two portions it will be seen by Diagram XVII. that in the first half of that period—viz., from 1869 to 1884—the death-rate from that disease was almost constantly above the mean for the whole period, whilst since 1884 it has been as constantly below it. A careful study of this chart will show this clearly. What is peculiar in the history of enteric fever in 1902 is the fact of its abnormal distribution with respect to time. Thus Diagram XVIII. shows that whilst the duration of excessive enteric fever prevalence extends normally from the thirty-fourth to the fifty-first week of the year, in 1902 that period began as early as the twenty-fifth week, exceptional prevalence being noted in the twenty-ninth and thirtieth weeks of that year. This increase was not limited to any one locality but was widely distributed throughout London. In discussing the causes of enteric fever in London the subject most frequently referred to by local medical officers of health is that of infection from the consumption of shell-fish. Large quantities of such food, especially cockles, came to London from the neighbourhood of Southend and many London inhabitants visited that resort during the summer months, some for a single day and others for longer periods, many of them partaking of shell fish during their stay. "There is no reason for doubting," says Mr. Shirley Murphy, "that many cases of enteric fever in London were caused in this way, and it is highly probable that the consumption of shell fish from other places had a similar result."

In view of the foregoing experience it is satisfactory to note that the County Council has memorialised the Local Government Board, expressing the Council's hope that, in the interests of the public health, the Board will as soon as possible take steps to amend the law so as to prohibit the laying down of shell-fish in sewage-polluted creeks, &c., and to prohibit the sale of such shell-fish for human consumption; it also asks that all unpolluted layings, fattening beds, and storage ponds at present in use may be protected from pollution by any person or any sanitary authority. As this subject is now under consideration by the Royal Commission on Sewage Disposal we may hope that suitable legislative measures will be adopted by the Government for the protection of an important source of food supply.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 27, 1904.

War Office Changes.

As our readers, in common with the rest of the world, are aware a great scheme of army reform is in process of being carried out. Sweeping changes have been recently introduced and many are still impending in the organisation of the army, in the remodelling of the War Office, and in the readjustment of its machinery. It is a matter of vital importance that what is now being done should, to every possible extent, meet all present and future requirements and should have some guarantee of permanence about it. We wish that we could predict that such is likely to be the case, so far as the efficiency of the medical service and the medical and sanitary needs of the army are concerned; but, on the contrary, we cannot help feeling that the country is threatened with a distinctly retrograde movement by which constantly recurring evils and causes of public complaint are more likely to become stereotyped than removed. It will be intolerable if no well-grounded attempt is now made to obviate the scandals which, whether real or only alleged, have arisen out of so many of our wars from the time of the Crimea (when army sanitation was comparatively unknown) up to the date of the recent protracted struggle in South Africa. The facts connected with the late war are still fresh in the public mind, while the allegations made regarding the medical service in the Egyptian expedition of 1882, which on full official inquiry were shown to have been either unfounded or exaggerated, have not yet passed into oblivion. It will be remembered that as the result of the recent reforms in the Army Medical Service, which were mainly attributable to the South African war, we were able to congratulate the army and the medical profession on the improvements and changes that had taken place in the Medical Department. The influential official position which the head of the Army Medical Service as the representative of that service was for the first time to hold in connexion with the Government, the War Office, and the military authorities we regarded as a very notable feature. Quite recently, however, in announcing the names of the members of the newly constituted Army Council[1] we had to allude to the fact that the head of the Army Medical Service had no place on that council; and we would refer our readers to our remarks on the subject. We repeat what we there said that it is, in our opinion, absolutely essential in the interests of the army that the medical service should be represented adequately and prominently in the councils of the War Office. We are therefore glad to see that the British Medical Association has brought the subject to the notice of the Secretary of State for War who will assuredly have to declare his intentions and to justify them to the satisfaction of the House of Commons. It is not a question of mere medical sentiment or military detail; it is a matter of national interest that the medical service should not be relegated to some indirect and subordinate position but should occupy a place worthy of its grave and important responsibilities, such as Mr. BRODRICK rightly gave to it. The difficulties with which the Army Medical Service has always had to contend have largely arisen from the fact that responsibility and power have hitherto borne no relation to one another among the heads of the department. The late War Minister made a real attempt to rectify this unfortunate position by putting the head of the Army Medical Service in a situation at the War Office, where he could make the wants of his service directly known to those who could supply them. And now Mr. ARNOLD-FORSTER proposes to undo the work of his immediate predecessor in office in order to return to an obsolete state of things which has not stood the test of experience but has been already tried and discarded because found wanting. With the results and findings embodied in the report of the Royal Commission on the War in South Africa and the report on the Care and Treatment of the Sick and Wounded in the South African Campaign still fresh in our memories we cannot shut our eyes to the evils of unpreparedness with regard to medical and sanitary matters in war. But that is what Mr. ARNOLD-FORSTER will risk for the country.

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The After-Care Association.

THE After-Care Association, as is now well known, is a body which devotes itself to the well-being of poor persons discharged recovered from asylums for the insane and it had the good fortune to hold its annual meeting on Feb. 11th under the chairmanship and hospitality of the Bishop of LONDON who is one of the vice-presidents. His Lordship, in his opening remarks, said truly that the work of such an association appealed more or less directly to every member of the community as it was impossible to avoid some personal knowledge of the distressing effects produced by disease and derangement of the mind upon acquaintances, friends, or relatives.

The chief objects of the association are to facilitate the readmission of poor persons, who have been discharged as recovered from asylums, into social life: (1) by obtaining for them when needful an interval of change of scene and air, often so beneficial on recovery from ordinary sickness, by boarding them out in the country in cottages under proper care and supervision; (2) by giving them grants of money and clothing; and (3) by assisting them to obtain suitable employment. Surely no philanthropic scheme could be more worthy or more commendable and the council of the association is able to state in its annual report for 1903 that the work of the year has again been very encouraging and that the proportion of cases successfully started in life has increased, while the accounts which have been received of those helped in past years are satisfactory. The report goes on to say that during the year 250 cases had been before the council; of these, 155 were women and 95 were men. All cases, we are told, are thoroughly investigated by the officers of the association previously to being brought before the council and, where possible, all employers are interviewed. Sometimes as many as 20 or more visits have been made by a member of the staff in connexion with a single case. This means a very considerable expenditure of time and money but the council "has been well repaid for this work by the most satisfactory manner in which a very large majority have retained the situations found for them." To carry out this work the total amount of subscriptions, donations, and contributions for maintenance for the year came to £648. If we take the figures roughly as an estimate of income and work done it means on the average an expenditure of 50*s.* for each case which came up for consideration and which, if not actually maintained for a period or assisted pecuniarily in some way, had to be investigated as to its merits and circumstances. Considering the number and variety of claims upon the finances of the association it appears to us that this expenditure is not only moderate in itself but is also a testimony to the importance and significance of the services, gratuitous and otherwise, of the members of the council and their fellow workers. But bearing in mind the fact that the association has been in existence for some 20 years or more we are bound to say that, in our opinion, this income, which is necessarily the measure of the association's capacity for carrying out its beneficent work, is far from being commensurate either with the requirements of the class of "poor persons" under consideration or with a reasonable manifestation of philanthropy on the part of a responsible public community.

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[1] Vide THE LANCET, Feb. 13th, p. 462, and Feb. 20th, p. 538.

A glance at the last report of the Commissioners in Lunacy shows that on Jan. 1st, 1903, the pauper insane, or, as some prefer it, the rate-supported insane, in England and Wales numbered 103,794 and we are certainly not overstating the case if we say that 6000 or 7000 patients of this class are discharged as "recovered" every year. But of the number thus discharged as no longer requiring the immediate care and supervision of an asylum, how many are so far recovered as to be able at once to cope successfully with the buffetings and storm and stress of social and domestic life and to obtain suitable employment? In the absence of statistics on the point we may, at all events, reckon that at least one-half need the temporary help of an organisation like the After-Care Association if the best opportunities are to be secured to them of remaining well, of acquiring increased mental stability and confidence, and of warding off the risks of relapse. The 250 cases which, as we have said, came before the council during 1903 represent less than one-tenth of the work which the association, if it had the means, would be able to carry out. In other words, the After-Care Association ought to be placed in such a position financially as to enable it year by year to lend a helping hand to 2500 poor persons discharged recovered from lunatic asylums. This is the lowest estimate possible of the number of persons requiring such services as the association offers. The feeling expressed at the largely attended annual meeting at London House was strongly in favour of strenuous efforts for making the association and its work more widely known to the public and thereby increasing the number of members and workers as well as of private benefactors and subscribers. The development of self-supporting provincial branches to work locally in connexion with the parent association is necessary, while it is proposed to endeavour to obtain grants from public funds. There is every reason why public funds should contribute to the advancement of this particular sort of work, for, apart from physiological and hygienic considerations, it must not be forgotten that the present congested condition of our county and borough asylums necessitates or brings about in many cases a somewhat premature discharge on recovery, thereby handicapping the individuals so discharged in their struggle for existence and leading to an increase in the number of relapses and re-admissions. In this relation it is interesting to learn from Sir JOHN BATTY TUKE, M.P., who seconded the adoption of the report, that he intends at an early date to ask Parliament for the appointment of a commission of inquiry into the lunacy administration of the country with a view to strengthen the hands of the officials in dealing with what he regards as the two blots of that administration—namely, the defective arrangements as to the early care and management of incipient cases of insanity and the want of provision for the proper after-care of persons discharged recovered from asylums.

The patroness of the association is H.R.H. Princess CHRISTIAN and the Earl of MEATH is the president. The Archbishop of CANTERBURY and the Archbishop of YORK are among its vice-presidents and practical support and personal encouragement are given to its work by the Commissioners in Lunacy and many other official and private workers of standing and experience in the lunacy world. The offices of the association are at Church House, Dean's-yard, Westminster, and Mr. H. THORNHILL ROXBY is the secretary. There is no other society of the kind in the United Kingdom and, as we have endeavoured to point out, its objects are both extensive and urgent and fully deserving of the practical benevolence of the charitably disposed public.

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The Sale of Poisons.

SEVERAL recent occurrences are likely to cause anxious inquiries whether any steps can be taken to check the self-administration of poison under conditions of despair and it is highly probable that the matter is one which will in some form be brought under the attention of the Government at an early date. Notwithstanding the thoughtful care which resulted in the construction of the Act which regulates the sale of poisons by chemists and druggists there can be no doubt that at the present time there are abundant facilities for the acquisition and employment of large quantities of poisonous substances. Numerous attempts have been made to introduce and to enforce restrictions which would impede the purchase of poisons for unlawful purposes. The general desire has been to afford protection against homicide and the precautions which have been suggested and acted upon tend to facilitate legal investigations by supplying records of the sale of poisons to individuals who can readily be traced. The various steps which have been taken in the interest of public welfare are instructive, since they demonstrate the ardent desire to exert control, and they also show that this desire has been hampered and rendered ineffective by a respect for vested interests and by the frequency with which poisonous substances are largely employed for legitimate purposes. In 1868 an Act to regulate the sale of poisons and to alter and to amend the Pharmacy Act of 1852 gave the Pharmaceutical Society the power to draft regulations for keeping, dispensing, and selling certain poisons which were enumerated in a schedule. It was further declared to "be unlawful for any person to sell or to keep open shop for retailing, dispensing, or compounding poisons unless such person shall be a pharmaceutical chemist or a chemist and druggist within the meaning of the Act." A little later in the Act came the list of exceptions which has done so much harm indirectly by facilitating the sale of poisons. Clause xvi. states that "nothing hereinbefore contained shall extend to or interfere with the business of any legally qualified apothecary or of any Member of the Royal College of Veterinary Surgeons of Great Britain, nor with the making or dealing in patent medicines, nor with the business of wholesale dealers in supplying poisons in the ordinary course of wholesale dealing." This clause is probably to blame for many of the "accidents" which occur. Many examples could be quoted of poisons which have been procured under the plea of a desire to destroy animals. Our coroners' courts also afford frequent evidence of the dangers resulting from patent medicines which constitute a grave source of risk when improperly employed through ignorance or design. Many of these must be labeled "poison" on account of the presence of opium or of one of its active ingredients but this label does not check the sale of various nostrums which are largely advertised by leaflets and in the daily press.

The schedules drafted in 1868 have from time to time been extended to include additional drugs and preparations; sometimes these seemed to be necessitated by the introduction of new drugs and occasionally perhaps by some recent event attracting attention to an oversight. The last important addition was the inclusion in 1900 of "liquid preparations of carbolic acid and its homologues containing more than 3 per cent. of those substances" amongst the list of poisons within the meaning of the Pharmacy Act, 1868. When sold for all ordinary purposes these preparations must now bear the name of the article, the word "Poison," and the name and address of the seller. Lest these restrictions should hinder the use of these substances, exemptions are granted for "any preparation prepared for use as sheep-wash, or for any other purpose in connexion with agriculture or horticulture, and contained in a closed vessel, distinctly labeled with the word 'Poisonous,' the name and address of the seller, and a notice of the agricultural or horticultural purpose for which the preparation has been prepared." In spite of precautions carbolic acid still has to be credited with being the poison most commonly employed with suicidal intent and in addition with the responsibility of a relatively large number of accidental deaths. Classified lists of cases of poisoning afford very curious reading since they show that there is usually a reckless disregard for a period of intense suffering or an ignorance of the amount of pain likely to ensue. The poisons most commonly used are carbolic acid, spirit of salts, and oxalic acid, and they are probably selected because they are readily at hand, having been legitimately purchased some time previously for necessary work. The great difficulty which hinders any effective legislation lies in the frequency with which poisons are necessarily used for various purposes in the arts and in commerce. Every photographer and every entomologist is probably in possession of an abundance of poison and in the engrossing preoccupation demanded by his work it may well be doubted whether care is always taken to surround these substances with the vigilant precautions necessary to prevent abstraction for improper purposes.

We need not refer in detail to the statutory requirements connected with the dispensing and retailing of poisons. The regulations have been carefully constructed and generally they afford adequate protection against improper purchase of poison, although they can be evaded by false declaration of the "purpose for which it is stated to be required." All such provisions can be set at naught by the purchase of proprietary preparations or of compressed drugs intended to procure sleep or by the acquisition of small quantities of sedatives procured from several establishments. This last method is often facilitated by the possession of an old prescription and by the absence of a record, stamped upon it, of the dates upon which it has been compounded. This small precaution might prevent many regrettable incidents and it would appear to involve less trouble than the insertion of the lengthy index reference to the druggist's book in which a copy of the prescription will be found duly dated and numbered. In spite of all attempts to surround the sale of poisons with regulations designed to check their purchase with homicidal or suicidal intent the legitimate use of poisons appears to be so widespread that the framing of further restrictions is attended with very great difficulty.

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A Chemical Conception of the Ether.

Two distinct schools of thought in regard to the nature of the ether would appear to have arisen out of the discovery of radium in particular and of radio-activity in general. That there is a certain amount of antagonism between the views respectively held is natural enough but we should not be surprised if subsequent developments showed that a compromise will ensue and that time will prove that both schools are, after all, increasing our chances of arriving at a solution of the mystery. We still have amongst us the adherents of the emission theory of light as opposed to the wave theory, and, indeed, the ranks of the former have been decidedly strengthened since the discovery of radio-activity. What may be considered as the orthodox view of radio-activity is that which seeks explanation in the subdivision of the atom into infinitely smaller particles, the electrons. This conception of the atom that it is composed of a cluster has become so clear in the minds of many that already the phenomena of a screen fluorescing under the action of radium is spoken of as a bombardment of electrons. The atom of radium is, so to speak, in a state of disruption, its electrons are projected with enormous velocity, giving rise to the phenomena of light and heat. What Sir WILLIAM CROOKES described some years ago as radiant matter or a fourth state of matter is now made more intelligible, according to one school, by the electron theory and since the electron is the embodiment of an electric discharge we would appear to be in the presence of a phenomenon at one time manifesting itself as matter and at another as force. Thus the borderland between matter and energy would seem to have been broken down. The theory of electrons amounts to a return to the emission theory, which disregards the notion of the transmission of luminous vibrations through an etherial medium. The origin of the emanations of radium is still a mystery, but we may here recall the view that this display of energy is due to the power which radium has of absorbing unknown energies in space and yielding them again in a form within human perception. This is the wave theory as opposed to the emission or electron theory of radium's activity. The wave theory does not necessarily depend upon the assumption that ether consists merely of a subtle highly elastic fluid or medium capable of transmitting vibrations with an enormous velocity. On the contrary, attempts have already been made to found a chemical theory of ether and in this direction the conceptions of MENDELÉEFF, the great Russian chemist who was the first to perceive the beauty, order, and importance of the periodic law of the chemical elements, are of the highest interest.

In a masterly essay recently published[1] upon the subject MENDELÉEFF suggests that the ether is a gas which, like helion or argon, is incapable of chemical combination. The recognition of the ether as a gas assumes, of course, that it belongs to the category of the ordinary physical states of matter, gaseous, liquid, and solid. "It does not require," he says, "the recognition of a peculiar fourth state of matter beyond the human understanding (CROOKES)" and "all mystical spiritual ideas about ether disappear." MENDELÉEFF thus clearly takes the realistic view and it is not to be expected that his attitude would be without the support of well-ascertained facts. His reasoning on the face of it is most cogent. He recognises, in spite of the enormous penetrative power of ether which enables it to pass through every envelope, that it would be impossible to determine experimentally its mass in a given amount of other substances; therefore he speaks not of the imponderability of ether but of the impossibility of weighing it. In short, his propositions are: (1) that the ether is the lightest ultimate gas and is endowed with a high penetrating power which signifies that its particles have, relatively to other gases, small weight and extremely high velocity; and (2) that ether is a simple body or element incapable of entering into combination or reaction with other elements or compounds although capable of penetrating their substance, just as helion, argon, and their analogues are soluble in water and other liquids. He even proposes to place ether as an element in the periodic system at the top of the series of elements known as the zero group which comprises helion, neon, krypton, and zenon. The existence of elements lighter than hydrogen is highly probable because the hydrogen group is preceded by the zero group containing elements of less atomic weight according to the classification. On abundant reasoning MENDELÉEFF gives the first element in his series as "x," the second as "y" to the discovery of which he now looks forward, and the third element in the group is helion. He then clearly anticipates what would be the atomic weight, density, and properties of "x" and "y." He assigns to "x," the ether, an atomic weight of nearly one millionth that of hydrogen, travelling at a velocity of about 2250 kilometres per second. He thus regards ether as the lightest of all the elements both in density and atomic weight, as the most mobile gas, as the element least prone to enter into combination with other atoms, and as an all-permeating and penetrating substance.

Bearing these properties in mind uranium, thorium, and radium (the elements possessing the highest atomic weights) may be looked upon, according to MENDELÉEFF, as suns "endowed with the highest degree of that individualised attractive capacity, a mean between gravity and chemical affinity, which is seen in the absorption of gases and in the phenomena of solution." According to this conception the substance of the ether or gas must naturally accumulate from all parts of the universe towards the medium or mass of the sun just as the gases of the atmosphere accumulate in a drop of water. And the lightest of gases "x" will also accumulate about the heaviest atoms of uranium and thorium and radium and perhaps change its form of motion like a gas dissolved in a liquid. If, however, such a special accumulation of ether atoms about the molecules of uranium and thorium be admissible it seems to us that these elements ought to exhibit radio-activity to the same degree, whereas radium is several thousand times more active than is thorium or uranium, though its atomic weight is not very different. The well-known experiment which shows how readily the emanations from radium affect substances as soon as its salt is placed in communication with them appeals to MENDELÉEFF as "an emissive flow of something material from the radio-active substance and in a sense seems comprehensible if we assume that a peculiar rarefied ether gas capable of exciting luminous vibrations enters and passes off from the radio-active substance." The equilibrium of the ether atoms, it is suggested, may be destroyed in the case of the radio-active bodies by the "massiveness" of the atoms of uranium and thorium, "just as the luminosity of the sun may be, I think, due to its great mass being able to accumulate ether in far larger quantities than the planets." We fail to see how "massiveness" can be a factor in the way described, since the degree of radio-activity of these three elements differs enormously. In further support of his chemical conception of the ether MENDELÉEFF places a remarkable interpretation upon the phenomena proceeding at excessively low temperatures, at which the phosphorescence of many substances, and especially of paraffin, becomes more intense at the temperature of liquid air. His explanation is that paraffin and such like substances have a great capacity for condensing the atoms of ether at very low temperatures—in other words, the solubility or absorption of the ether in some bodies increases in extreme cold. According to this view phosphorescence in these circumstances becomes more intense, for the vibrations of light are then set up in the phosphorescent substances, not only by their own atoms but also by the atoms of ether which condense in th[illegible] bodies and start a rapid state of interchange with the surrounding medium.

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[1] A Chemical Conception of the Ether. By Professor D. Mendeléeff. London: Longmans, Green, and Co. 1904.

To sum up, it is clear that MENDELÉEFF adopts a distinctly realistic and charmingly simple view of the ether and we cannot but admire the ingenuity with which this great master of chemical science has marshalled so many facts in favour of his conceptions. All scientific men will listen with the greatest respect to the teaching of the elaborator of the periodic law, though they may not agree with him, that ether is a highly penetrative and an elastic gas, a real chemical entity which is at the bottom of the marvellous phenomenon of radio-activity. It is a bold thing to maintain against a powerful school containing men such as CROOKES, RAMSAY, LODGE, LOCKYER, SODDY, and RUTHERFORD that any conception of the division of the atoms into electrons is contrary to the scientific teaching of the present day. Yet that is what MENDELÉEFF confesses to be his attitude until "some one demonstrates either the actual transformation of ordinary matter into ether, or the reverse, or else the transformation of one element into another." It will be interesting to see, now that helion has been shown to appear as a product of radio-activity and of the slow breaking down of radium, how far the eminent Russian philosopher will consider it expedient to modify his tenets.

Annotations.

"Ne quid nimis."

THE METROPOLITAN STREET AMBULANCE ASSOCIATION.

WE published in our issue of Feb. 6th, p. 377, a brief account of this association which has now got seriously to work. In view of the approaching London County Council elections on March 5th all medical men whose work lies in the metropolis are invited to send in their names as soon as possible to the honorary secretary of the association, Dr. Arthur W. James, 69, Gloucester-terrace, Hyde Park, W. In this way candidates for municipal honours may see that the medical profession in London is of one mind as regards the necessity of the Council providing an efficient street ambulance service for London. Medical men joining the association will find themselves in good professional company. Several hundred members have already been enrolled, amongst them being the President and many of the Council of the Royal College of Physicians of London; the President, an Ex-President, two Vice-Presidents, and 16 members of the Council of the Royal College of Surgeons of England; the Vice-Chancellor of the University of London, and members of the staffs of all the London hospitals, among whom may be mentioned Sir Thomas Barlow, Sir T. Lauder Brunton, Sir William H. Bennett, Sir Alfred Cooper, Sir Anderson Critchett, Sir R. Douglas Powell, Sir E. Cooper Perry, and Sir Thomas Smith. The Metropolitan Street Ambulance Association has already sent a communication on this subject to every county council candidate, inclosing a postcard for a reply to the following question: "If elected to the London County Council will you interest yourself in securing the establishment by the Council of an efficient street ambulance service for London?" A great many satisfactory answers have been received and it appears certain that candidates will do what is wanted if the medical profession will point out to them the urgency of the matter. Neither those responsible for the local government of the metropolis nor the London public understand that our enormous capital has virtually no ambulance provision whatever. There are certain ambulances generously placed by Mr. H. L. Bischoffsheim at the public disposal, the police have a few stretchers, and the St. John Ambulance Association a few litters at its stations; but considering the population concerned there is virtually no provision in London for the rapid and safe conveyance of the victims of street accidents to the hospitals. The chances that a man with, say, a broken leg will reach a hospital in grievous anguish and at considerable risk of increased damage in a four-wheeled cab are very great, and this example alone is sufficient to bring before medical men the importance of a systematised scheme for supplying London with ambulances. We advise our readers to follow the example of the presidents of the Royal Colleges and other prominent members of the medical profession and to join the Metropolitan Street Ambulance Association.

THE VENTILATION OF RAILWAY TUNNELS.

A SERIES of articles on the advantages of the Saccardo system of ventilating railway tunnels has recently appeared in successive numbers of the *Engineer*, commencing with that of Jan. 15th. The difficulties presented by atmospheric vitiation in tunnels are exemplified by the conditions which accompanied increase of traffic in that of the St. Gothard. The difference of ordinary atmospheric pressure prevailing at opposite extremities of this tunnel usually suffices to create a decided natural draught throughout its length and for the first one and a half years during which the trains were run it was supposed that natural ventilation would be sufficient. Even when it had been for nearly eight years open for traffic—namely, in March, 1889—the chief engineer stated in a report that there existed at all times a natural air current so that, although the tunnel employés and trainmen were affected by the smoke, the vitiation of the air did not prevent them from working. At that time there were about 42 trains a day but when more trains were put on the air became worse. In the summer of 1897 there were 61 trains a day. Moreover, from the middle of September, 1897, up to the end of the year the atmospheric pressure at both ends of the tunnel was so nearly alike that the smoke from the locomotives simply remained in the tunnel without escaping by either entrance owing to the feebleness of the natural ventilation. The atmosphere then became injurious to the tunnel employés and the number of trains had to be reduced till the air was rendered just tolerable. The trainmen also were inconvenienced by the fumes, although their suffocation never went to the stage of syncope, as had often happened before—and has happened since—in tunnels of very much shorter length but constructed on steeper gradients, wherein doubling and trebling of the locomotives are necessary. Various schemes were now proposed to prevent the loss of traffic caused by the enforced diminution of trains, but nothing was done until in April, 1898, the directors determined to adopt the Saccardo system of forced ventilation which had since July, 1894, been employed with fair success on a main line of the Italian Adriatic Railways in the Apennine tunnel near Pracchia This method of mechanical ventilation, invented by Marco Saccardo, is in principle very simple. A cone-shaped ring of sheet iron, large enough for the trains to pass through but of less diameter than the tunnel, is placed concentrically with the latter and the vacant space between them is closed at the end next the mouth of the tunnel but remains open at the further end. Two air channels leading from this interspace communicate with two fans or ventilators by means of which air can be either forced into the tunnel or withdrawn from it. The length of the tunnel from the Swiss or north end at Göschenen to the Italian or south end at Airolo is 15 kilometres or about nine miles. The prevailing direction of the natural air current is from north to south and as it is generally preferable to create a current from the ventilator rather than towards it the ventilating station has been placed at Göschenen. It was stipulated by the railway company that the air throughout the whole length of the tunnel should have a uniform velocity of three metres (9 feet 10 inches) per second and no more. The ventilators have been working regularly since March, 1899. The effect was satisfactory from the very first, the smoke never accumulates with such density as previously, the nauseating mildewy odour which was formerly prevalent has disappeared, and the suitability of the air for breathing is, of course, immensely improved. Among other tunnels satisfactorily ventilated in the same manner and described in the *Engineer* mention may be made of the Ronco tunnel *(5·2 miles in length) and the Giovi tunnel (two miles in* length), both of which are not far from Genoa. The principal reason which led to the application of forced ventilation in the Giovi tunnel was the asphyxiatio [illegible] on August 12th, 1898, of two enginemen; the train th[illegible]n back down the hill to a spot in the Polcevera valley where a marble cross now marks the site of a terrible accident. The Saccardo system of ventilation is also to be applied to the Mont Cenis tunnel. The station containing the machinery is near the Italian or Bardonnecchia entrance and was completed towards the close of 1903.

BRANDY v. BRITISH BRANDY IN SCOTLAND.

IN THE LANCET of Feb. 13th, p. 447, we commented upon a conviction under the Sale of Food and Drugs Act at Accrington, where some innkeepers had sold "British brandy" when asked for brandy. The medical officer of health of the county of Lanark, Dr. J. T. Wilson, has recently succeeded not only in obtaining convictions before the sheriff substitute for similar offences but in a case selected as a test case for appeal to the High Court at Edinburgh has had the satisfaction of hearing upheld by the court his contention as to the application of Section 6 of the Sale of Food and Drugs Act, 1875, to grain spirit sold as brandy. The facts of the case in which the appeal was made seem to us to have established the culpable conduct of the defendant rather more clearly than is usual upon such occasions, although the circumstance which causes us to say *so apparently affected the opinion of the Lord Justice* Clerk in exactly the opposite manner. The inspector who bought the bottle of spirit which formed the subject of the charge asked the vendor what kind of brandy he was selling and received the answer, "Tricoche's brandy," which he imperfectly heard. He went away and returning ten minutes later asked a shopman in the defendant's employment for "a bottle of brandy," when he was given a bottle bearing the label "Old Brandy, Tricoche & Co., Cognac ***," for which he had to pay 8*s* The finding of the sheriff-substitute as to the liquor thus sold, upon the evidence of analysis laid before him, was that it "contained a large proportion (about one-half) of either raw grain or beet-root spirit and was therefore not of the nature, substance, and quality of brandy." The decision of the Court of Appeal upon this and upon the other facts found by the sheriff-substitute was that they constituted an offence against the Sale of Food and Drugs Act. With regard to one of the objections raised, "that the complaint was not relevant in respect that it did not state what genuine brandy is," Lord Moncrieff said: "It is complained that the sheriff-substitute has made a standard for brandy for himself. I do not see how he could avoid that. He has taken the evidence of skilled witnesses and has come to a conclusion. *It may* be wrong but we must take it as a matter of fact"—in which view the rest of the court concurred. The point which caused some doubt in the mind of Lord Trayner, the third judge, and in consequence of which the Lord Justice Clerk declined to concur in the judgment of his learned brethren as to the guilt of the defendant, arose out of the question and answer referred to above which preceded the sale of the "brandy." These were considered by his lordship to show that "the inspector was told what kind of brandy was being sold," so that, even though he might not have heard or understood what was said, "the seller was entitled to assume that the purchaser was aware of what he was getting" We do not consider that everyone who buys brandy, whether an inspector under the Sale of Food and Drugs Act or not, is to be expected to know the reputation of Messrs. "Tricoche and Co." or from what materials they distil their stuff. To us the sale of a bottle labeled "Old Brandy, Tricoche and Co., Cognac ***," at 8*s*. implies the offer and acceptance of a French brandy from the Cognac district, an old and consequently matured spirit of "three star" quality, at a price which entitles the purchaser reasonably to expect an article such as the label describes. In short, the transaction strikes us as a worse instance of sale "to the prejudice of the purchaser" than where "British brandy" is sold as "brandy" without the additional attractions of deceptive French names, a claim of age, and an absurd price. The liquid sold at 8*s*. in Lanarkshire had apparently been imported from France and bought in cask from the importers by the retailers who had bottled it, and we feel inquisitive as to what it may have cost them before they put it on the market, a matter which was, no doubt, irrelevant to the appeal but which in such cases might, we conceive, *affect the penalty inflicted*. In any case, however, whether the defendants were themselves deceived or not, we congratulate the medical officer of health and the county council of Lanark upon their success on behalf of the public, and especially because in Scotland even more than in England brandy is not a beverage but is used principally for medicinal purposes. We venture to think that recent successful prosecutions in England and in Scotland have been results of THE LANCET Special Analytical Commission on Brandy. The Commission sought to make it plain, among other matters, that brandy, if genuine, is a distillation of wine or a "grape spirit" and that fraudulent imitations can be surely detected by chemical analysis. These propositions have now been proved by evidence *in courts of summary jurisdiction and a* court of appeal has decided that the facts thus established constitute an offence against a useful Act of Parliament passed for the protection of the public.

MYOSITIS OF THE RECTUS ABDOMINIS AFTER TYPHOID FEVER.

MYOSITIS is a rare complication or sequel of typhoid fever. In a series of 829 cases Professor Osler found it only once. In the *Boston Medical and Surgical Journal* of Nov 26th last Dr. D Scannell has described a case in which the rectus abdominis muscle was affected. It is of interest both because of the difficulty of diagnosis and because no other case in which this muscle was affected appears to have been recorded. A boy, aged nine years, was admitted to hospital with a severe attack of typhoid fever. After four weeks furunculosis, mainly of the abdomen, thighs, and buttocks, appeared as a complication. Cultures yielded staphylococcus pyogenes aureus and streptococcus pyogenes. 12 days later signs of ischio-rectal abscess developed. The pus did not yield the typhoid bacillus. Two months after admission he was discharged well. Five days later he was taken back with the history that on the day after discharge there was profuse diarrhœa with a little blood in the stools and abdominal pain. The pain increased and there were chills and fever. On re-admission the temperature was 100·2° F. and the pulse was 134. He lay in the dorsal decubitus position with the thighs flexed. The lower abdomen on the right side was dull and very tender and a mass was felt there, [illegible] like that conveyed by a full bladder. The Widal reaction was negative. Acute perforative appendicitis with abscess was diagnosed. Under ether, the abdominal muscles being relaxed, the question of a full bladder again presented itself but catheterism negatived this supposition. An incision was made over McBurney's point. The peritoneum and appendix were found to be normal. There was an ovoid indurated thickening of the right rectus muscle in its lower third. The appendix was removed and the wound was closed. Unfortunately the swelling was not incised. On the sixth day after operation the wound was healing and the temperature had fallen to normal but the induration and tenderness persisted. On the tenth day after operation the induration was slightly diminished and the wound was healed. From the thirteenth to the sixteenth day the conditions present on readmission—pyrexia, pain, spasm, and palpable mass—were reproduced. Then the mass gradually diminished and 24 days after operation it had completely disappeared.

A CRITICAL TRIAL OF SOME NEW DRUGS.

IN the *Wiener Klinische Rundschau*, No. 50, 1903, Dr. Alois Strass of Vienna gives the results of a careful critical examination of the effects of some drugs of comparatively recent introduction—viz., aristochin, aspirin, hedonal, mesotan, and theocin—with a view to determine their usefulness. Aristochin, a neutral carbonic acid ester of quinine, was administered in doses of from a quarter to half a gramme in place of quinine itself in about 15 cases. It has been claimed for this substance that it does not cause the noises in the ears and the giddiness sometimes resulting from the use of the sulphate of quinine and that it is not bitter. Dr. Strass was satisfied of the usefulness of aristochin but was not convinced in many cases of the absence of symptoms of cinchonism after its use and came to the conclusion that it had no advantages over the sulphate, except that for children the absence of the bitter taste was an advantage. Aspirin, which is a derivative of salicylic acid, one atom of hydrogen being replaced by an acetyl group, was given in about 40 cases. Satisfactory results were only obtained in cases with a rheumatic origin. Its action was in no way inferior to that of sodium salicylate and the unpleasant effects of this substance were in general not forthcoming. Aspirin entirely failed to influence the fever of pulmonary tuberculosis but was useful in some febrile conditions of doubtful origin and in the fever of acute gastro-enteritis. Hedonal, a hypnotic of the urethane group, was administered to about 40 patients, mostly cases of heart and lung disease with a few cases of neurasthenia and neuritis. The usual dose was from 1 to 1·5 grammes. Dr. Strass found that this drug had very little influence on insomnia, unless it were combined with some other drug influencing the cause of the sleeplessness more directly; for example, in heart cases it was necessary to give some strophanthus, in pulmonary tuberculosis codeine, and in neurasthenia bromides. In cases of neuritis and chronic alcoholism it tended to produce cerebral congestion and some excitement and was soon refused by the patients. Mesotan, a metoxymethyl ester of salicylic acid, was tried in about 30 cases and was found to be very useful in all conditions in which salicylates are of value. Its local action could be increased by the production of a local hyperæmia before its use by means of baths or dry cups—e.g., in sciatica and lumbago. Mesotan was, moreover, found to be a useful [illegible] with good results [illegible] from eight to 14 days [illegible] were rubbed into the skin [illegible] and [illegible]. Theocin ([illegible]), a synthetically prepared xanthine derivative, was tried in about 30 cases. It proved to be a valuable [illegible] cases but only when no heart failure and no lowering of the blood pressure were present.

THE RELATION OF THE "N" RAYS TO VISION.

A NEW department of physiology seems likely to be opened up through the discovery of Blondlot's "n" rays which appear to play an important rôle in regard to various manifestations of vital activity. Several scientific observers have been working at the relation of the "n" rays to vision and Blondlot has observed that the eye is itself a source of the rays and also that the sensitiveness of this organ to light is augmented under their influence. M. Augustin Charpentier has carried the investigation a step further and has tried the effect of directing the rays upon the brain through the skull. Stimulation in this way, especially of the region of the angular gyrus, produces a sensation of luminosity. Changes in the pupils can also be brought about by introducing the region of the corpora quadrigemina into the path of the rays or by acting upon the medulla through the agency of a source of the "n" rays placed over the cervical spine. It is probable, therefore, that the "n" rays which accompany ordinary light waves are in part responsible for the phenomena of vision and in a recent communication to the Société de Biologie M. Bohn has ingeniously applied this hypothesis to explain why fresh water and marine animals adhere to their respective habitats. In some experiments on Nereis he found that while the animal when kept in sea water swims about actively in the light, in darkness it falls to the bottom of the vessel and crawls there sluggishly. A similar change takes place when Nereis passes from salt water to fresh—e.g., as in entering the mouth of a stream—its activity ceases and it is then carried out to sea again. M. Bohn suggests that the relatively dormant condition has the same essential origin in the two cases and is to be attributed to the cutting off of the "n" rays, on the one hand by removal of the source of light and on the other through the inability of the rays to pass through fresh water.

THE ASSOCIATION FOR THE TRAINING AND SUPPLY OF MIDWIVES.

THE council of the Association for the Training and Supply of Midwives is issuing an appeal for funds to enable it to carry on and to extend the work of the association. As it points out, the new Midwives Act requires that in future all midwives shall be trained and registered. After March, 1905, no one will be able to take the title of midwife unless certificated and after 1910 no women will be allowed "habitually and for gain to attend women in childbirth" without the certificate of the Central Midwives Board. There can be no question but that the number of untrained women who are practising as midwives throughout the country at the present time must be very large indeed. Many of these women will, from lack of education, from lack of means, or from lack of opportunity be unable to obtain the certificate necessary to enable them to continue their work. It is with the object of helping such as these and for the purpose of assisting poor women to acquire the necessary training that this association has been formed. The cost of training [illegible] about £20, a sum far beyond the reach of [illegible] who at the present time are pursuing [illegible] the new Act comes fully into force in 1905 a considerable demand for trained midwives is likely to arise and for some time it is probable that there will be a dearth of properly trained women. The livelihood to be gained by practice as a midwife amongst the poor must often be very small and very precarious and the initial expense will act as a deterrent to many who might wish to undertake such work. If a sufficient supply of fully trained women is to be provided for the poor it is necessary that the funds for their training should be contributed in many instances by the charitable public. The association undertakes to arrange for the training of suitable women in approved hospitals and other institutions and centres; it is anxious to coöperate in this work with local associations and it will be prepared as funds allow to make grants and loans in aid of training to associations and individuals. It is felt that in a large number of cases free training will have to be given under agreed conditions as to the subsequent work of the candidates, and it is also thought that a practical form of help may be in grants to local committees for the part maintenance of a midwife in districts too thinly populated to support one without such help. A home has been opened at East Ham by the association in coöperation with the Plaistow Maternity Charity, where four pupils at a time are trained in a crowded and very poor district under a competent midwife for the certificate of the Central Midwives Board. The objects of the association are worthy of all recognition and we hope that this appeal will meet with a favourable reception from those who have the interests of the poor at heart. As the registered midwife is now a legal institution it behoves us all, whatever we may think of the arguments that led to her creation, to see that she is a competent person. The offices of the association are at Hanover Chambers, 12, Buckingham-street, Strand, London, W C, to which address any donations may be sent.

THE ETIOLOGY OF LEPROSY.

IN an annotation which appeared in THE LANCET of Jan. 30th, p. 316, we expressed a hope that further investigations would be forthcoming which would corroborate or otherwise Mr. Jonathan Hutchinson's theory with regard to the connexion between fish-eating and leprosy. We have now received a copy of a special report by Dr. George Turner, medical officer of health of the Transvaal, entitled "Fish and Leprosy" (Government Printing Works, Pretoria, 1903). Dr. Turner does not agree with Mr. Hutchinson that the eating of decomposing or imperfectly cured fish is the chief cause of the prevalence of leprosy. In support of his view he points out that leprosy is fairly common in Basutoland. He thinks that it is probable that the disease was introduced amongst the Basutos by the Hottentots but he argues that it does not follow that the source of infection was cured fish. He considers such an occurrence most improbable because the Basuto in his own land does not eat fish; he never fishes; and will not eat fish given to him by others. Dr. Turner gives a table showing the proportion of cases of leprosy amongst the different races reported at the census of 1901 in the Cape Colony. It is shown that excepting those of European race the Kaffir is the least affected, then in order comes the Malay, the most frequently attacked being the Hottentot. Yet the Malay is essentially a fish-eater in whose hands the catching and "washing" of fish chiefly rest. Dr. Turner argues that if the theory regarding the etiological influence of cured fish were true leprosy should be most prevalent amongst the Malays; but, as he has pointed out, such is not the case. Probably the white man eats fish more frequently than does any other class of the population, with the exception of the Malay, yet he suffers least of all. A table is given showing the number and percentage of the patients in the Pretoria Leper Asylum on July 31st, 1902, and indicating those who had eaten fish before becoming lepers, the kind of fish consumed, and the variety of leprosy from which they suffered. The facts with regard to the white and coloured races are interesting. 95 per cent. of the white patients had eaten fish and 45 per cent. had partaken of cured fish. Amongst the coloured races only 30 per cent. had ever tasted fish of any sort and only 10 per cent. cured fish, and there was this result, as shown by the statistics, that there were fewer cases of leprosy in the asylum amongst those who had habitually eaten fish than amongst those who had not. These observations would seem to disprove the theory enunciated by Mr. Hutchinson and it will be interesting to observe whether Dr. Turner's conclusions are supported by other authorities.

THE BRITISH MEDICAL BENEVOLENT FUND.

WE publish in another column a brief notice of the annual meeting of the supporters of the British Medical Benevolent Fund and desire, not for the first time, to bring the claims of this charity prominently before our readers. The committee of the fund pleads earnestly for continued and increased help without which many of the urgent applications made to the charity must be passed over; and it brings, in our opinion, sound arguments forward why its efforts should be supported. The cost of administration is only just over 5 per cent. of the funds at its disposal and, as there is no canvassing, candidates for benevolent aid are spared the pain of publicity. All legacies are invested in trust securities and thus an assured income is obtained for the annuity department. We think that these considerations should recommend the fund to those benevolent persons who desire to see their gifts well administered and who hold that a charity should deal with the public and its immediate supporters upon strictly business principles. The British Medical Benevolent Fund does excellent and valuable work in an unostentatious and economical fashion, and we should be glad to hear that accessions to its funds enabled it to extend its operations.

A RARE DEFENCE.

ALTHOUGH the general public are not lacking in a proper gratitude for the services of the medical profession, yet when it comes to an expression of opinion dramatists, novelists, and satirists of all kinds have from the days of Molière chosen rather to hold the medical man up as an easy butt than to employ the forces of ridicule in his just defence. With all the more pleasure, then, did we read an article signed "S. R L." in the *Manchester Daily Dispatch* of Feb. 10th. The author of this article—whoever he is—writes "All for the Dear Doctor," and he is not only witty and amusing in the medical man's behalf and at the expense of those who decry him but also extremely sensible. To begin with, he holds sound views upon the value of a medical man's advice and attention, altogether apart from any drugs that the practitioner may or may not choose to employ. He deprecates the common way in which the medical man and the medicine are confounded, as though they were integral parts of one obnoxious whole. "One might as well give up the shoe maker because he did not make one able to walk about in bare feet," says our author, "as the doctor because his medicine does not provide a new stomach, or liver, or whatever the defective organ under treatment may happen to be." Again, "S. R. L." combats the way in which the man of the legal and the man of the medical profession are constantly viewed in the same light. The public, he says, regards one as the parasite of crime and the other as the parasite of disease. Yet, according to him, no comparison could be more unfair, for whereas the lawyer fosters litigation, upon which he fattens, the medical man spends his days in paradoxical but benevolent efforts to mitigate those very evils which are the source of his livelihood. "How easily," he says, "might an unscrupulous doctor terrify his patients and treble his income by magnifying their complaints and multiplying his own attendances, and how thoroughly in accord would such practice be with the lines on which business and other professions run. How entirely opposite, says our laudator, "is the behaviour of the family doctor," and we are glad to believe that the praises of "S. R. L" are well founded and widely deserved.

CYTODIAGNOSIS IN NERVOUS DISEASES.

THE study of the cerebro-spinal fluid and of other serous fluids of the body has opened up a new field of diagnosis in medicine. In some departments considerable results have already been achieved. The study of the cerebro-spinal fluid and its contained cell elements (cytodiagnosis) has been carried out with great success, especially by observers of the French school, an account of whose work has already appeared in THE LANCET.[1] The special methods of cytodiagnosis are being widely used in nervous diseases since Quincke devised his method of lumbar puncture whereby the fluid could be drawn off easily for study. In the *Medical Record* of Jan. 23rd Professor Charles L. Dana, of Cornell University, gives an account of his studies on a series of cases of various nervous diseases. Widal in 1900 reported several cases tending to show the value of cytodiagnosis and claimed for it an important place in the diagnosis of cerebro-spinal syphilis, tabes dorsalis, and general paralysis and his observations have been largely confirmed by others. The cerebro-spinal fluid exists normally in the subdural and pia arachnoid spaces under a pressure equal to that of from 40 to 60 millimetres of mercury, but under pathological conditions, says Professor Dana, it may rise to 800 millimetres. The specific gravity is from 1003 to 1004 but in inflammatory and other diseases it may rise to from 1008 to 1012. Normally it is clear but in disease it may be cloudy from the presence of cells and débris or may become blood-stained. In general paralysis and in cerebro-spinal meningitis the proteid constituents of this fluid are increased (Widal, Ravaut, Guillain). The disintegration of medullated nerve fibres, a process which occurs in cases of chronic alcoholism, is indicated by the presence of cholin in the cerebro-spinal fluid, a fact which was ascertained by Dr. F. W. Hastings in Professor Dana's patients. Phosphoric acid is, according to Donatti, simultaneously met with in the cerebro-spinal fluid, this substance and cholin being joint products of the disintegration of lecithin which exists in the myelin of the nerves. A systematic study and counting of the cellular elements were made in 22 cases by Professor Dana with the following results. In eight cases of general paralysis the lymphocytes or cells in the fluid varied from 16 to 135 per 100 fields of the hæmo cytometer. In two other cases of the same they averaged from three to six. Lymphocytes were found to be abundant in the fluid in cases of both general paralysis and of tabes dorsalis. In commencing alcoholic insanity and in Korsakoff's disease the cells varied in number from four to six per 100 fields, in cerebro-spinal meningitis they were more frequent and averaged 155, while in syphilitic disease of the brain or spinal cord they reached the very high average of 722. In cases of doubtful diagnosis between general paralysis and chronic alcoholism the existence of cells in the cerebro-spinal fluid tended to indicate the presence of the former disease, while the absence of cells enabled the investigator to exclude syphilis, tabes dorsalis, general paralysis of the insane, and multiple sclerosis. In meningo-myelitis of syphilitic origin, Professor Dana, the abundance of the cells i the degree of intensity of the morbid pro bacterial (streptococcal) inflammation was pr observed polynuclear leucocytes in the whereas in ordinary syphilitic diseas leucocytes were present. Mallory and that in tuberculous meningitis the pred cerebro-spinal fluid was the lymphoid (mo that in purulent meningitis polynuclear ponderated, and this is confirmed by Profes In the same issue of the *Medical Record* P Fraenkel of New York gives an account of 4 by him in regard to cytodiagnosis. Of thes cerebro-spinal fluid in sufficient amount for s included seven cases of tabes dorsalis, four paralysis, three of cerebro-spinal syphilis, seven o sclerosis, two of paralysis agitans, three of cerebra two of severe hysteria, and one each of poliomyelitis, diplegia, aural vertigo, hereditary syphilis, and rhino All the cases of tabes dorsalis presented a marked in of lymphocytes and in two of them polynuclear cells present. Three cases of general paralysis and six of mult sclerosis showed marked lymphocytosis as did two cases cerebro-spinal syphilis and one case of cerebral gumma. I all the other cases, adds Professor Fraenkel, the fluid was free from corpuscular elements. All the observations of Professor Dana and Professor Fraenkel were made under aseptic precautions.

THE CONGRESS ON CLIMATOLOGY AND URBAN HYGIENE AT NICE.

A FURTHER programme has been issued concerning this Congress. Though it is entitled the First French Congress of Climatothérapie et Hygiène Urbaine, the circulars concerning the same are printed in English and foreigners generally are cordially invited to attend. The object is to discuss the climatic treatment of disease and the hygiene of health resorts where such treatment may be attempted. With this programme it is but natural that the Congress should meet on the Riviera. We are told that the Congress "will consist of duly qualified French and foreign physicians, of scientific men whose works bear on the subjects to be discussed at this Congress, and also of representatives of the medical press." Application for membership must be made not later than March 15th and the entrance fee of 20 francs should be sent to the treasurer, Dr. Bonnal, 19, Boulevard Victor-Hugo, Nice A form will then be forwarded, on which the member must inscribe the details concerning the route by which he proposes to travel and he will then receive tickets which will entitle him to a reduction of 50 per cent. in the railway fare. Speeches in other languages than French may be delivered if the president approves. Several papers by well-known local practitioners are announced on the climatic effects of various Riviera resorts and Dr. Balestre, whose functions at Nice are the nearest French approach to those of an English medical officer of health, will read a paper on the Disinfection of Towns. Of course, there will be excursions and facilities given to investigate on the spot the various advantages offered for the treatment of the diseases that are most likely to be benefited by a change of climate. Professor Chantemesse of the Pasteur Institute will preside and Dr. Hérard de Bessé of Beaulieu-sur-M Alpes Maritimes, is the general secretary of the Cong All seems to have been well thought out and orga Indeed, if there is any fault it is rather that the r somewhat too much into detail and do not leave sufficiently open to the circumstances and moment. One rule, in any case, is sure to

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[1] THE LANCET, May 30th, 1903, p. 1535.

It is undoubtedly very necessary to limit the duration of the speeches, though this is best done by a vote of the Congress itself given when the necessity of such limitation has made itself felt. But here we are told in advance that the time for reading papers must not exceed ten minutes and the speeches discussing these papers five minutes. It is absolutely impossible to treat complex scientific subjects in so short a time. The president is sure to allow speakers to overstep this narrow limit and once such a concession is made to one speaker it cannot be refused to others. A broader limit might be more easily observed and then something effective would be done to check undue loquacity. Undoubtedly as travelling becomes more and more easy there will be an increased tendency to utilise change of climate in the treatment of disease. Such congresses as that announced should facilitate this very natural and generally very agreeable method of treatment.

THE IMPERIAL YEOMANRY HOSPITALS' REPORT AND SIR ALFRED FRIPP.

WE were requested last week to publish the letters from Sir Alfred Fripp and the Countess Howe which appear on p. 605 of our present issue. Publication was delayed, however, by a communication which we received from Sir Alfred Fripp to the effect that his letter as it had appeared in the lay press was not as he had signed it. His apology, as we now print it, tallies with the document signed by him which has been produced for our inspection by Lady Howe's solicitor.

THE LONDON LICENTIATES' AND MEMBERS' SOCIETY AND THE LONDON CONJOINT DIPLOMA.

A MEETING of the London Licentiates' and Members' Society was held on Feb. 23rd, when Dr. F. J. Smith, the President, addressed the society. He explained clearly the circumstances, so often alluded to in THE LANCET, by which the provincial student has obtained so great an advantage over the London student in the securing of a medical degree, and pointed out that the public had begun to assume that a practitioner without a degree was in some way, on paper and in theory at any rate, inferior in medical attainments. The effect on the medical schools in London now was, he said, that for some years there had been a steady and nearly persistent increase in the number of students in the provincial schools and a decrease in those of the London schools, a result which it was thought the London teachers might have foreseen. They were told, it was true, that the Royal Colleges tried to obtain powers to grant a degree in medicine; that might be so but it was impossible to believe that their efforts were really thorough and unanimous and that they went steadily to work with the one object in view of relieving the difficulties of metropolitan students of medicine. The reconstructed University of London had copied the worst features of the old examining body of that institution and had grafted on to the old constitution but little of what was of use in the metropolitan schools of medicine. The petition of the London Licentiates' and Members' Society, setting forth these disabilities and difficulties, had been received by the Royal College of Surgeons of England very sympathetically and by the Royal College of Physicians of London with hardly the same spirit, but the meeting of a combined committee of the two Colleges led to nothing. The Colleges declined to approach the University of London with a view to any combined examinations. The association then appealed to the University of London whose reply was that it could not help them. The association has our best sympathies but we do not see how the object for which it is working, the granting of a medical degree to holders of the London diplomas or licence, is to be effected. We look forward confidently to the time when the medical degree of the University of London will be attainable by all capable and industrious London students, but no regulations by the University or the Colleges to assist in bringing about this result would be retrospective in their action.

THE LONDON SCHOOL OF TROPICAL MEDICINE: CRAGGS'S RESEARCH PRIZE.

A PRIZE of £50 will be awarded to a past or present student of this school who during the current year (October to October) makes the most valuable contribution to tropical medicine. Contributions must be written in English and essays must be sent in on or before Oct. 1st next to the Medical Tutor at the London School of Tropical Medicine, Royal Albert Dock, London, E., who will gladly afford further information.

SANITARY MARITIME AND QUARANTINE COUNCIL OF EGYPT.

IT is announced that the Quarantine Board of Egypt will dispose of five posts for medical officers at a monthly salary ranging from £22 11*s* to £28 14*s*. Competitors must be duly qualified either by a European faculty or by the State. Applications must be addressed to the President of the Quarantine Board not later than April 2nd, 1904, accompanied by (1) a copy of the candidate's diploma; (2) a certificate of practical work; (3) a certificate of good health; and (4) a formal engagement to take possession of the post, in case of nomination, during the month following the official notification. Candidates must also indicate the languages which they know. The administration reserves the right to send these medical officers, in succession, to the different ports of the Mediterranean and Red Sea. Their resignation cannot be accepted unless addressed to the Presidency of the Quarantine Board three months in advance.

SMALL-POX IN MADAGASCAR.

IN what way small-pox was first introduced into Madagascar is uncertain but there is evidence that the disease has long been prevalent in the island. Its dangerously infective character was early recognised and in the *Annales d'Hygiène et de Médecine Coloniales* for 1904 is given some account of the protective measures adopted before the French occupation of the country. At the beginning of the nineteenth century there was in vogue the primitive procedure of burying alive the unfortunate victims of the disorder, a penalty of death being exacted in the case of any person who attempted to disinter the body. This barbarous method was in time replaced by a rigorous isolation of the sick person who was confined in a pit to the edge of which food was brought by his friends, the patient apparently being otherwise left entirely to his own devices. Greater laxity marked the reign of King Radama I., in whose time the practice of vaccination on the lines of Jenner is said to have been employed, but his successor, Queen Ranavalona, returned to a great extent to the old régime. She forbade anyone who had not already had the disease to act as a nurse and prohibited the washing of infected clothing in running water, but so far as the sufferer himself was concerned seems to have contented herself with a policy of *laisser faire*. Under King Radama II. still less attention was paid to sanitary precautions and though after him Queen Rasoherina again checked the exhumation of those who had died from small-pox it was not until French influence became predominant in 1896 that modern hygienic methods can be said to have obtained a firm footing.

THE medical officer of health of the Cape Colony states that for the week ending Jan. 30th no case of plague was discovered throughout the Colony. Dead rodents were found at Port Elizabeth, East London, and Queenstown, but in the Cape Town and Harbour Board area although 221 rats were examined during the week none was found to be affected with plague. As regards the Mauritius a telegram from the Acting Governor, received at the Colonial Office on Feb. 19th, states that for the week ending Feb. 18th there was one case of plague and that was fatal. As regards Hong-Kong telegrams from the Acting Governor state that for the week ending Feb. 13th there were 2 cases of plague and 2 deaths from the disease and for the week ending Feb. 20th there were 1 case and 1 death.

Sir Edward H. Sieveking, physician extraordinary to His Majesty the King, died on Feb. 24th in his eighty-eighth year. He graduated as M.D. of the University of Edinburgh in 1841 and was well known for his work in connexion with diseases of the nervous system.

His Majesty the King of the Belgians has bestowed upon Dr. A. S Gubb, now of Algiers, the Civic Cross of the First Class for services rendered by him as honorary medical officer of the Société Belge de Bienfaisance de Londres.

The general condition of Sir Samuel Wilks is causing great anxiety and it is with sincere regret that we have to report that his strength and powers of resistance are declining.

Looking Back.

FROM

THE LANCET, *SATURDAY*, FEB. 25, 1826.

ROYAL COLLEGE OF SURGEONS.

On Saturday last, February 18th, a public Meeting[1] of the Members was held at the Freemasons' Tavern, to take into consideration the best means of remedying the abuses which exist in the government of this College. The number of gentlemen present was upwards of twelve hundred. At seven o'clock Mr. Lawrence entered the Hall, and, on the motion of Mr. Tyrrell, was immediately called to the Chair, amidst the loudest acclamations.

Mr. Lawrence.—In the year 1824, certain regulations were framed by the ruling body of the College of Surgeons, which I considered as having been directed against the whole body of the members of the profession. The substantial enactment is short but effective for its purposes. I will read the bye-law, if you please, before I enter upon any commentary :—

> "The Court of Examiners of the Royal College of Surgeons, in pursuance of their duty to promote the cultivation of sound chirurgical knowledge, and to discountenance practices which have a contrary [illegible] t.—That from and after the date hereof, the [illegible] recognised by the Court, be those of London, [illegible] asgow, and Aberdeen. That certificates of attendance upon the chirurgical practice of a hospital be not received by the Court unless such hospital be one of the above recognised schools, and shall contain, on an average, one hundred patients.
>
> "And that all certificates of attendance at lectures on anatomy, physiology, the theory and practice of surgery, and of the performance of dissections, be not received by the Court, except from the appointed Professors of Anatomy and Surgery in the Universities of Dublin Edinburgh, Glasgow, and Aberdeen, or from persons teaching in a School, acknowledged by the medical establishment of one of the recognised hospitals, or from persons being physicians or surgeons to any of those hospitals."

When men begin to legislate, inasmuch as the laws which they frame are to govern the conduct of others, they should express themselves in the plainest language, and avoid all ambiguity. This I take to be one part of the duty of legislators. Whether or not the enactments which I have just alluded to are calculated to promote "sound knowledge," and "discourage practices of a contrary tendency," I leave you to determine. Yet, Gentlemen, it is by such regulations as these—it is upon such miserable pretexts, that the great body of the profession, not only in London, but in the country, are disqualified from teaching the knowledge of their science to others, how great soever may be their peculiar superiority in imparting instructions, whatever be the stores of valuable information which a long course of industry and fortunate opportunities may have enabled them to amass.—(*Cheers.*) Gentlemen, it is necessary that we advert for a moment to the distinction which is *laid down* in this famous regulation, between winter and summer courses ; and first of all we observe that they require of the candidate, that he shall have attended three winter courses at least. Now, Gentlemen, I take the liberty to say that, as is sometimes the case with lawmakers, these excellent legislators require that which is absolutely impossible to be performed ! In London, Gentlemen, whatever may be the case elsewhere, there are, in fact, no winter courses given, at least no winter courses so called. We know very well that two courses of lectures are delivered in each year, the one commencing in October, the other in January. But that which begins in October is called, as you well know amongst the profession, and by the Lecturers themselves, according to their advertisements in the newspapers the "autumnal course," and that which commences in January is uniformly denominated the "spring course." You see, therefore, that the candidate cannot comply with the law ; there is no winter course of lectures for him to attend. (*Laughter and applause.*)

The next, Gentlemen, is a regulation of more extensive power—"That certificates of attendance upon the chirurgical practice of a hospital be not received, unless such hospital be in one of the above recognized schools," meaning those of Dublin, Edinburgh, &c. as above mentioned. In a subsequent clause of the same regulation, we find, that attendance on anatomical or other lectures, is not to be recognized, except from the appointed professors of the above schools, or "from persons teaching in a school acknowledged by the medical establishment of one of the recognized hospitals, or from persons being physicians or surgeons to any of those hospitals." I really profess myself unable to understand this jumble. In the first clause, the privileged hospital must be in one of the recognized schools, and in the next, the favoured school must be acknowledged by the medical establishment of one of the recognized hospitals ! Now, Gentlemen, to say nothing of the absurdity of supposing, as this regulation does, that anatomy and surgery may be taught by the *physicians* of a hospital, I do declare that I deem it to be impossible to have combined more confusion, more nonsense in the same compass, than are to be found in the limits of this short enactment. (*Applause.*) But, Gentlemen, I have a more material objection to state, and it is to the catalogue of the schools of instruction to which the privilege of recognition has been conceded—Aberdeen, Glasgow ! We know, Gentlemen, that at least anatomy cannot be studied in those places with any hope of success. We are all, I believe, aware, and no one is more ready than myself to acknowledge the great talents and acquirements of the Gentlemen at the head of the anatomical schools in those places ; but we are also aware that they are destitute of *subjects*[2] and without subjects, without the necessary means, no talents in the teacher, no acquisition of which he can boast, no peculiar fitness for the office of instruction on his part will avail the student in his study of anatomy. (*Applause.*)

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[1] Excerpts only have been transcribed. The full report of the meeting occupied 37 columns of The Lancet. The speakers were Mr. Lawrence, Mr. Tyrrell, Mr. Wardrop, Mr. Wakley, Mr. Kingdon, Mr. Churchill, Mr. Welbank, Mr. Lloyd, Mr. Wakefield, Mr. Leese, Mr. Wigan, Mr. Dillon, Mr Ellerby, Mr. Waln, Mr. Macilwain, Mr. Ingram, Mr. Garland, and Mr. Paty.

[2] This statement was challenged in The Lancet of March 18th by Glaswegians, and Mr. Lawrence's reply, modifying the statement, appeared in The Lancet of March 25th.

Freemasonry.—*Rahere Lodge, No. 2546.*—A meeting of this lodge was held at Oddenino's Imperial Restaurant, Regent-street, London, W., on Tuesday, Feb. 16th, W. Bro. Ernest Clarke, F.R.C.S., being in the chair. The sanction of Grand Lodge to the change in the place of meeting was announced. At the request of Bro. Nunnerly the Master and Wardens signed a petition to Grand Lodge for the formation of a St. George's Hospital Lodge—the eighth hospital lodge to be established in London and the sixth which the Rahere, the oldest, has had the privilege of assisting to promote. A considerable number of the brethren subsequently dined together.

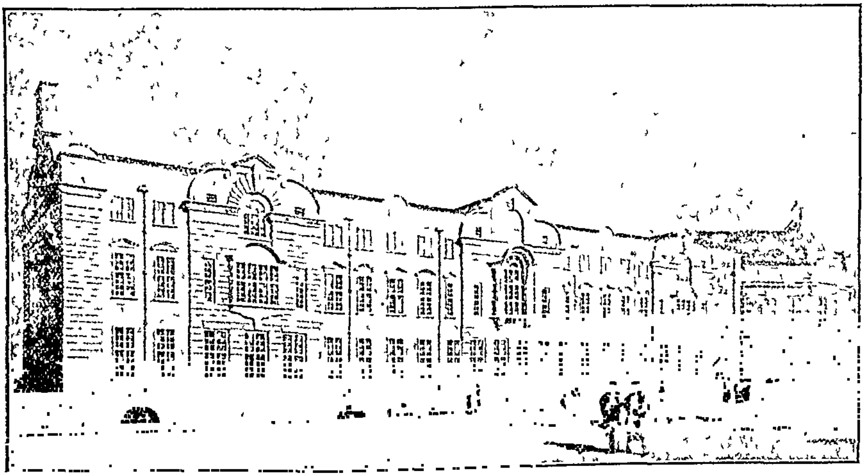
THE NEW SCIENCE SCHOOLS AT THE UNIVERSITY OF CAMBRIDGE.

THE MEDICAL SCHOOL.

THE new buildings of the Cambridge Medical School, which are to be opened on Tuesday next, March 1st, by His Majesty the King, accompanied at her special desire by Her Majesty the Queen, will provide accommodation for the departments of medicine, midwifery, surgery, and pharmacology. The same buildings will temporarily house the departments of public health, medical jurisprudence, and pathology, the last named being the department which will later receive expansion when the whole of the projected block is completed and when an Institute of Hygiene is prepared to carry on the work of instruction in theoretical and practical sanitation.

As will be seen from the plans (see Fig. 2) the block is shaped roughly as an L. The long arm of this L has its south façade facing Downing street and runs east and west to terminate at the eastern extremity in the Humphry Museum (see Fig 3) The short arm is not yet completed, but it will *run northwards from the Humphry Museum* to join the *older* buildings of the school, the ancient houses, which formed the original medical school, being removed. The new buildings are built of brick faced with Ancaster stone and, as will be seen by our illustration (see Fig. 1), are plain in style, no money having been wasted upon making what is meant to be a centre of hard practical work and progressive research wear the appearance of a palace or a temple. The classic ornamentation introduced upon the Humphry Museum is almost the only departure from the suitable severity of the building.

FIG 1.



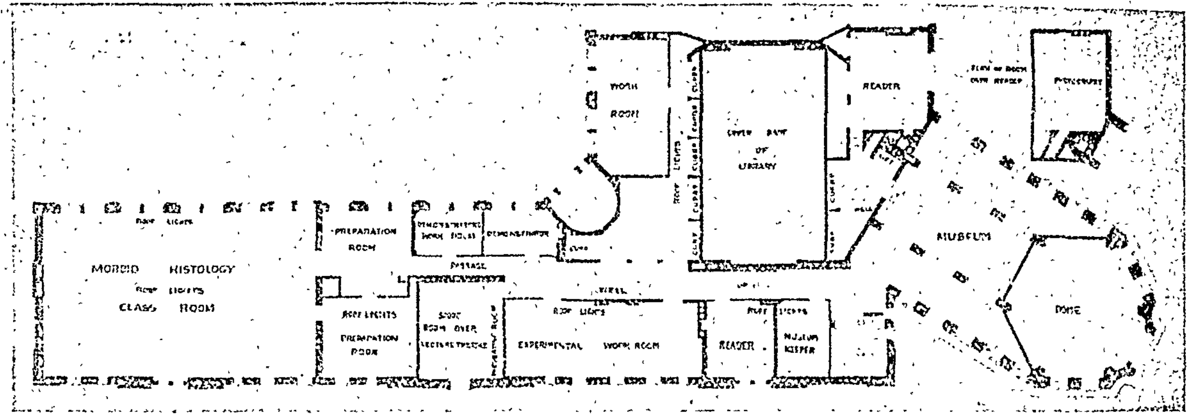
New Buildings of Cambridge Medical School, Downing street Façade

The accompanying plans show clearly how thoroughly the needs of the modern medical student are to be met for the future at Cambridge. On the *Basement Floor* are situated workshops, store rooms, combustion and other experimental rooms, photographic rooms, and stable opening into a small yard, while we have here also the engine house and accommodation for the electric lighting, heating, and ventilating installations The heating and ventilation are carried on independently on the Sturtevant plenum system by means of two steam heaters, two fans driven by electric motors, a special air filter, and an elaborate system of ducts and flues built throughout the walls of the whole building. Air, therefore, is thoroughly washed, screened, and warmed before being distributed through the structure Electricity for light and power is developed by two 20 h.p Diesel oil engines coupled to two dynamos, while there is reserve current stored sufficient for an eight hours' supply in a battery of accumulators. Thus it will be seen that the plant has been particularly arranged to obviate immediate stoppage of the whole system in case of injury to any detail. Each ventilating fan is capable of doing three quarters of the warming of the whole building, and the accumulators would provide temporary electric current in case of stoppage of either of the dynamos

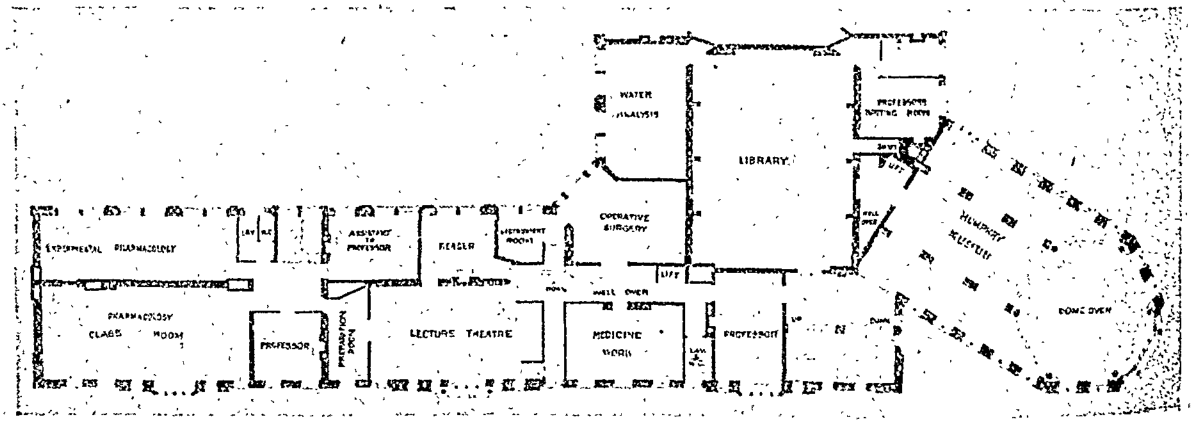
On the *Ground Floor* is the east entrance in Downing-street. Immediately to the left of this entrance are various private work-rooms, large demonstration and examination rooms, the medical and surgical departments, and the pharmacological laboratories with the private workrooms belonging to this branch of study. The entrance and staircase are spacious and are paved with black and white marble A large lecture room, built to accommodate a class of 200 students, is at the foot of this staircase, while facing are the pathological museum and two workrooms, one for pathology and the other at present for public health work. It will be noted by the plan that the big lecture-room receives practically no lighting from without but is dependent upon artificial light. This was done deliberately so that all available light could be used for the work rooms where the maximum of natural illumination is indispensable. In a lecture room not only is artificial light as good as natural light but it is even better, for the exact amount necessary for a demonstration can be focussed on to a *particular map or screen and maintained there steadily.* The method adopted at Cambridge of giving no outside wall to the big lecture room has already been imitated in other buildings having similar objects.

On the *First Floor* we have the Humphry Museum, the most elaborate feature of the pile. This is a nobly proportioned chamber, 62 feet long by 38 feet broad terminating with a bold and lofty semi octagonal eastern end (Fig 3) Over this is a dome supported by marble columns. The walls are lined with glazed tiles of varying depths of sea green in colour relieved with dull pink mouldings. The tiles are quite plain and flat and the scheme of decoration does not pretend to be other than tile

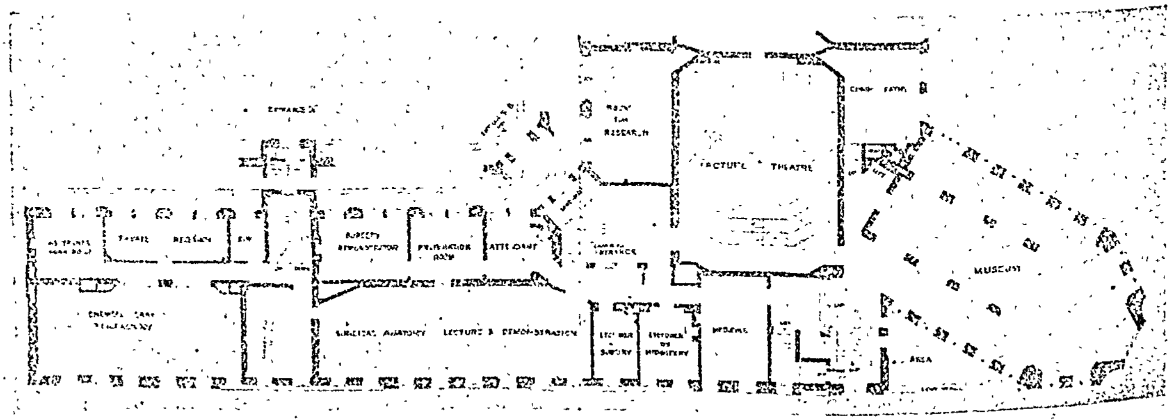
FIG. 2.—PLANS OF THE NEW MEDICAL SCHOOL BUILDINGS.



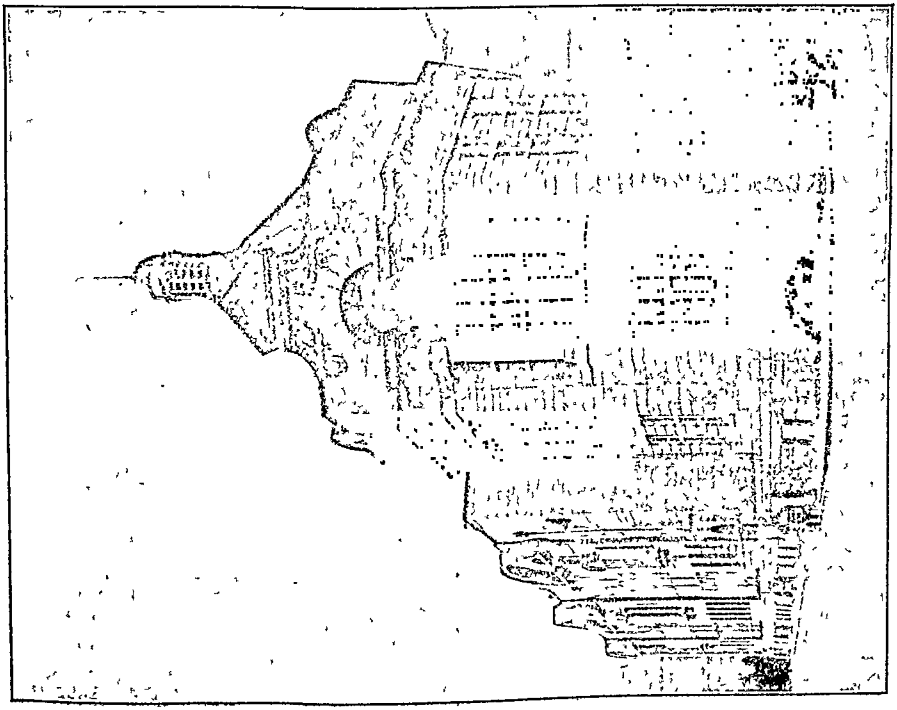
Second Floor Plan.



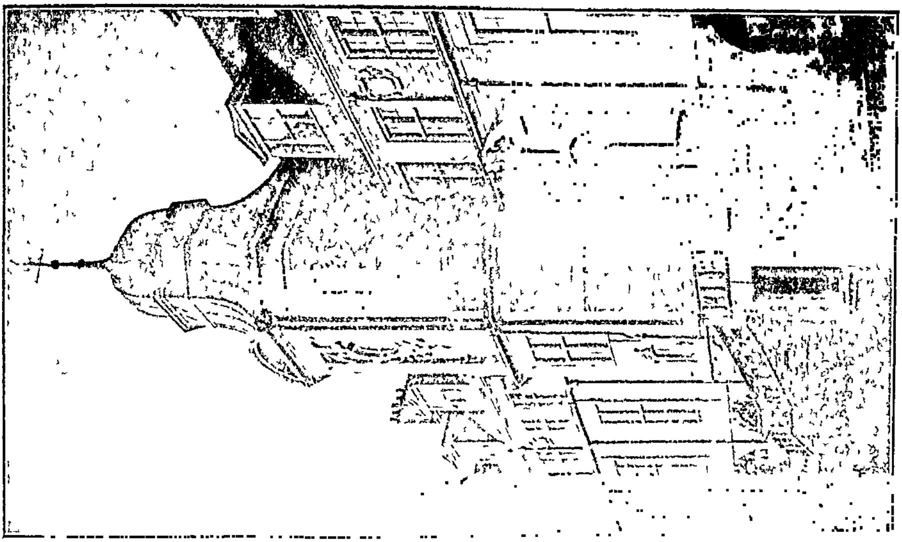
First Floor Plan.



Ground Floor Plan.



The Humphry Museum (New Medical School).

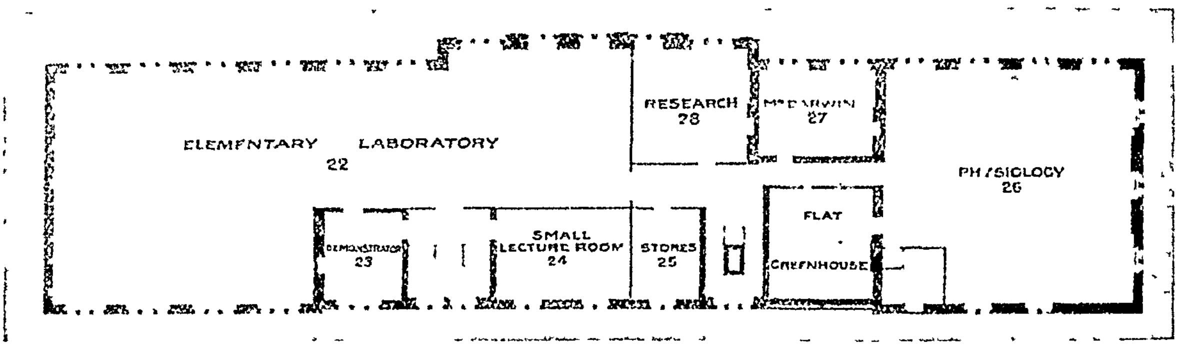


The Geological School, south entrance.

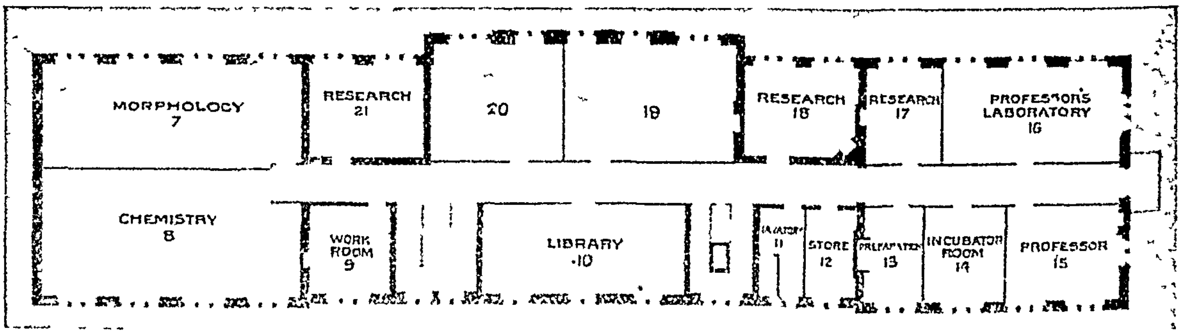
work. It is consequently satisfactory and effective. It is the work of Mr. Conrad Dressler. The cost of the Humphry Museum was largely defrayed by subscriptions from Cambridge medical graduates, so many of whom were pupils and friends of the great Cambridge teacher and surgeon. They cannot fail to be gratified at the use to which their subscriptions have been put. On the same landing is the library. This, like the Humphry Museum, is a lofty room and both, it will be seen from the plans, occupy space in two storeys. It is lighted from the top. The arrangement for storing books in stacks is ingenious, for each separate block of cases is moveable, allowing access to shelves behind. In this way it is hoped to house a very large reference library in quarters of modest dimensions. On the same floor are the private room of the Regius professor of physic, a research room for members of his class, and an operating room and a private room for the professor of surgery. This room communicates with a lecture room of 60 desks. On the same floor are admirably fitted class-rooms for elementary and advanced pathological work and work-rooms for the professor of pharmacology and his assistant.

On the *Second Floor*, at the end of the main staircase, is a small museum, to be used for teaching purposes. Here the student will have full access to all specimens and will be able to bring his text-books and note books and to record the result of his studies on the spot. Beyond this museum is a room already in use as a laboratory for pathological chemistry, in connexion with which is a photographic room. On the left side of the central staircase is a series of rooms lighted from the roof—viz., the room of the curator of the museum, a private research room, a larger room for experimental pathology, and a room which is at present being used by the department of hygiene. Further to the west are a work room and private room for the demonstrator of special pathology, two rooms used for the preparation of

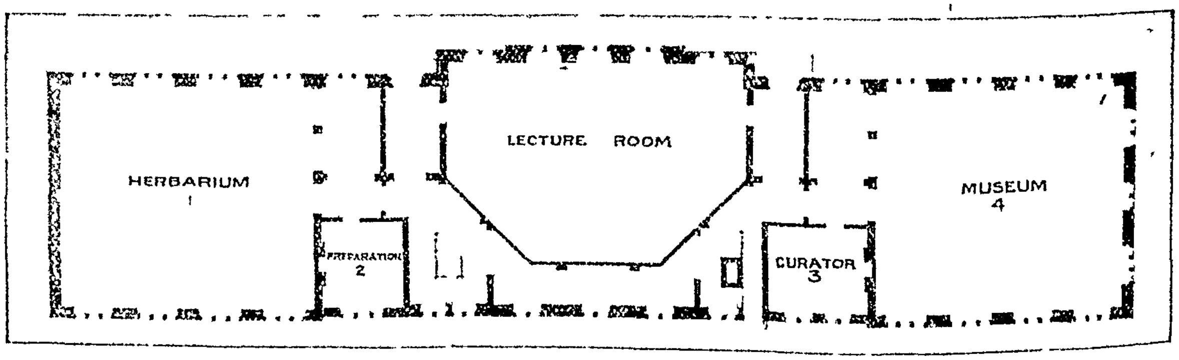
FIG. 5.—PLANS OF THE BOTANICAL SCHOOL.



Second Floor Plan.



First Floor Plan.



Ground Floor Plan.

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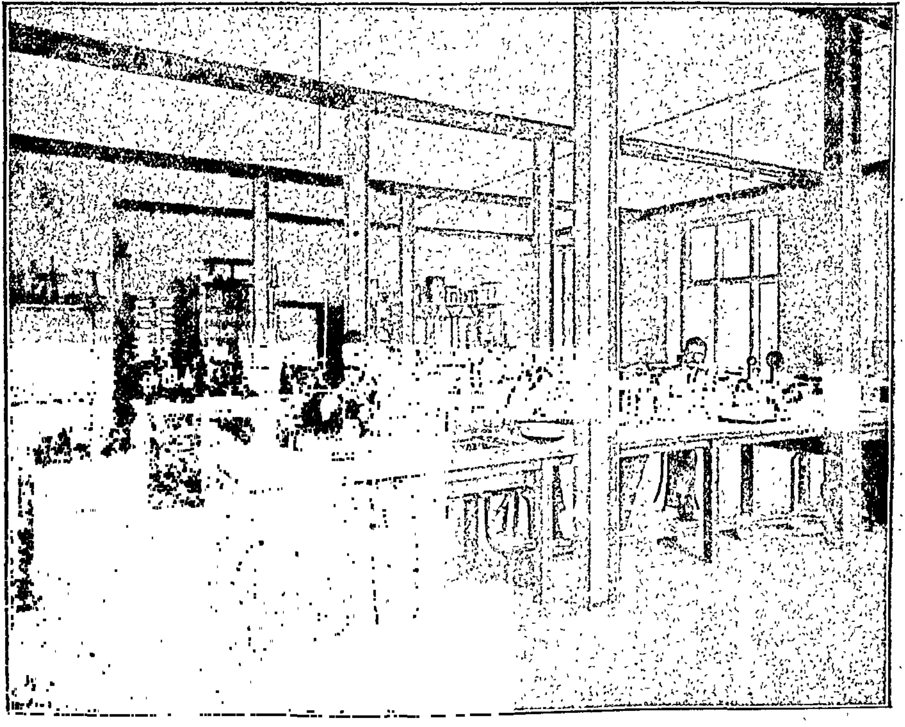
having
id good

ich the
University of Cambridge is now providing for the scientific and technical education of the medical student, but this
does not do justice to
e responsible for the
y class rooms designed
either for research purposes or for the practical work of the students. In all of these the greatest care has been exercised to give the worker the maximum advantage. Hot and cold water, gas, and electric current are laid on in an accessible manner to every bench and all the plain furniture is strong and suitable. There is a lavish supply of cupboards, drawers, and lockers for the keeping of reagents, specimens, and microscopes, while the precautions taken against dust and dirt are elaborate. Concrete floors have been put in throughout and glazed surface channels are employed to take the waste water, &c., in all laboratories immediately outside. All the supply pipes and electric wires being carried in covered chases can be reached without breaking the walls or floors. The walls and ceilings are finished with a smooth concrete surface, all angles are rounded, and there are no skirting boards, but the walls join the floors in plain curves below, as they join the ceilings in plain curved cornices. All doors and all furniture have been made plain and flat, there are no mouldings or projections anywhere to catch dirt; the window sashes are of cast iron and great attention has been paid to the lighting, all the laboratories being splendidly lighted. The big class-room for 90 students on the top floor of the building is a model of what such a room should be. It is divided into two by a moveable partition and lighted from above in such a way that the back benches are just as good for microscopic work as the front benches.

FIG. 6.



A Laboratory in the Botanical School.

The responsibility for the design of the buildings rests with Mr. E. S. Prior, who has met fully the wishes of the various professors and teachers more immediately concerned with the Cambridge Medical School. Professor Sims Woodhead has been indefatigable in assisting him with his unrivalled expert knowledge. The work has been carried out by Messrs. Kerridge and Shaw. Mr. Wray, of Messrs. Sturtevants' firm, has supervised the engineering work.

THE GEOLOGICAL AND BOTANICAL SCHOOLS.

The King, as we announced last week, after inspecting the new medical school buildings will visit the new law school, the new botanical school and laboratory, and lastly, will visit the geological school and will unveil the statue in the Sedgwick Museum to the famous Cambridge geologist, Professor Adam Sedgwick. The three schools stand in the beautiful park ground, lying north of Downing College, which has been purchased recently by the University from that College. The botanical and geological schools which are built upon a common plan are dignified as well as beautiful buildings, thoroughly adapted to their modern purposes, and yet so built as to harmonise externally with the mediæval features of

Cambridge. The bright grey stone, relieved with red bricks and [illegible] exactly the right combination of solidity and [illegible] and Cambridge is to be congratulated upon these additions to the beautiful university city.

The accompanying plans of the botanical school, by the range of accommodation indicated, prove how thoroughly the science of botany is being taught at Cambridge, where the subject is now pursued not only as an ancillary science to medicine but as a department of agriculture. A large number of students take up botany as one of the subjects the natural science tripos, while the practical side of the subject is further recognised by those who wish to work at forestry. Every facility is offered to the student to observe with his own eyes [illegible] that may have a most [illegible] recent developments [illegible]

Parallel to, and just [illegible] the geological school, [illegible] face being shown a [illegible] fossil cabinets of John W[illegible] century geologist, w[illegible] ence of strata in th[illegible] collection made by [illegible] Professor T. McK. [illegible] 30 years ago, on the [illegible] posed to build a Se[illegible] name in the univer[illegible] his splendid specim[illegible] the middle of his [illegible] geological hammer [illegible] Tuesday next.

The new botanical school, the new geological school, and the new law school are all the work of Mr. T. G. Jackson, R.A., who has thus scored further successes in his long list of university and scholastic buildings.

FIG. 7.

The Sedgwick Statue, by Onslow Ford.

THE UNIVERSITY OF LONDON: THE INSTITUTE OF MEDICAL SCIENCES.

LETTER AND DONATION FROM HIS MAJESTY THE KING.

THE Faculty of Medicine of the University of London was summoned on Feb. 19th to "receive a communication from His Majesty the King in reference to th[illegible] of Medical Sciences." Mr. H. T. BUTLIN, [illegible] faculty, who presided over the meeting, took the opportunity of laying before the members the following short statement of the means which were being taken and the progress which had been made towards the attainment of the institute the establishment of which had been suggested by the faculty and approved by the Senate of the University.

In the summer of last year the Senate appointed a committee of appeal consisting of two senators who represent the faculty, Dr. J. Kingston Fowler and Sir Cooper Perry, the dean of the faculty, Mr. Butlin, and Dr. Lauriston E. Shaw, its honorary secretary. Dr. Fowler and Mr. Butlin were appointed joint treasurers, the former to represent the Senate and the latter on behalf of the faculty. The duty of drawing up an appeal for funds was intrusted to this committee and it was determined that in the first instance the appeal should not be made more public than was implied in sending a copy of it to every member of the Faculty of Medicine. It was hoped that some individual or individuals possessed of ample means might be found willing to furnish a sufficient sum of money to build and to equip, if not to endow, the institute so that it might not be necessary to issue a general appeal. That expectation had not at present been fulfilled, probably for reasons which would be referred to later. At one time, however, it was believed that successful negotiations towards this object would be carried through. In November last, o[illegible] Fowler, the Senate determined to issue [illegible] press an appeal for funds to build, to equ[illegible] institute. To a meeting of the Faculty of Medicine it must be a matter of interest that this, the first public appeal of the Senate for money, was made on behalf of the needs of medical education. The drawing up of the appeal and the manner in which it should be issued were again left to the appeal committee.

On Dec. 18th the letter of ap[illegible] number of lay and medical papers [illegible] very freely by both, and in every inst[illegible] was aware, most favourably. In fac[illegible] had ever been better received. In [illegible] favour of the establishment of the [illegible] to Lord Rosebery, as Chancellor of the University, signed by the treasurers or chairmen of nine of the hospitals to which medical schools are attached. The only names absent were those of the treasurers of King's College and University College Hospital, who excused themselves from signing on the ground that in the institutions with which they were connected the teaching of science is not confined to medical students.

On Feb. 1st Mr. Butlin received a letter from Sir Dighton Probyn, the Keeper of the Privy Purse, stating that the attention of His Majesty had been directed to the defects arising from the want of concentration of the teaching of the earlier subjects of the medical curriculum in London. The letter concluded in these terms: "As the King now learns that the University of London is making an attempt to remedy this defect by the establishment of an Institute of the Medical Sciences under its proper control, where the concentration of medical teaching will be carried out with every prospect of success, I am commanded by His Majesty to inform you that he is willing to contribute 100 guineas towards this Medical Institute should the scheme be carried out."

Mr. Butlin stated that the attention of His Majesty the King had been directed to the subject by Sir Francis Laking, whose strong interest in the welfare of the profession and in medical education was well known. He begged members of the faculty individually and collectively to do their utmost to assist the appeal committee. Owing to the scarcity of money the present time was peculiarly unfavourable to any and every form of appeal for funds and this appeal was not likely, without some explanation of those familiar with the facts, to be attractive to the general public. Medical education in London had always been carried on as a private enterprise and was regarded as so profitable to those who were engaged in it that an appeal for funds on its behalf seemed to many persons almost in the light of an impertinence. In spite of these difficulties he would point out what had been done in the course of eight weeks by the four persons who constituted the appeal committee. The appeal had been most favourably received by the lay and medical press, had been recommended by the treasurers of nine of the hospitals to which schools had been attached, and had been graciously and liberally responded to by His Majesty the King. The committee had received promises of donations to the amount of about £8000, including contributions from the Presidents of the Royal College of Physicians of London and the Royal College of Surgeons of England. The University was indebted to Dr. Fowler, not only for his own handsome subscription of £250 but also for interesting Mr. Alfred Beit and Messrs. Rothschild in the proposal with the result that they had contributed £5000 and £500 respectively. If so much could be done in the face of serious difficulties in so short a time by so small a number of men what might not be done in the course of a few months by the largest and most influential faculty of medicine in the world? Amongst its members were men who had access to the houses of the [illegible] not merely to build and to equip the institute but to endow it handsomely for teaching and research.

Mr. H. W. PAGE moved and Sir FELIX SEMON seconded:—

That the Dean be requested to convey in suitable terms an expression of the gratitude of the Faculty of Medicine to His Majesty the King.

The motion was carried by acclamation.

THE IMPERIAL YEOMANRY HOSPITALS REPORT AND SIR ALFRED FRIPP.

THE following letters have passed between Lady Howe, as chairman of the Editing Committee of the Imperial Yeomanry Hospitals' report, and Sir Alfred Fripp relative to his evidence before the Commission on the War in South Africa:—

I.

11th Feb., 1904.

DEAR LADY HOWE,—In the course of the correspondence which has passed between us you take exception to certain views relative to the book on the Yeomanry hospitals expressed by me in the evidence I gave before the Commission on the War in South Africa. The statements in which these views were expressed were "that I did not think [illegible] many points inaccurate and might be called, if it was a money matter and was done in the City, 'cooked' so as to make an impressive number of figures," and that I knew that "a whole lot of statements as to services re[illegible] untrue," a[illegible] some of the [illegible]

From yo[illegible] caused by [illegible] they were [illegible] ask you to accept my assurance that I gave this evidence in perfect good faith and as the expression of opinions which I had honestly formed, I also now ask you to let me say that on reflection I think my conclusions were hastily come to and that even if they had been expressed in less sweeping language they are liable to a construction which goes beyond what was justifiable. The questions put to me were unus[illegible]k me by surprise. I was under the [illegible] a scientific question as to whether t[illegible] Yeomanry hospitals was such as I considered scientifically perfect and as such adequately described in the book. I replied hastily and I see on looking at the words I used that my language went beyond a mere expression of a simple opinion and I wish as handsomely and completely as I can to express my regret for what has been construed as allegations against the good faith of some of those with whom I was associated. To begin with my observations upon the Yeomanry hospitals were meant to be confined to the only one of which, as the opening statement of my evidence indicated, I had practical experience—namely, [illegible] working of the Imperial Yeoman[illegible] of the Yeomanry field hospital and [illegible] experience. I expressly stated in [illegible] north of Kronstadt and I had, and have, formed no opinion about them. As regards Deelfontein, I wish, in justice to myself, to say that I had in my posse[illegible]hich led me to doubt the ac[illegible] the entries as to patients [illegible] these returns which I had in [illegible]swer to an unexpected questi[illegible]urns have been challenged by people whose integrity I did not, and do not, for a moment intend to question and for whom as individuals I have much respect. It is possible that I may have been right and that they, and not I, have been misled, for in such a scene of hurry as prevailed in the early days of the hospital at Deelfontein it may well be that one or other of us was misinformed. What I hope is [illegible] will be accepted that I spoke under an impression [illegible] but which was formed on what I con[illegible] I still think that, judged by purely [illegible]ties used in the book would require [illegible] of them could be accepted as the [illegible] for an army hospital system in the [illegible]alification I unreservedly express my regret for statements which have given pain. If I have used language about the services they rendered which has given pain to those with whom it has been my privilege to be associated in a [illegible] patriotic endeavour I trust that they will accept this [illegible] convey to them a full [illegible]

ALFRED D. FRIPP.

II.

11th Feb., 1904.

DEAR SIR ALFRED FRIPP,—On behalf of myself and the Editing [illegible] Yeomanry hospitals report I have pleasure [illegible]xpression of regret contained in [illegible] are offered.

Yours sincerely,
(Signed) GEORGIANA HOWE.

MEDICINE AND THE LAW.

An Action against Medical Men in Ireland.

IN a somewhat remarkable action a young man in Ireland recently sued two medical men, one of whom was his brother-in-law, for conspiracy, false imprisonment, and assault in connexion with placing him in a lunatic asylum. Owing to their conduct he claimed that he had been deprived of property by his father who had altered the dispositions in his will. At the trial of the action the jury negatived the charges of conspiracy and false imprisonment but disagreed with regard to the assault, and the judge, in giving judgment for the defendants, deprived the second medical man, Mr. N. J. Meehan, of his costs on account of an irregularity in connexion with the certificate which he had signed. The Court of Appeal at Dublin has now upheld the verdict of the jury and has refused to grant the plaintiff a new trial, and in doing this has awarded to Mr. Meehan his costs, considering that he was influenced by no malice or other improper motive and that consequently he had done nothing to deserve deprivation of them. The nature of the attack upon the two defendants may be judged from the fact that the father who had desired not to leave his property in the control of his son had himself been one of the most firmly convinced of his son's alleged mental condition and been directly concerned in placing him under treatment. Under the English Lunacy Act of 1890 a medical man signing a certificate, or any person doing anything in pursuance of the Act, is not liable to legal proceedings if he has acted in good faith and with reasonable care. There does not, however, appear to be any provision of this kind in the Acts relating to lunacy in Ireland.

Lead in Cream of Tartar.

At Stratford police-court on Feb. 13th a fine of £5 was inflicted upon a defendant for selling cream of tartar in which lead was found in the proportion of three-quarters of a grain to the pound. The presence of the lead was attributed to contact with lead vessels in the process of manufacture. Evidence was given as to the cumulative nature of the poison and it was stated that a case of illness had been traced to lead present in cream of tartar.

Litigation over the Sale of a Practice.

The action of Gibson *v* Ross, tried on Feb. 17th by Mr. Justice Walton and a common jury, presented no features which are not unhappily common to such cases. It was brought to recover money due under a promissory note given in respect of the purchase of a medical practice and the defendant counter-claimed for the cancellation of the promissory note, the repayment of money already paid by him, and other relief in respect of his bargain on the ground that the value of the practice had been misrepresented by the vendor. The defendant was unsuccessful in respect of the issue thus raised and the plaintiff obtained judgment upon the claim and counter claim. The only observation to which such a case can give rise (besides the obvious one that purchasers of medical practices should make very careful inquiries before they buy) is that such disputes had far better be settled by arbitration than fought out in a court of law. There is generally no evidence which could not be more fully appreciated by a carefully selected arbitrator than by a jury and the undesirable publicity given to damaging allegations and recriminations brought by one professional man against another would be avoided.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 9075 births and 5420 deaths were registered during the week ending Feb. 20th. The annual rate of mortality in these towns, which had been 19 4, 17·2, and 18 4 per 1000 in the three preceding weeks, rose again to 18·5 per 1000 last week. In London the death-rate was 17·8 per 1000, while it averaged 18·8 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 8 3 in Tottenham, 9 6 in Hornsey, 11 0 in Stockton-on-Tees, 11·4 in Handsworth (Staffs), 11 6 in East Ham, 12 0 in Northampton, 12 2 in Leyton, and 12·3 in Croydon; the highest rates were 23·9 in Nottingham and in Liverpool, 24·1 in Salford, 24·3 in Oldham, 24·9 in Preston, 25 6 in Plymouth and in Warrington, 25 8 in Merthyr Tydfil, and 27 9 in Bootle. The 5420 deaths in these towns last week included 493 which were referred to the principal infectious diseases, against 497, 412, and 449 in the three preceding weeks; of these 493 deaths 191 resulted from whooping-cough, 119 from measles, 70 from diphtheria, 48 from diarrhœa, 37 from scarlet fever, 21 from "fever" (principally enteric), and seven from small-pox. In Croydon, Southampton, Reading, Walsall, Aston Manor, York, and in nine other smaller towns no death from any of these principal diseases was registered, while they caused the highest death-rates in Norwich, Stockport, Wallasey, St Helen's, Burnley, Preston, Leeds, Rhondda, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Norwich, Stockport, Warrington, Preston, Huddersfield, Leeds, Sunderland, and Rhondda; from scarlet fever in Merthyr Tydfil; from diphtheria in Willesden, Hanley, and Salford; from whooping cough in Portsmouth, Wallasey, Liverpool, Wigan, and Gateshead; from "fever" in Preston; and from diarrhœa in Rhondda. Of the seven fatal cases of small-pox registered in these towns last week two belonged to Hull and one each to London, Derby, Wigan, Manchester, and Gateshead. The number of small-pox cases remaining under treatment in the Metropolitan Asylums hospitals, which had been 21, 25, and 24 at the end of the three preceding weeks, had risen again to 29 at the end of last week; nine new cases were admitted during the week, against four, eight, and three in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday, Feb. 20th, was 1620, against 1651, 1657, and 1644 on the three preceding Saturdays; 143 new cases were admitted during the week, against 168, 169, and 162 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 429, 347, and 324 in the three preceding weeks, rose again to 349 last week, and were 75 above the number in the corresponding period of last year. The causes of 63, or 1·2 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Manchester, Salford, Leeds, Newcastle-on-Tyne, and in 50 other smaller towns; the largest proportions of uncertified deaths were registered in West Bromwich, Birmingham, Liverpool, Warrington, Blackburn, Preston, Sheffield, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18·4, 18·5, and 19·2 per 1000 in the three preceding weeks, further rose to 22·2 per 1000 during the week ending Feb. 20th, and was 3·7 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 18 1 in Edinburgh and 19·4 in Leith to 24·7 in Greenock and 25 8 in Dundee. The 733 deaths in these towns included 26 which were referred to whooping-cough, 19 to measles, 18 to diarrhœa, six to diphtheria, five to small-pox, and one to "fever," but not any to scarlet fever. In all, 75 deaths resulted from these principal infectious diseases last week, against 62, 44, and 72 in the three preceding weeks. These 75 deaths were equal to an annual rate of 2·3 per 1000, which was 0·6 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 16, 15, and 24 in the three preceding weeks, further rose last week to 26, of which six were registered in Aberdeen, six in Leith, five in Dundee, four in Glasgow, three in Edinburgh, and two in Paisley. The deaths from measles, which had been 12, seven, and 21 in the three preceding weeks, declined again to 19 last week, and included eight in Glasgow, five in Dundee, four in Paisley, and two in Greenock. The fatal cases of diarrhœa which had been 17, 11, and 20 in the three preceding weeks, decreased again last week to 18, of which 15 occurred in Glasgow. The deaths from diphtheria, which had been three in each of the two preceding weeks, rose to six last week and included four in Glasgow and two in Aberdeen. The fatal cases of small-pox, which had been three, three, and one in the three preceding weeks, rose again last week to five, of which three were registered in Greenock and two in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 128, 129, and 126 in the three preceding weeks, increased again to 167 last week, but were 58 in excess of the number in the corresponding period of last year. The causes of 21, or nearly 3 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25 6 30 5, and 27 2 per 1000 in the three preceding weeks, rose again to 29 7 per 1000 during the week ending Feb. 20th. During the past four weeks the death-rate has averaged 28 3 per 1000, the rates during the same period being 18 1 in London and 16·7 in Edinburgh. The 216 deaths of persons belonging to Dublin registered during the week under notice were 18 in excess of the number in the preceding week and included 16 which were referred to the principal infectious diseases, against 14, 12, and ten in the three preceding weeks; of these, nine resulted from whooping cough, three from "fever," two from diarrhœa, one from measles, and one from diphtheria, but none from either small-pox or scarlet fever. These 16 deaths were equal to an annual rate of 2 2 per 1000, the death-rates last week from the principal infectious diseases being 1 6 in London and 0 6 in Edinburgh. The fatal cases of whooping-cough, which had been 11, nine, and six in the three preceding weeks, rose again last week to nine. The deaths referred to "fever" numbered three last week, against one in each of the three preceding weeks. The two fatal cases of diarrhœa corresponded with the number in the preceding week. The 216 deaths in Dublin last week included 43 among children under one year of age and 64 among persons aged 60 years and upwards; the deaths both of infants and of elderly persons showed a slight excess over the respective numbers recorded in the preceding week. Five inquest cases and three deaths from violence were registered, and 93, or more than 43 per cent., of the deaths occurred in public institutions. The causes of six, or nearly 3 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: H. W. Macnamara to the *President* for three months' hospital study; H. Holyoake to the *Resolution;* J. H. Beattie to the *Andromeda;* and D. T. Hoskyn to the *Crescent.* Staff Surgeon: H. W. Finlayson to the *Scylla.* Surgeons: A. E. Merewether and W. K. D. Breton to the *Crescent;* R. Dickinson to the *St. Vincent;* R. Kennedy to the *Andromeda;* and J. Martin to the *Scylla* and to the *Terpsichore.*

ROYAL NAVAL VOLUNTEER RESERVE.

The undermentioned gentlemen have been appointed Surgeons:—Edward John Steegman and Herbert Robert Power (dated Feb. 13th, 1904).

ROYAL ARMY MEDICAL CORPS.

The date of the promotion of Lieutenant-Colonel J. F. Williamson, C.M.G., is Nov. 20th, 1903. The date of the reversion from the Seconded List of Captain T. H. M. Clarke, C.M.G., D.S.O., is Nov. 23rd, 1903.

The undermentioned Lieutenants to be Captains (dated Jan. 29th, 1904):—A. J. W. Wells, G. F. Sheehan, H. H. Scott, H. A. Bransbury, M. W. Falkner, R. N. Woodley, E. Ryan, E. E. Parkes, J. V. Roche, A. J. Hull, R. V. Cowey, J. Conway, J. H. Barbour, F. E. Robinson, S. Mason, J. S. Bostock, and A. H. McN. Mitchell.

Lieutenant A. O. H. Gray is seconded for service under the Foreign Office (dated Feb. 4th, 1904). Captain and Brevet Major A. F. Tyrrell is placed on half-pay on account of ill-health (dated Feb. 11th, 1904). Captain R. M. Le H. Cooper retires on a gratuity (dated Feb. 13th, 1904).

The undermentioned gentlemen to be Lieutenants on probation (dated Jan. 30th, 1904):—Godfrey Faussett Rugg, Douglas Stokes Brownlie Thomson, Arthur Samuel Arthur, John Fairbairn, Robert Grenville Anderson, Leonard Bousfield, James Henry Douglass, Dumaresq Le Bas, Robert Robinson Lewis, Charles Harold Turner, Frank Herbert Noke, George Elliott Cathcart, Eugene Christopher Whitehead, Travis Clay Lucas, John Archbold Turnbull, William Wiley, Richard Brassey Hole, Alexander Loftus Otway, Walter Frederick Hamilton Vaughan, Montague Frederick Grant, Howard Harding, David Patrick Johnstone, Edward Henry Milner Moore, Frederick Joseph Garland, Michael David Ahern, Harry Bertram Connell, George Sullivan Clifford Hayes, Sidney Clement Bowle, Alban Anderson Meaden, and Robert John Cahill. The undermentioned Lieutenants are seconded under the provisions of Article 349 of the Pay Warrant: R. G. Anderson (dated Jan. 30th, 1904), S. C. Bowle (dated Jan. 30th, 1904), and F. H. Noke (dated Jan. 30th, 1904).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Dorsetshire: The un[illegible] — Thoma[illegible]rd Telford [illegible]e: Joseph Grant-Johnston to be Surgeon-Lieutenant (dated Feb. 20th, 1904.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant V. Graham, 2nd Volunteer Battalion the York and Lancaster Regiment, to be Surgeon-Lieutenant (dated Feb. 20th, 1904); Surgeon-Lieutenant N. P. Watt to be Surgeon-Captain (dated Feb. 13th, 1904).

The notification which appeared in the *London Gazette* of Feb. 2nd, 1904, stating that Surgeon-Captain W. P. Peake ceased to belong to the Army Medical Reserve of Officers, is cancelled.

THE ITALIAN RED CROSS ASSOCIATION.

The public utility of the Associazione Italiana della Croce Rossa was recognised by a law dated March 30th, 1882. The society is allowed to coöperate with the sanitary department of the army by providing war hospitals, which are organised exactly like the army field hospitals and hospital trains, and by establishing infirmaries at railway stations. It is also empowered to take charge of, and to distribute, the gifts destined for the benefit of soldiers on active service and to set up an information office where friends and relatives can obtain information regarding combatants on both sides. The president of the central committee of the association is named by the King on the proposition of the Ministers of War and Marine. When troops are mobilised this official becomes the sole intermediary between the society and the Ministers. The agents who accompany the forces are under the orders of the military authorities and must conform to military rules. In recruiting its *personnel* the society can only engage men who, except that they may belong to the national militia, are entirely free from military obligations. In 1902 the association had about 25,000 members and disposed of resources, cash, and material valued at upwards of 6,500,000 lire. It was able to place the following equipment at the disposal of the Minister of War: eight hospitals of 100 beds each, 41 hospitals of 50 beds each but capable of expansion to 100 beds, 54 mountain ambulances, 244 dressing posts for railway stations, 15 hospital trains, two river ambulances, two hospital ships, and eight depôts for sanitary material. The *personnel* of the society is exercised as often as possible and to this end it always takes part in autumn manœuvres. In 1900 six field hospitals were mobilised, as well as one mountain ambulance and two hospital trains (one in Sicily and the other at Bari). The society has also taken a share in aiding the agricultural population of the Roman Campagna which every year is decimated by malaria. Since 1899 eight ambulances have done duty in the most exposed parts of this insalubrious region. As may be supposed the Red Cross Association is very popular in Italy. In addition to this admirable organisation there is another association in Italy—namely, that of the Italian Military Knights of Malta—which undertakes to afford aid to the sick and the wounded in war time. By special favour this society enjoys complete autonomy as regards its internal affairs but on service the agents are, of course, under military control. The members wear the red cross as well as the cross of their order. At present the society possesses three hospital trains, each fitted for 280 patients.

DEATHS IN THE SERVICES.

Inspector-General of Hospitals and Fleets William Macleod, C.B., R.N. (retired), on Feb. 17th, at his residence in Mornington avenue, West Kensington, aged 84 years. In 1842 he entered the Royal Navy as an assistant surgeon and served on the China Station from 1845–47. Under Admiral Sir Thomas Cochrane he was landed from the *Agincourt* in medical charge of the detachment of Royal Marines and took part in the capture of the forts on the river Borneo and the city of Bruni. During the Crimean War he was surgeon of the *Driver* in the Baltic and of the *Madagascar* in 1859 at Rio de Janeiro during a severe epidemic of yellow fever. He received the Sir Gilbert Blane's medal for his official records relating to the epidemic. In 1866 he was promoted to the rank of Deputy Inspector-General and was in charge of the Royal Naval Hospital at Yarmouth until 1875, when he was promoted to the rank of Inspector-General. He retired in 1880, receiving from the Admiralty an expression of its high appreciation of the manner in which he performed the arduous and responsible duties devolved upon him at Yarmouth. He received the Companionship of the Bath in 1880.

Brigade-Surgeon William Henry Harris, A.M.S. (retired), on Feb. 16th, in his seventy-fourth year. He joined the army as assistant surgeon in 1855 and served in the Crimea, taking part in the siege and fall of Sevastopol and the battle of the Tchernaya (medal with two clasps and Turkish medal). During the Indian Mutiny he was present with Colonel Maxwell's column in the operations before Calpee in 1858, proceeding with it to the Alumbagh during the capture of Lucknow. He was at the surrender of the forts of Ahmatee and Shunkerpore, took part in the pursuit of

Beni Madhoo across the Gogra, and the subsequent operations in Oude (medal). He retired in 1886 with the honorary rank of brigade-surgeon.

Deputy-Surgeon General William Bisset-Snell, A.M.D., at his residence, Onslow-gardens, W., at the age of 73 years. He entered the medical service of the army in 1855 and served throughout the campaign of 1860 in North China (medal with two clasps) and was promoted for "meritorious services."

CONVALESCENT HOMES.

An army order states that the convalescent home at Osborne, Isle of Wight,[1] presented to the nation by H.M. the King for the reception of officers of the navy and army, will be opened on April 6th. The accommodation will be divided equally between the two services and will provide for 38 single officers and five married officers (who may be accompanied by their wives). Children will not be allowed to live in the home. Officers will be admitted on the recommendation of the directors-general of the medical departments of their respective services, to whom all applications for admission should be addressed. The Commander-in-Chief in India has been requested to issue similar instructions and the names of officers of the Indian army will be submitted for admission to the Director-General of the Army Medical Service. The only payment required will be that laid down in Para. 65, Allowance regulations—viz., 2*s.* 6*d.* per diem for each officer or his wife. In connexion with the Convalescent Home at Osborne a hospital will be opened at the same time in London for the reception of officers of the navy and army requiring medical or surgical treatment prior to their removal to Osborne. The daily charge will be the same as that at Osborne.

THE NEWLY CONSTITUTED ARMY COUNCIL.

The omission of the name of any representative of the Army Medical Service on the Army Council has very naturally been regarded as placing that service at a serious disadvantage. The medical department differs from many other departments and has important claims to direct representation, a fact which Mr. Brodrick fully recognised and provided for. The difficulties with which the Army Medical Service has always had to contend has largely arisen from the absence of any direct representative influence and of any opportunity to make its wants properly known in high places. The late War Minister made a real attempt to rectify this and the alteration of his design is a retrograde step.

Correspondence.

"Audi alteram partem."

THE PROPOSAL TO PROHIBIT MEDICAL PRACTITIONERS FROM DISPENSING.

To the Editors of THE LANCET.

SIRS,—Time was when the practice of medicine throughout the country was mainly in the hands of physicians, who reaped the emoluments and left their prescriptions to be dispensed by an inferior body named apothecaries, and their surgery to the barbers of the day. As time went on these apothecaries improved their knowledge and acquirements, divided themselves into surgeons and apothecaries, either separately or in combination, and having obtained the ear of the people gradually nudged themselves into the position of, and shunted, the physicians. The apothecaries and surgeons, in fact, absorbed the cream of the practice in the country, and excepting in the instance of the great minds in the large towns and cities of the land, left but poor skim milk for the hosts of physicians. History, we are told, repeats itself, and one notices that there is at this time in the mind of some a disposition to disregard the teaching of past experience and, following the example of the old physicians, to look down upon the technical practice in connexion with the dispensing of medicines as unworthy of their dignity and gentility. Certainly it may be said to be the experience of the history of the past that those who combined their practice with the oversight of the drugs they supplied were the men who obtained the greatest and most conspicuous reward.

But it is not the object of this letter to treat the subject on these lines alone, although the policy may very well form a serious part of the argument. I desire to consider it from a much higher platform than that of personal pecuniary interest. Will it be for the good of the public? This seems to be the first and greatest consideration. In so far as it regards practice amongst the rich in great towns and cities, the dispensing of medicines by the practitioner may not be a very important or necessary factor. With the poorer and working classes it will be a very different matter. They will be obliged to consider cheapness and to save wherever they can, and rich and poor are alike, though from different reasons, prone to consider *cost.* The practitioner who obtains his drugs from the wholesale druggist and gets his living by his advice and attendance can naturally afford to employ the required medicines at a less cost (prime cost) than one who has to get his living out of the profit from the medicines themselves. He is also very careful to obtain medicines that can be relied upon for their purity and perfection, as this gives him confidence in their application. Prescriptions that may be taken to anybody lend themselves easily to cheap substitution and confidence must be weakened by poor results. If the practitioner suggests their being made up by a particular firm some underhand collusion may be hinted at by an unfriendly critic. Of course, at the present time anyone, be he physician, surgeon, or general practitioner, has perfect liberty in this matter to retain or to dismiss dispensing from his practice. But our agitators are not content to leave the members of our profession *free* to act as they think best, but they seek power to tyrannise over the rank and file who think quite differently from them on this subject. Those gentlemen can hardly have had much experience of general practice or country work. Here, and especially in the country, the practitioner must be self-reliant and self-contained; he must be an adept with his tools, whether they be medical or surgical; always ready by day or night to supply at the shortest notice whatever the nature of the case demands. His patients know the man and trust him thoroughly and are sure that they can always obtain from him whatever is required of the very best of quality and whenever needed. Should the preparation of medicines pass from his superintendence this confidence would be greatly shaken and in the case of the poorer classes it would be a positive calamity. The increased cost of the doubled sources of supply would be a serious consideration and would pretty certainly lead to the *run* being upon the physic and the compounder and the *curtailment* on the supervision of the practitioner.

Everyone engaged in full general practice will, I imagine, have a considerable number of patients on the borderland of great poverty. Most of us, I suspect, regard this residuum as a call upon our benevolence and Christian charity. It is easy to do very kind, useful, and acceptable work in this way with no loss to the general profession and but little, and sometimes even no, cost to the individual benefited, and the profession has reason to pride itself on its generous acceptance of this great duty. Generosity towards the wants of the real poor has always been the distinguishing characteristic of the medical profession. The professional man can control and regulate this charitable disbursement effectually and at comparatively small cost to himself if he supplies the medicaments but not so when they are removed out of his ken. Beyond the organised charity of hospitals and dispensaries there exists a numerous class that will not apply to either; though very poor they are very independent and cannot brook charity and wish to pay. It will be a bad day for the profession when it adopts methods which will make it impossible to meet such cases in the most sympathetic and kindest manner.

I know perfectly well that the profession is greatly imposed upon but not by the class of which I am writing. People who can well afford to pay 20 or 30 guineas for an operation are not ashamed to enter a hospital and to get the work done for nothing. But every general practitioner knows, or is soon able to ascertain, as to the means and circumstances of his poorer patients and he need rarely be deceived much about them. Perhaps the best disposed and widest spread charity of the profession is carried on by the general practitioners of the country out of the largeness of their hearts and in the most self-denying, unobtrusive, and effective manner.

It appears to be the wish of some to stigmatise this kind of practice as traitorous to the profession. I cannot think for a moment that the British Medical Association, which has done so much to advance the interests, honour, and prestige of the profession, will consent to support or to champion any such views. The gentility of the profession depends upon the individual man himself. Is he by education, manners, and conduct fitted to mix in the better ranks of society or is he not? That is the question society will ask. And it thinks neither more nor less of him because he superintends the dispensing of his own medicines than it does of the family lawyer, the welcome guest, who keeps his own offices and superintends the work of his own clerks.

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[1] See THE LANCET, Jan. 30th, 1904, p. 320.

I am, Sirs, yours faithfully,

Huddersfield, Feb. 14th, 1904. SAMUEL KNAGGS.

To the Editors of THE LANCET.

SIRS,—With regard to the proposal to prohibit medical practitioners from dispensing may I be permitted as a general practitioner to bring the following to your notice. We have already druggists prescribing and dispensing, district nurses attending midwifery and prescribing and dispensing medicine, certified midwives, large numbers of well-to-do shopkeepers and the great majority of the working classes paying 1*d.* or less a week into clubs for attendance and medicine, Poor-law authorities doing their utmost to minimise our fees, impecunious parsons and their numerous relatives receiving gratuitous attendance, cottage hospitals, myriads of already dispensed prescriptions on sale in the form of tabloids, microscopic fees, and our "tiller of the soil" who, having owed a bill for three or four years, blandly expects half the amount to be taken off (when the whole sum asked for would be scorned by any self-respecting cabman for the same mileage) and who would certainly consider, unless supplied with something tangible in the shape of medicine, that he had received nothing in return for his money.

Again, can we depend on the quality of drugs and the accuracy of dispensing by all druggists? For obviously if a drug is not to hand there is no check on substitution. And though, far from wishing to impute such practices to druggists as a class, yet no large body of men are above suspicion and it is well known that such instances have occurred. Personally, I dislike and think dispensing undignified—a dislike which I am sure is shared by many of my fellow practitioners. At the same time it is obvious that general practice will soon become impossible for men with small means who after years of toil and hundreds of pounds spent to enter the profession will have laboured in vain to gain a livelihood, and in the near future the country doctor will become as extinct as the dodo, and general practice will have to be reserved as a pastime for those of ample means who may treat such cases as have advanced a step beyond the ken of the prescribing druggist, the village nurse, the certified midwife, &c., and the urgency of which is so great that even the frantic exertions on the part of "the lady of the village," with her swift-running motor, would fail to convey suffering humanity to the nearest hospital in time to sing the "Nunc Dimittis."

I am, Sirs, yours faithfully,

Chard, Somerset, Feb. 20th, 1904. NAPIER CLOSE.

To the Editors of THE LANCET.

SIRS,—Nothing, I am convinced, will so uplift the medical profession as the cessation of dispensing by medical men. Not that we are not competent for the task, but that the more imperative claims of other departments of medicine make it necessary that we should utilise the dispensing druggist as we have already the trained nurse. Then, indeed, will the reproach of lack of scientific advancement be removed from the profession in Britain, as it has from our brethren on the continent, and we shall receive our rightful social recognition with the Bar and the Church. It is doubtless the fact that many practitioners must supply medicines to their patients, but even this it is easy to arrange with the druggist, as is done in Dublin, where a pharmacist often arranges to supply all the medicines which a practitioner may order for a certain club for a proportion of the fee—generally one-fourth. Thus, if a medical man take a club worth £20 per year, the druggist agrees to supply all the medicine required for £5. Of course, some confidence and sweet reasonableness are required on both sides; but druggists like to do dispensing in such cases at almost the price of the drugs. A very important point is that the practitioner is not then compelled to confine himself to the few drugs which he would keep in his own surgery but is free to avail himself of all the resources of the Pharmacopœia.—I am, Sirs, yours faithfully,

J. C McWALTER, M.A., M.D.Brux., D.P.H.

Dublin, Feb. 20th, 1904.

To the Editors of THE LANCET.

SIRS,—Surely all this talk about compelling medical men [illegible] be a joke; if it is not, then all I [illegible] to interfere with the liberty of the [illegible] When I passed the College and [illegible] I gave no undertaking (nor was it expected of me) not to dispense but looked forward to practice with that understanding. If it is to become law in the name of conscience let it not be made retrospective but only to apply to men commencing practice after a certain date, then they on joining the profession would see their way clear. I should like to know who are the men who started this fad of "dispensing with dispensing." I will wager that if a *plébiscite* of the profession were taken the vote would be pretty decidedly "No." Could you, Sirs, kindly undertake to receive at your office a simple "Yes" or "No" as to the desirability of the proposed innovation? A post-card would be sufficient. These things by supineness sometimes slip through and then we say, Who would have thought it? and hundreds of practitioners would be put to serious straits. I am, Sirs, yours faithfully,

A SUBSCRIBER TO THE LANCET FOR OVER 40 YEARS.

Feb. 16th, 1904.

To the Editors of THE LANCET.

SIRS—If it is possible to make it illegal for a medical man to dispense medicines under a penalty of £100 I would be glad to know if it would not be possible to make it illegal to attend midwifery cases under a similar penalty. Of course, our female population has now an order of professional ladies to attend these cases. Or, say, for a consultant to write a prescription under a penalty of £1000. Consultants could, of course, afford the larger penalty seeing their larger income. I am quite at one with "L R C.P." who writes in THE LANCET of Feb. 13th. The Bill would mean ruin to half the general practitioners of to-day. What most people want to know is, Of what benefit is the Bill to be to anyone except the druggist? Is a druggist originating it?

Is the profession as a whole to benefit? Certainly let us look to our [illegible] Will it not be foolis[illegible] a little to either of [illegible] is of the profession will not be much improved by half of us going through the bankruptcy court. Let us attend to that prescribing druggist.—I am, Sirs, yours faithfully,

Feb. 20th, 1904. FAIRPLAY.

THE INQUEST ON WHITAKER WRIGHT.

To the Editors of THE LANCET.

SIRS,—I am glad [illegible] former letter as Dr. Willia[illegible]stion only that part of it [illegible] the body and the *fluidity* of the blood are neither separately nor together distinctive of poisoning by prussic acid" In fact, he calls in question only the first half of this twofold assertion—namely, that which relates to the *bluish tint* of the body which he regards as "pathognomonic if seen soon after death."

Now, I do not for one moment deny that both the signs referred to by me as the only criteria adduced by Dr. Freyberger, in addition to the odour, are generally observable in cases of prussic acid poisoning. But what I insist upon is that neither is peculiar to that form of death. Almost any text-book on forensic medicine will serve to refresh our minds on this subject. Since Dr. O'Neill has selected Taylor's I will take Guy's (second edition, 1861). Here are a few extracts: "Sudden death, unattended by hæmorrhage or effusion of blood, is characterised by extensive lividity. ...... Cadaveric lividity is said to be distinguished from the effect of injuries inflicted during life by the seat of the discolouration being in the *rete mucosum* and vascular membrane which lie exterior to the true skin" (p. 213). More important still in view of the particular hue alluded to by Dr. O'Neill, "Death from suffocation would be indicated by violet patches on the surface of the body" (p. 220). Continuing upon death from asphyxia, Guy says: "After death the body presents the following appearances. Patches of rosy, bright red, or violet discolouration are seen on the face or on other parts of the body as much on the least as on the most depending parts," &c. (p. 223) And he gives the following warning: "It is most important, however, that the medical jurist should bear in mind that the characteristic appearances of sudden death due primarily to the heart, the lungs, or the brain, are not always equally marked; that they may be combined with each other in different proportions, and that a cause usually productive of the one may, in certain circumstances, give rise to the other" (p. 224). Incidentally, Dr. Guy makes the following statement: "In some instances, as in two cases related by Mr. (afterwards Sir James) Paget, death really due to fatty degeneration of the heart was believed to have been caused by poison" (p. 219). Have we not some reason to surmise that at the present time the number of such instances amounts at least to three? Dr. Guy goes on to say: "The nervous shocks of sufficient force to paralyse the heart and to cause instant and speedy death may be caused by strong and sudden emotions," &c. (p. 219).

Of course, the question arises as to what is the specific cause of the "glimmering blue (or violet) colour" (Guy, p. 458) which the blood assumes in cases of prussic acid poisoning. Is it due to a chemical process (1) during life; or (2) after death? The speed with which the tint appeared in the case narrated by Dr. O'Neill points to its being the result of what we may (not quite ironically) call a vital process. But if it be produced by the action of hydrocyanic acid on the iron in the system we might expect a tint more resembling *prussian blue*. However, I need not further discuss this point.

As to the *fluidity* of the blood found in Whitaker Wright's case allow me to refer to the celebrated John Hunter's "Treatise on the Blood," which I have (bound up with his works on Inflammation and Gunshot Wounds, the volume being published as a new edition in 1828). He says: "In many modes of destroying life the blood is deprived of its power of coagulation, as happens in sudden death produced by many kinds of fits, by anger, electricity or lightning, or by a blow on the stomach, &c. In these cases we find the blood, after death, not only in as fluid a state as in the living vessels, but it does not even coagulate when taken out of them" (p. 32). But more cogent still is the following: "We find in many who die suddenly, from a strong impression of the mind, the blood does not coagulate" (p. 29). I therefore think the sentence in my former letter to which reference has been made is fairly accurate.

The letter of "Midlothian" in THE LANCET of Feb. 20th, p. 540, is very forcible, but I think he is in error in saying we were informed that Whitaker Wright obtained cyanide of potassium in capsules. Dr. Freyberger's theory as to the excoriation of the tongue would be negatived by such information. There is, in fact, no proper evidence that the deceased took poison or that he had poison upon him when he left the court, nor was there anything pointing to poison in the manner of his death as observed by five competent persons. I am, Sirs, yours faithfully,

D. BIDDLE, M.R.C.S. Eng.

Kingston-on-Thames, Feb. 22nd, 1904.

RAYS PROCEEDING FROM ACTIVE MUSCLES AND NERVES.

To the Editors of THE LANCET.

SIRS,—It gives us pleasure to be able to confirm the chief claims of M. Charpentier as to rays given off by active muscles and nerves and we think it only right to publish our results at once in view of the allegations we have heard made that the facts given to the world by the Nancy physicists are mythical. In order that others may verify these results for themselves we will give some details. The experiments are remarkably easy to perform and, to us at least, absolutely convincing as to the actual existence of the rays though we hold no brief for "n" radiation as the cause.

The directions given by M. Charpentier[1] for making the screens should be accurately adhered to. We use hexagonal zinc blende and stick a very thin film on thin paper, a glass slide, &c. Contrary to the general impression we find the effect of the rays seriously diminished by the interposition of a thick background for the fluorescent material. Our best screens are a round patch a centimetre in diameter on very thin celluloid with the zinc sulphide so thinly spread that print can easily be read through it. We excite the screen by holding it near to a source of ultra-violet rays, and let the fluorescent light die away till it has approximately reached the steady stage, then bring underneath it a muscle in a state of contraction, as, for example, the contracting abductor and adductor pollicis of the thumb. The fluorescing screen will then be seen to brighten perceptibly with a rapidity depending on the thickness of the zinc sulphide. One of the most convincing tests is to place a small screen when it is very feebly fluorescing on the floor in a dark room by the side of the foot with the shoe off. It will be invisible by the observer when he is standing upright and he will need to stoop considerably before it becomes visible. If the screen be now placed on the top of the toes and the muscles made active the light will easily be seen and the increase, though considerably diminished, may be observed through the boot. We have tried to estimate the extent of this increase of light and have come to the conclusion it must be fully 100 per cent. when at its best. We arrived at this by measuring the distance at which the spot of light became invisible before the wrist was held behind it and then asking the observer to walk backwards till it again became invisible. These measurements were about five feet without the arm and at least eight feet with it. In addition to observing the effect on the arm the screen was placed over the heart, Broca's convolution, spine, &c. By this means anyone may satisfy himself and those in his company that the light from the screen really does increase, but it is not so easy to prove the matter in print by methods not depending on vision.

The only way that suggested itself to us was to use photography. If the light varied 100 per cent. it should be possible to blacken a negative more or less with it. It doubtless is, but there are difficulties on the way. In the first place the fluorescent film used for judging by vision is only very thinly coated. Secondly, the fluorescence after exposure to light falls rapidly away at first when it is strong and when it arrives at an approximately stable condition is very weak. The negative must therefore be exposed for a long time and this is inconvenient when it must be held over the wrist with the muscles kept at strong tension. We were consequently obliged to coat our screens when used for photography with a thicker film and not wait until the light had fallen to a nearly steady and dull stage Four impressions were taken on one spectrum plate with one-minute exposure and intervals of two and a half minutes between each exposure. Only the first three exposures have left their image, the second being much less black than the first, and the third almost invisible.

On the next negative we took a photograph of the fluorescing screen without the muscle, then another without the muscle, then a third with the muscle behind, all with the same exposure and, of course, the same development. When the negative is examined it will be seen that although the brightness was falling off, the third impression is just about as dark as the second, showing that the fluorescence of the screen had brightened up under the action of the muscle behind it.

It is perhaps necessary to give a word of caution as to the effect of heat on these fluorescent screens. Heat will both originate and add to fluorescence, whereas at present muscle rays have only been proved to augment the effect. As both act in the same way it is, of course, a little difficult to separate the results, but M. Charpentier has made a number of experiments to prove that the increase of light is not due to heat only. For instance, the rays persist when several layers of aluminium or of cardboard separated by layers of air, thus forming a heat screen, are interposed.[2] He also found that a frog which was at a temperature sensibly lower than that of the air in the laboratory formed a good subject. To prove the point on warm-blooded animals he raised the temperature of the screen above that of the animal and found the result the same.[3] Some of these experiments have been confirmed by us. We are now using calcium sulphide for the screens and think it rather better than the zinc. The possibilities of this method of examining the human body are immense, such as, for instance, the localisation of nerve centres in the brain, of injury to peripheral nerves, the size of the heart, &c.

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[1] Comptes Rendus, Jan. 4th, 1904, p. 45.

[2] Ibid., Dec. 14th, 1903, p 1050.

[3] Ibid., Dec. 28th, 1903, p. 1278.

We are, Sirs, yours faithfully,
HUGH WALSHAM, M A., M.D. Cantab., F.R C.P. Lond.
LESLIE MILLER, A.M.I.E E.
Feb 10th, 1904.

*** Our own experiments in THE LANCET Laboratory have confirmed the above observations. Mr. Miller has since pointed out that by simply placing a speck of recently excited calcium sulphide on a thick book—such as, for example, the Medical Directory—a distinct increase in the glow is obvious when the muscles of the hand or leg are contracted underneath.—ED. L.

BILHARZIA HÆMATOBIA.

To the Editors of THE LANCET.

SIRS,—I should be glad to know if there is any treatment otherwise than that of local sedatives for the condition of chronic cystitis and hæmaturia caused by the bilharzia hæmatobia. I take this opportunity of humbly pointing out to the profession the necessity of looking for this trematode in the urine of anyone complaining of bladder or kidney trouble who has lived in the neighbourhood of Rustenburg, Transvaal, for any length of time. My patient has been seen by four medical men, none of whom thought of the true cause of his complaint.

I am, Sirs, yours faithfully,
E. H. WORTH.
Streatham, S.W., Feb. 23rd, 1904.

THE LEGAL AND MEDICAL PROFESSIONS IN IRELAND.

To the Editors of THE LANCET.

SIRS,—The spirit of friendly relationship that formerly existed between the professions of law and medicine and the courtesy that was its natural expression seem to have departed altogether in our times, or to be recalled only by the occasion of social functions outside the sphere of professional work. Anyone who has had experience of the system that presently obtains in the courts cannot fail to have been struck by the unwarranted impertinence—frequently amounting to positive insult—to which medical witnesses are constantly subjected, as if it were a recognised fact that every medical witness must not only be prejudiced but be prepared to sacrifice his professional honour and to degrade his office in the interests of whatever party has employed him.

It is not an infrequent occurrence to find judges priding themselves upon their knowledge of petty medical technicalities and parading it in a series of questions that should certainly arouse indignant protest, if it did not afford compensation in the silent amusement of the doctor who happens to be pilloried in th[illegible] excessive fees and the [illegible] men are occasionally [illegible] to the conclusion that [illegible] of the introductory remarks to the advertisements of patent medicines. The bar, of course, takes its cue from the bench, and the method of cross examination of a medical witness bears frequently a close resemblance to the petty sessions court style where the evidence of a doubtful character is being sifted.

Formerly the cross examination of medical witnesses was directed to minimise the injuries alleged to have taken place, and the most vigorous investigation of facts did not preclude the observance of that old-time courtesy that was honourable alike to both professions. Now, however, the doctor is subjected to every indignity, his motives are impugned, and his testimony is regarded as at least not above suspicion That this is the actual state of things can scarcely be gainsaid, the reason for it may be debateable. It does assuredly seem that the present duty of medical witnesses is to resent immediately and resolutely any insulting observations or insinuations addressed to them in a court of justice, whether they emanate from the judge or the counsel.

I am, Sirs, yours faithfully,
Dublin, Feb. 20th, 1904. E. MAGENNIS, M.D. R.U.I., D P.H.

EXTERNAL STUDENTS OF THE UNIVERSITY OF LONDON.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to express in THE LANCET a complaint of external students of the University of London? The preliminary scientific examination for internal students is divided into three parts: (1) chemistry; (2) experimental physics; and (3) biology. If the candidate passes in either of the parts 1, 2, or 3, or in any two of them, he is only required to repeat those parts in which he was unsuccessful. External students, on the other hand, take the examination in two parts: (1) chemistry and experimental physics; and (2) biology. If a candidate is unfortunate enough to fail in chemistry but satisfies the examiners in physics, or *vice versâ*, the whole of the first part must be taken over again. This is obviously hard on the external student, as he has to take the same papers as the internal student. Again, I believe, there is a similar arrangement in the intermediate examination in medicine and yet the internal degree is looked upon as a better degree. In conclusion, may I invite the opinion of external students on these points?—I am, Sirs, yours faithfully,

Feb. 15th, 1904. A SYMPATHISER.

AN EXPERIENCE AMONG THE RED INDIANS.

(FROM A CORRESPONDENT.)

THE following incident which has just come to the knowledge of the writer will illustrate how little those travellers can learn of the life of the people who are carried from one end of Canada to the other in expeditions made in saloon cars on the line of rail, and yet the life of the people is the chief thing that is worth the knowing.

A young Scotchman, well known to the writer, who had grown tired of doing practically nothing in London, made up his mind last summer to try his luck "out West." Accordingly he set out for Canada and in due course found his way to Manitoba. At first he tried the inevitable plan of getting work on a farm but not being satisfied with this set about to look for something more interesting. Being a man of some ability and exactness of method he was offered employment with a survey party which was then going out on a trip northwards. As soon as winter had set in and put a stop to their operations they made ready to return to civilisation. Driving across the frozen prairie in a wagon drawn by several horses (probably a wagon-box on runners), they came to a slough which was frozen over and attempted to cross to avoid a detour. A slough is a hollow or dip in the rolling prairie where water settles in wet seasons but generally not more than some few feet deep and always surrounded by a belt of willow-scrub. When they were half-way across the ice broke and the whole outfit went through into the water. Before they could unhitch the horses two of the animals were drowned, but by dint of extraordinary exertions they managed to get the rest of the horses to drag the wagon out. The men were soaked to the skin, hands and noses were frozen, and then their clothes froze on them as they stood. This, however, is a not uncommon occurrence in a North-West winter.

The young Scotchman now began to have trouble with his left hand, into the palm of which he had happened to drive a nail not long before leaving home, and the wound thereby caused had never satisfactorily healed. Any wound or tender place of this kind is always the first point which the frost will attack. Next day the arm became very painful—possibly there may have been blood poisoning—and began to swell. But there was no assistance at hand and the nearest medical man was 70 miles away, so that there was no alternative but to set out to find him. The young fellow took a horse and rode off, but the suffering was so great that the pain became unendurable. About 30 miles on the way he came to a lodge of Indians encamped on the prairie and being thoroughly exhausted upon seeing a fire in one of the teepees he went in and asked if they would let him sit down and warm himself. A teepee is the Indian tent made of skins sewn together with thongs of hide and

MANCHESTER.

(From our own Correspondent.)

Dangers of Water Gas.

The numerous deaths that have recently taken place from accidentally breathing water gas bring up the question as to the advisability of its use by gas companies merely because it is cheap and can be produced rapidly. The figures are not at hand but statements have been made from time to time that since its very general use for mixing with coal gas accidental poisoning has become more frequent than when coal gas was supplied without admixture. But, as an inquest held at Sheffield on Feb. 17th shows, this is not the only source of danger. A man was found dead in his house. There was nothing in the house to account for it, but close by was a Siemens blast furnace which had been shut down since September until three or four days before the tragedy occurred. Several witnesses told how they visited the house on the Saturday and Sunday, and after being there a few minutes were attacked by headache, dizziness, and vomiting. The post-mortem examination by Dr. Godfrey Carter and the analysis of the blood by Professor Macdonald showed clearly that death was due to poisoning by carbon monoxide. In reply to the coroner, Professor Macdonald said that carbon monoxide was an ordinary product of the Siemens steel process. One-tenth per cent. of the gas had been fatal. The cellar of the house adjoined the works and Dr. H. Scurfield, the medical officer of health, thought that the gas came from the cellar. Several other cases have been recently reported—as, e g., the case of a nun in Liverpool the other day—showing how insidiously dangerous the gas is and, therefore, that special care should be taken against accident. Slight leakage of gas from ordinary gas fittings is a common occurrence. It is bad enough when coal gas only is used but when there is an admixture of water gas the danger to life is enormously intensified and extreme care —a most rare commodity—should be taken to insure that the fittings are gas-proof.

Provident Dispensaries.

The Manchester and Salford Provident Dispensaries Association was formed in 1874 for the double purpose of relieving the various hospitals from improper applications—protecting them, in fact, from abuse—and of affording medical attendance to the provident. The inquiries into the circumstances of the hospital out patients showed that for the first ten weeks after it began more than half of those at the infirmary were "improper applicants" and the percentage at all the associated charities for the year 1875 was 42·32. During the year 1903 the percentage at the four hospitals now associated with the provident dispensaries was 5 05. It appears therefore that the association may fairly lay claim to have done a good deal in the prevention of hospital abuse. As regards the provision of medical attendance on the provident it is not easy to make any statement that would not excite criticism. The medical profession, it is alleged, has never been unanimous about anything and in Manchester the "dispensary doctors" and their position, their wrongs, and their privileges, have afforded material for discussion and controversy for the last 30 years. Nor is the subject yet worn out. The annual report claims an increase in the number of paying members, the total membership being 18,620, while there is a gross surplus of £290, from which certain payments have to be deducted.

Infantile Mortality and the Milk-supply.

On Saturday evening, Feb. 13th, Dr. Henry Ashby addressed a meeting at the Art Museum, Ancoats, on Infantile Mortality. Having pointed out how remarkably the infantile death-rate in New York had declined since systematised attention had been paid by various philanthropic societies, agencies, and individuals to the feeding and environment of children, Dr. Ashby urged that the interests of the farmers, the milk dealers, and the citizens were the same, inasmuch as better results would be obtained if some form of fresh milk were substituted for the condensed milk, and the various forms of dried milk, with additions of malt and starch, which were now used. He urged all to support the corporation in its endeavours to improve the milk supply by insisting on a high standard of cleanliness in its treatment from the cow through its various stages till it reaches the infant and by stopping the supply of impu milk or that from diseased cows.

Infirmary for Leigh.

It has been decided that Leigh, which is now a town between 8000 and 9000 inhabitants, shall have its ow infirmary. The scheme, which is capable of extension, wi provide at first for 30 patients, 15 men and the rest wome and children. The total estimated cost is £15,000. Lor Lilford has given a site in a central situation.

Death of Mr. Robert Smith, M.B., C.M. Aberd., D.P.H.

I regret to record the death of Dr. Robert Smith Rawtenstall, in the Rossendale Valley, where he had a extensive practice. Several weeks ago he suffered fro ptomaine poisoning after eating some tinned tongue. Th was followed by septic pneumonia, from which he neve rallied. His death occurred on Feb. 20th.

Feb. 23rd.

WALES AND WESTERN COUNTIES NOTES

(From our own Correspondents.)

Prevention of Infectious Disease in Bath.

Medical officers of health have to contend with man difficulties in the administration of the Public Health Act more especially in connexion with those sections whic deal with the prevention of infectious disease. It is to b regretted, therefore, that they do not always receive fro their colleagues that support which they are entitled expect. The Bath newspapers have recently containe accounts of disputes which have arisen in the sanitary committee of the corporation between a medical member of th council and the medical officer of health, Dr. W. H. Symons from which it appears that, among other leaflets issued b Dr. Symons, there is one having reference to the preventio of the spread of whooping-cough in which there is given *résumé* of Section 126 of the Public Health Act, 1875, whic imposes a penalty of £5 upon any person who exposes himself if infected, or permits any infected person of whom he in charge to be exposed, in a public place or in a public conveyance. The councillor in question expressed the opinio that Section 126 only applied to those diseases which wer scheduled in the Infectious Disease (Notification) Acts an said it was misleading to state that a fine could be inflicte for allowing a child with whooping-cough to go out in th public streets. The same gentleman also cast some dout upon the desirability of examining bacteriologically spec mens taken from the throats of suspected diphtheri patients because there were so many bacilli very muc alike that they might discover an alarming amount diphtheria. The reputation of the city of Bath as a healt resort would surely be better served if such discussions a these took place in a committee at which reporters were no present.

Bristol Public Baths.

At a meeting of the West of England and South Wale branch of the Incorporated Society of Medical Officers Health held at Bristol on Feb. 18th Dr. D. S. Davies gav an account of the public baths which had been establishe in Bristol and the members of the society subsequentl visited the most recently erected bathing establishment a Barton Hill which has some features of a novel description The corporation of Bristol has acquired by purchase thre public baths and has erected four others. Swimmin baths either open or covered are connected with each o these seven establishments; there are slipper baths in si and in two there are washhouses. The question of erectin three more open swimming baths in the public parks i now under consideration. If these are provided Bristo will compare very favourably with other towns, even wit Liverpool where the accommodation for public bathing i very considerable. The total capital expenditure upon th seven Bristol baths has been nearly £70,000 and in th financial year 1902–03 there were spent in current charge £3300 more than the receipts, a sum equal to about on halfpenny in the pound on the rateable value of the city During the same period there were 267,000 bathers. Th most recently erected baths cost £17 600 and are situate in a densely populated working-class neighbourhood. In th large covered swimming bath the water is heated by th injection of steam; it is kept constantly circulating an while traversing the pipes outside the bath it passes through a mechanical filter of pumice stone. By means of suitable inlets it is also possible to aerate the bath water. But the distinguishing feature of these baths is the installation of spray baths which have been devised by the superintendent, Mr James Kane. These are for washing purposes and are intended to take the place of the ordinary slipper baths. Each spray bath is in a separate cubicle about half the size of an ordinary bathroom and contains in addition to a lavatory basin suitable apparatus for spraying the body. The floor is impervious and slopes to a trapped outlet. Each cubicle is provided with a dressing room from which it is divided by a gangway. This enables Mr. Kane to put into practice his contention that the room in which a bath is taken should be of a higher temperature than the room in which the bather dresses. At the Bristol baths the bath room is heated to a temperature of 115° F. and the dressing room to 65°. In addition to the advantages claimed for a spray bath over a slipper bath, it is said that not only is the initial cost of the spray bath less but there is only one-third of the quantity of water used. The establishment of these baths in a poor neighbourhood is important and the extent to which they are used will be watched with considerable interest.

Royal Devon and Exeter Hospital.

The 167th report of this institution, which has just been issued, states that 1317 in-patients were treated during 1903, against 1349 in 1902. The out-patients numbered 4970, compared with 5214 in the previous year. The average daily number of in-patients was 150. The financial statement shows that the receipts amounted to £7446 and the expenditure to £9122. The committee urgently appeals for increased support, adding that an additional £2000 per annum are needed to carry out the work of the hospital and unless this is forthcoming some of the invested funds of the institution will have to be sold to meet the deficiency. During the year Lieutenant-Colonel Miller presented a handsome marble bust of the late Dr. Patrick Miller who was an honorary physician for nearly 50 years and Mrs. Bankart presented a large photograph of the late Mr. J. Bankart, a former member of the honorary surgical staff.

University College, Bristol.

A deputation of representatives of university colleges, including University College, Bristol, waited on the Chancellor of the Exchequer on Feb. 17th on the subject of the Government grant. The Chancellor intimated in his reply that he was prepared to double the grant for the present year, so that the Bristol College will receive £2400 instead of £1200.

Feb. 23rd

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Medical Society of Edinburgh.

A MEETING of this society was held on Feb. 19th, Dr. D. O. L. Fitzwilliams being in the chair. Dr. Fitzwilliams referred to the great loss sustained by the society and by the Edinburgh Medical School by the recent death of Dr. Robert Milne Murray, an old member of the society. Dr. H. N. Fletcher showed a male patient, aged 57 years, suffering from Nervous Symptoms There had been gradual atrophy of the intrinsic muscles of the right hand and other evidence of progressive muscular atrophy. In addition the patient had lately developed some ataxia, with well-marked Argyll-Robertson pupil, diminution of knee-jerks, and increased sensitiveness to cold, symptoms pointing to locomotor ataxia. The question of diagnosis elicited considerable discussion. Dr. H J Dunbar read notes of four cases of Intussusception recently successfully treated by operation at the Edinburgh Sick Children's Hospital. The children, whose ages varied from six weeks to 11 months, were all boys and all well nourished, healthy children. In two of the cases the invagination had begun, not at the ileo cæcal valve, but in a small pouch in the wall of the cæcum. Dr. Dunbar attributed the success of the operation in these cases very largely to the comparatively short time which had elapsed between the onset of the condition and the operation. The operation itself was one which every practitioner should be prepared to perform. A dissertation on Anæsthesia in Difficult Cases, by Dr. Sidney Gilford, was read in his absence by Dr. H. D. Shepherd. Dr. Gilford contended that chloroform was the safer general anæsthetic at the extremes of life and in all operations on the head, thorax, and abdomen, and also in all cases of lung disease. In other cases ether should as a rule be employed. Deaths under chloroform occurred most frequently in the prime of life, at which time local anæsthesia could be most safely used; and in very many of the recorded cases local anæsthesia could have been perfectly well employed. Dr. Gilford stigmatsied as absolutely criminal the practice occasionally followed, especially in dental operations, of giving chloroform with the patient in the sitting posture.

The Case of Dr. Lachlan Grant.

At a recent meeting of the Ballachulish Workmen's Medical Society, which was held in the Public Hall, Ballachulish, presided over by Mr. Donald Macmillan, it was unanimously agreed that all legal expenses incurred by Dr. Grant and by the medical club during the recent dispute should be paid out of the appeal fund. The fund received upwards of £900 from the public.

Glasgow Southern Medical Society.

Sir J. Halliday Croom on Thursday, Feb. 11th, delivered an interesting address before this society, of which he is Vice-President, taking for his subject "Moot Points in Cancer." The lecturer was inclined to attach little importance to the influence of heredity in malignant disease.

Feb. 23rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Ultra-microscopic Disease Germs.

Professor E. J. McWeeney, M.D., delivered an interesting lecture on Feb 17th in the theatre of the Royal Dublin Society on Ultra microscopical Disease Germs. After showing on the optical screen projections of many well known parasites he dealt with the minute bacteria which cause disease through their parasitic mode of life. He showed the large bacteria in anthrax and the smaller kinds down to the germ of influenza which is, of course, one of the smallest known. He then dealt with the special subject of his lecture and stated that the limit of microscopical visibility was set by the wave-length in white light at 1/43500th of an inch. Particles less than half a [illegible] ll blurred spots c[illegible] nor their structu[illegible] amulating evidence to show that certain infectious maladies, the course of which had hitherto baffled the bacteriologist, were really caused by germs too small to be seen by our best microscopes and yet perfectly recognisable by their effects. One of these was the germ of pleuro-pneumonia in cattle, a veritable scourge until about ten years ago when it was stamped out owing to the labours and discoveries of the late Professor Nocard, the very eminent French veterinarian whose latest researches were carried out in Ireland under the auspices of the Agricultural Department. The lecturer explained the methods by which Professor Nocard made his discoveries without any microscopical aid and concluded by mentioning many diseases the pathology of which is really in the domain of the ultra-visible rays. As regards hydrophobia it is well known that the illustrious Pasteur failed to see its germ but, acting in the belief that it must be existent and fatal, saved thousands of lives.

Shell-fish in Ireland.

Dr. T. J Browne, medical inspector under the Local Government Board, states that periwinkles are collected all round the coast of Ireland to the measure of about 1500 tons per year and are exported to the London, Liverpool, and Manchester markets. For some strange reason they are not consumed in Ireland as food The inspector states that they are not collected in the vicinity of sewer outfalls or in situations liable to pollution. They are boiled before being eaten but Dr. Browne seems doubtful whether they are sufficiently cooked to be safe from pathogenic organisms. He is unable to say whether they are completely sterilised but is of opinion that if they are not properly cooked their consumption might be attended with a certain amount of risk.

Epidemic of Blood-poisoning in Cootehill Workhouse.

Dr. E. Cooy Bigger, medical inspector under the Local

Government Board, has reported in reference to the recent outbreak of septicæmia in the infirmary of Cootehill Workhouse which caused the death of four patients that he found as a result of his investigation that the patients were in charge of two qualified nurses who were present and assisted at the operations. The medical officer sterilised his instruments and dressings and the operations were carried out with the necessary antiseptic precautions. The wards were disinfected biennially. No sanitary arrangements were provided inside the building and drainage and slops were carried off in an open channel situated several feet from the walls. The wards had not sufficient window space and so did not receive sufficient sunlight. A direct and definite cause for the outbreak was difficult to assign but Dr. Bigger reports that the two main wards occupied by patients were re floored some years ago and that the boards, which were not closely joined, were laid on the top of the old floor, which might have contained disease germs. The medical officer was inclined to attribute the outbreak to this circumstance. It has been advised by the Local Government Board that the fever hospital should be enlarged and that better accommodation should be provided for all infirmary patients.

Queen's College, Belfast, and the Ulster Medical Society.

The Ulster Medical Society at a recent general meeting unanimously passed an important resolution having reference to Queen's College, Belfast. The resolution recorded the necessity for the provision of increased facilities for higher scientific teaching in Queen's College, pointing out that the faculty of medicine had always formed one of the most important departments of the College and must ever remain in the closest touch with the progress of investigation and research in the various physical and biological sciences. The resolution also, while recognising and appreciating the manner in which Queen's College had utilised the resources at its disposal in keeping abreast of modern methods of teaching medical science, pointed out that the training of medical students in the subjects of zoology, botany, chemistry, and physics is certain to suffer unless more adequate facilities for teaching these subjects are now provided and drew attention to the necessity for providing the College with the means of taking full advantage of the generous offer of the Right Hon. W. J. Pirrie to build a laboratory for physical science at his own expense. It is undoubted that the absence of sufficient laboratory accommodation and staff seriously interferes with the development of post graduate work in medical science at Queen's College and it is to be hoped the Lord Lieutenant, the Chief Secretary, Lord Londonderry, and the various Members of Parliament to whom copies of the motion have been sent, will take an active interest in the plight of the College.

Feb. 25th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Diagnosis of Actinomycosis.

AT the meeting of the Academy of Medicine held on Feb. 9th M. Le Dentu referred to the difficulties in the diagnosis of actinomycosis and to the necessity which existed for a histological examination. He himself had just had under his own care a very interesting and deceptive case—namely, that of an old man, aged 75 years, who was suffering from a tumour. The look of the growth and the multiple fistulæ in it led the medical men of Lyons to think that the case was one of actinomycosis. Examination of the pus, however, revealed none of the typical granules, neither did curetting the bone. Histological examination showed the growth to be a typical epithelioma. M. Cornil referred to the possible absence of the characteristic granules. In one case under his care these granules which could not be found at the first examination were afterwards discovered in large quantities in the spongy nodules from the bone. This, however, is by no means always so even in marked cases of actinomycosis. The ray masses, easily stained by violet, are as characteristic as the granules for purposes of diagnosis. On the whole, however, the opinion was expressed that it is impossible to make a diagnosis in actinomycosis without a histological examination.

The Causes of Congenital Dislocation of the Hip joint.

Congenital dislocation of the hip-joint, a fairly common condition and one the explanation of which has often puzzled the medical profession, formed the subject of another communication at the same sitting of the Academy of Medicine. M. Le Damany, professor at the Rennes School of Medicine, brought forward a theory based upon anthropological considerations. On the one hand, the upright position by bringing about a twisting of the femur and, on the other hand, the large size of the head due to the development of the brain with its concomitant development of the pelvis would be the predisposing causes of this dislocation, which is altogether proper to the human species. Owing to the obliquity of the walls of the pelvis the head of the femur, being pushed forward by the twisting of the bone, has a tendency to slip out of the acetabular cavity. As a matter of fact, in those persons who are the subjects of this lesion, either at the time of birth or in whom it develops at a very early age, the observer may note an exaggeration of the normal twist of the femur and an excessive obliquity of the base of the acetabular cavity.

Inspection of the Paris Hospitals.

The authorities of the Assistance Publique have been reckoning up the wastage which occurs in the hospitals of Paris and M. Mesureur has sent to all the hospital directors a circular announcing that he has inaugurated a system of inspection for looking into the expenses of these establishments. Each of the inspectors, who are nine in number, will spend ten days in one of the hospitals to which they will be allotted by the director of the Assistance Publique. At the end of this time they will send in a report upon the working of the hospital, mentioning any particular points which may have struck them. They will, of course, take particular notice of financial extravagances as well as of errors of administration.

Presentation to Professor Bouchard.

On Feb. 21st the ceremony took place at the Academy of Medicine of the presentation of a medal to Professor Bouchard which had been subscribed for by his pupils and friends. Speeches were delivered by, amongst others, Professor Debove, dean of the Faculty of Medicine, M. Liard, the vice rector of the Academy of Paris, and the Minister of Public Instruction who presided. The last named in the course of his speech reminded his audience of the tact and prudence, the farsightedness and goodwill which Professor Bouchard had displayed throughout his career, particularly as regarded the inspections in the faculties of medicine with which he had been charged. Knowing well how to recognise intuitively and to encourage good intentions and how to give timely counsel in such a form that it would be well received Professor Bouchard had been a brilliant representative of French science in foreign countries at various congresses. Only last year he had presided over a congress at Cairo where he had gained the respect and sympathy of all. His luminous and sound opinion together with his accurate and precise speeches had many a time been the determining factor in a decision. The Minister concluded by joining his congratulations to those of the pupils and friends of the master. Professor Bouchard, who laboured under obvious emotion, spoke a few words which were almost inaudible owing to the cheering.

Feb. 23rd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Administration of the Holy Communion.

IN the present age even those rites of the Church which the devout regard as being above question or criticism are liable to be scrutinised from the hygienic point of view. The communion cup, for instance, has been looked upon as endangering the bodily health of communicants owing to the risk of disease being conveyed by it and some reformers have therefore proposed to replace the general communion cup by cups belonging to each individual communicant. The subject has been discussed at the last General Synod of the Protestant Church of Prussia but the matter was adjourned The daily papers now state that the vestry of St. Nicolas in Berlin, after hearing an address by the archdeacon, has decided to provide 40 communion cups to be used in taking the sacrament and also to permit any communicant to bring his own cup with him. For those who object to this innovation a cup in common will be provided as hitherto, so that the wishes of all parties, whether belonging to the new school or the old, may be met.

Medical Questions before the Berlin Town Council.

Medical questions were a prominent feature at the recent meetings of the Berlin town council. One of them had reference to the accommodation for venereal patients in the hospitals. This is far from being satisfactory and the attention of the municipal authorities has been drawn to the matter by some unfortunate occurrences which have been recently reported in the daily press. Some years ago there was only one special department for venereal patients—namely, in the Royal Charité Hospital. The female patients were almost exclusively registered prostitutes admitted by order of the police medical officer. In consequence of the increasing number of prostitutes the available beds in course of time were found to be too few and so in 1890 the municipal authorities enlarged the accommodation by establishing a venereal department in connexion with the Municipal Asylum for the Poor. This department, which at first had 60 beds and at present has 200 beds and is under the charge of Professor Behrend, is now insufficient for the patients seeking admission. Some of the female patients complained of their enforced association with the prostitutes sent in by the police and in consequence of this want of classification many women when suffering from venereal diseases preferred to be treated at home rather than to enter the venereal department of the asylum or the Charité Hospital, the result being the extension of such diseases in families. The municipal authorities therefore intend to establish a special hospital for prostitutes exclusively and to abolish the venereal department of the asylum. For male patients and for females who are not prostitutes a special department will be provided in the new Rudolf Virchow Hospital, the largest and most lavishly equipped hospital in Berlin, which is to be opened within two years. At the last meeting of the council, when the municipal authorities were sharply attacked because they had allowed matters to become so unsatisfactory, it was decided that in the meantime a department for syphilitic patients should be provided in one of the existing municipal hospitals by erecting temporary pavilions. Other subjects of discussion concerned the enlargement of the Kaiserin Friedrich Hospital for Children, where the number of beds, especially for children with contagious diseases, has proved to be insufficient. Some of the members were of opinion that the establishment of several small hospitals for children in various districts of the city would be preferable but as this scheme would require several years for carrying it out the council decided to enlarge the existing hospital. A third matter of importance was the establishment of a training school for nurses exclusively for the municipal hospitals. Hitherto the nurses of these hospitals have belonged to certain corporations—some of them religious and some of them secular—which were under a contract to provide a sufficient number of nurses, the municipality paying a certain sum to the corporation. Henceforth the municipal council will have its own nurses trained free of charge for one year in the municipal training school, the condition being made that the probationers shall serve three years as nurses in the municipal hospitals. The nurses will be paid from 360 to 540 marks (from £18 to £27) per annum and the matrons will have salaries varying from 1200 to 1800 marks; they will also have free board, residence, and wearing apparel. They will be entitled to pensions in the event of incapacity from age or ill health. A great number of candidates have already applied for admission to the training school which is to be in connexion with the Moabit Hospital.

Professor Koch.

It is rumoured that Professor Koch intends to resign his appointment as chief of the Royal Institution for Infectious Disease and to settle in South Africa. This conjecture no doubt originated in connexion with the repeated and prolonged visits which he has made to Cape Colony and the other British colonies in Africa on the invitation of the Colonial Governments. I learn, however, from a trustworthy source that the rumour in question is unfounded, that Professor Koch has gone to South Africa by special permission of the Emperor, and that his place at the above institution will be preserved for him till his return. It is true that Professor Koch has no objection to be absent from Berlin, his relations with the medical faculty there not being very cordial for reasons which are of a personal rather than of a professional character and are not of recent date. If he contemplates retirement it is certain that nothing will be decided till his return, which is announced for the end of April.

Appointments.

Two new appointments of ordinary professors in the Berlin medical faculty are announced. The chair of the late Professor Jolly will be taken by Professor Ziehen of Halle, whilst Professor Gusserow, who is retiring from the chair of Gynæcology on the ground of his advanced age, will be succeeded by Professor Bumm, also of Halle.

Feb. 22nd.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Changes in the Ontario Board of Health.

Dr. Peter H. Bryce, who for many years has been secretary of the Ontario Board of Health and deputy registrar-general, has entered the service of the Dominion Government at Ottawa, his new office being that of immigration inspector, supervising all the immigration officers at the ports of entry. In addition to this he is to have charge of the sanitary arrangements in connexion with the Indians who are the wards of the Federal Government. Dr. Bryce has been succeeded by Dr. Charles A. Hodgetts who has been connected with the board of health for a number of years, having three years ago been appointed permanently to the position of medical inspector of the province of Ontario.

Vital Statistics of Ontario.

The annual report of the Registrar General for the province of Ontario is now being prepared for 1902. During that year there were 47,796 births registered, compared with 46,061 in the previous year, an increase of 1735, giving a general birth-rate of 21 7 per 1000. The birth rate in the cities is 22 2 per 1000, or 0 5 higher than the general average. Compared with the 1 per cent. increase in population the increase in births is fairly satisfactory. Comparison with the province of Quebec, so long regarded as the possessor of a high [illegible] ecrease in [illegible] in 1898 to [illegible] the same [illegible] numbered 18,072, [illegible] of 37. The total [illegible] ith 29,608 in 1901, giving a death-rate of 12 6 per 1000 compared with 13·6 per 1000 in 1901. The high average of health in Ontario is shown by comparison with other countries, the corresponding rate being 17 1 in the United Kingdom, 14·9 in Norway, 24 2 in Austria, 18 0 in Switzerland, 20 0 in the German Empire, 20 1 in France, and 27 6 in Spain. The deaths from typhoid fever and from tuberculosis show a continued decrease.

Prevention of Tuberculosis.

The British Columbia Association for the Prevention and Treatment of Consumption and other Forms of Tuberculosis was organised at a meeting held in the City Hall, Victoria, British Columbia, on Jan. 20th. The medical aspects of the question were put before the meeting by Dr. C. J. Fagan, the secretary of the Provincial Board of Health, who thought that the Dominion Government should assist more in the way of prevention of the disease, seeing that Canada spends annually some $500,000 to assist 60,000 emigrants to settle here. Sir Henry Joly, the Lieutenant Governor of the province, was elected honorary president; Dr. Proctor of Kamloops, secretary; Dr. Fagan, treasurer; and Mr. R E. Walker and Dr. J. C. Davie members of the executive committee.

Royal Victoria Hospital, Montreal.

The annual meeting of the board of governors of the Royal Victoria Hospital, Montreal, was held in that city in the latter part of January, the medical report being as follows. On Jan. 1st, 1903, there were 188 patients remaining over from 1902. During the year 2911 were discharged, of whom 1397 were well, 914 improved, 165 not improved, 293 not treated, and 142 died. Of the 142 deaths 38 took place within 48 hours of admission. The death-rate for the year has been 4 88 per cent., or if those dying within 48 hours of their admission be deducted 3·57 per cent. The highest number of patients in the hospital on any one day was 230 on Dec. 17th and the lowest was 166 on August 30th. In the out-patient department the total number of patients treated was 4398. The income for the year amounted to $140,368, while the ordinary expenditure amounted to $120 419. The number of patients admitted during the year numbered 2931.

National Sanatorium Association: Sixth Annual Report.

The sixth annual report of the physician in charge of the Muskoka Cottage Sanatorium shows that the past official year ending Sept. 30th, 1903, has been one of progress. The greatest number of patients in residence at any one time during previous years has been 61; last year they reached 69. The number of patients in the sanatorium on Oct. 1st, 1902, was 49—namely, 26 males and 23 females. The number admitted during the year was 164—namely, 99 males and 65 females. Of 115 patients whose cases were reported on 24 were discharged apparently cured and 41 with disease arrested.

Death of Dr. John Herbert Sangster.

A notable figure in the medical life of the province of Ontario passed away in the person of Dr. John Herbert Sangster of Port Perry, Ontario, who died suddenly from heart disease while on a visit to Toronto. He was 72 years of age and was born in London, England. From 1866 until 1871 he was a prominent authority on education in Ontario, being at that time principal of the Toronto Normal School, at the same time acting as professor of chemistry and botany at what was then Dr. Rolph's medical school which subsequently became the Medical Faculty of Victoria, now defunct. It was at that time that he took up the study of medicine and upon his retirement from the Normal School he removed to Chicago, but returning within a short time to Canada he began the active practice of his profession at Port Perry, where he continued up to the time of his death. He was a prominent and valued member of the Ontario Medical Council, to which body he was elected in 1894. Here, upon taking his seat, he began a campaign against the presence on that body of representatives from defunct medical colleges. Many years ago Sangster's Arithmetic was the standard text-book in the public schools.

Western General Hospital, Montreal.

The annual meeting of the supporters of the Western General Hospital, Montreal, was held in January when it was reported that the number of patients in the institution was larger than ever before. The medical report was submitted by Dr. F. R England. It is stated that the number of patients admitted to the hospital during 1903 was 600. The death-rate was 5·16 per cent., but deducting the deaths which occurred within 48 hours of their admission and which numbered 13 the rate dropped to 3 per cent. The average number of days' treatment in the hospital was 18·3. In the outdoor department the number treated amounted to 7560, or an increase of 990 over the previous year.

Protestant Hospital for the Insane, Quebec.

The annual meeting of the supporters of the Protestant Hospital for the Insane of Quebec, situated at Verdun, was held at Montreal in February. A question which caused a good deal of discussion was that of voluntary commitment, the superintendent, Dr. T. W. Burgess explaining that he had been solicited by people who believed they would be mentally benefited by treatment in the institution for admission. Owing to the law which forbids this form of commitment he was, of course, obliged to refuse their requests. The total admissions for the year numbered 152 and the number under treatment 581; 57 were discharged as recovered and 23 as improved. The deaths numbered 44.

Canadian Medical Association.

The thirty-seventh annual meeting of the Canadian Medical Association will meet this year at the extreme western end of Canada, at Vancouver, British Columbia, under the presidency of Dr. Simon J. Tunstall of that city. Mr. Mayo Robson will be a guest of the association.

Toronto, Feb. 17th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Asylums for the Insane in New York State.

THE eleventh annual report of the New York State Charities Aid Association to the State Commission in Lunacy has just been published. The report states that for the year 1903 the total number of insane persons in State hospitals and licensed asylums was 25,934, an increase of 941 over the previous year. Of this total number, 24,187 patients were in the 14 State hospitals, being 918 more than on Oct. 1st, 1902. This increase is much larger than has been customary. One of the most important measures noticed in the report was the Bill introduced in the New York State Legislature of 1903 to provide for the establishment of a reception hospital for the insane through the joint action of the State and the city of New York. This Bill authorised the city to acquire a suitable site and to lease it to the State at a nominal consideration and authorised the State to spend $300,000 (£60,000) in erecting buildings to receive "a limited number of alleged insane and insane patients for the purpose of affording them such speedy and skilled treatment as might be conducive to their more prompt recovery" The annual per capita rate of maintenance for inmates of the public asylums for the insane in New York State showed an increase of nearly $11 (£2 4s) over the rate of the previous year. All the State hospitals of New York are greatly overcrowded and it is recommended in the report that steps should be taken quickly to provide for the accommodation of the rapidly increasing insane population of New York State.

Bellevue Hospital Nurses' Home.

The Bellevue Training School for Nurses, the first of its kind started in the United States, has issued an appeal for aid. Nearly 30 years ago the Bellevue Training School practically came into existence, since which time the work performed by those trained there has been of an exceptional nature. The city of New York pays to the Bellevue Training School a certain sum for the services and maintenance of each nurse supplied, but this sum is not enough to cover the entire cost of educating and caring for these women. The crowded condition of the wards of Bellevue Hospital makes it necessary now for each nurse to care, on an average, for 7·5 patients, while the average of nurses to patients in the best hospitals in the United States not run by cities is 4·9. The city of New York now requires more nurses. To answer this call adequately more room is needed for the Nurses' Home. The present home is filled to its utmost capacity and additional premises must be at once rented and properly equipped. The limit of the private income of the home has been reached and as new arrangements must be made at once the sum of $25,000 (£5000) is asked for to make it possible to embark upon this work. This is the first public appeal made by the Bellevue Training School for Nurses in over a quarter of a century.

Feb. 15th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Preservatives in Food.

AT the central court, Sydney, an employé of the Concentrated Milk Company was prosecuted for "disposing of a certain article of food—to wit, concentrated milk—containing boric acid, an antiseptic mentioned in the Public Health Regulations, in a proportion exceeding $\frac{1}{100}$th of a grain per pint of the said food." The Government analyst notified that the milk in question contained 14 grains per pint of boric acid, an amount that would be dangerous to health. The case was adjourned.

Duties of Health Officers.

Codes of duties for officers of health under the Health Acts have been issued by the Board of Health of Victoria as follows:—

An officer of health is required to carry out the directions of the board or municipal council and to inform himself respecting all influences injurious to health in the municipal district for which he is appointed. On becoming aware that any person in the district is affected with small-pox, Asiatic cholera, plague, yellow fever, typhus fever or leprosy, or that any article is likely to convey the infection of any such diseases he must [illegible] report the matter to the board and the municipal clerk. S[illegible]fer to a district other than that for which h[illegible]ition to report still holds good. The officer is obliged to investigate any disease of a dangerous nature not included in the above list, also as to any condition injurious to health and to advise as to the closing of schools and superintend the work of inspectors. Another of his duties is to systematically inspect premises used for the production, preparation, storage, or sale of articles of food. In case any article appears to be unfit for human consumption he is to give such directions as may be necessary to have it dealt with according to statute. The officer is obliged to direct inspectors to procure samples of drugs for analysis and must inquire into all offensive processes of trade and maintain careful supervision over water works, drainage, and sewerage. Duties performed by the officers are to be recorded and embodied in an annual report to the council and the board.

Consumptives' Home, South Australia.

The Governor of South Australia has opened the "Gooch" wing recently added to the Kalyra Home for Consumptives at Belair, South Australia. The home is pleasantly situated at the top of the first range of the Mount Lofty Hills. The new wing has been erected chiefly by the efforts of Mr. C. H. Gooch, after whom it is named.

Dismissal of a Hospital Surgeon.

The surgeon to the Junee Hospital, New South Wales, has, according to the *Cootamundra Herald*, been dismissed by the committee in somewhat peculiar circumstances. A maid-servant in his employ was admitted to the hospital and there confined; a few hours afterwards she was removed to the surgeon's private house. She then left his house and went by train to Albury and was admitted to the Albury Hospital in a state of collapse. It is stated that the surgeon in question knew nothing of her condition till after her confinement and had her taken back to his house in the interests of her family to avoid publicity and that "not the slightest suspicion of impropriety rests on" him.

Dental Board, New South Wales.

The first election of members of the Dental Board under the Dentists Act of New South Wales resulted in the return of Sir James Graham, M.D., and Dr. Palmer as medical members.

Balmain Friendly Societies' Dispensary.

The trouble between the Australian Natives' Association and the medical officers to the Balmain Dispensary has resulted in a proposal by the members of the dispensary board to appoint three medical officers, one at £600 and two at £500 per annum, to give their whole time to the members of the dispensary and of the affiliated lodges. The question is whether they will be able to get the medical officers who would be ostracised by their professional brethren.

Brunswick Friendly Societies' Dispensary.

At Brunswick, Victoria, the lodges formed a medical institute and have with great difficulty secured two medical officers. How long they will be able to carry on is doubtful as they are not recognised by the rest of the profession.

Sydney Medical Mission.

The third annual meeting of the supporters of the Sydney Medical Mission was held recently, Lady Rawson presiding. The report showed that the medical superintendent had made 2195 visits to the homes of 495 patients; 2644 patients had made 10,309 attendances at the dispensary. The mission reaches a class unable to attend the hospitals during the day time as they either have to be at work or are women who cannot leave their homes. All the patients were extremely poor. At the meeting the speakers all expressed surprise at the amount of work done and the smallness of the expenditure, and extolled the great self-sacrifice of the medical superintendent, Dr Carlile Thomas, who has been now succeeded by Dr. Stillwell.

Acute Suffocative Pulmonary Œdema.

In the *Intercolonial Medical Journal* for December Mr. H. M. Hewlett describes four cases of a very rare condition—acute suffocative pulmonary œdema—concerning which very little information can be found. The cases are most carefully recorded, with details of the chemical examination of the expectorated fluid and of the blood pressure, and in one fatal case of the post-mortem examination. All the cases occurred in women at or past the prime of life; all showed evidence of chronic cardio vascular and renal disease with very great arterial systolic blood pressure, produced probably by excessive consumption of alcohol. The majority of the attacks occurred at night after some extra exertion. They came on with remarkable suddenness and subsided rapidly when improvement began. The expectoration began immediately and, in Mr Hewlett's opinion, the mechanical obstruction which it causes to the air entry is responsible for the dyspnœa, cyanosis, and laboured heart action. Professor Martin has suggested that the escape of the highly albuminous fluid is due to an altered permeability of the capillaries and alveolar cells; it cannot be a question of increased pressure, for no ordinary pressure would drive almost pure serum through living animal membranes in their normal condition. The treatment which Mr. Hewlett has found effective is the hypodermic injection of a quarter of a grain of morphine.

Jan. 12th.

Obituary.

JAMES SMITH TURNER, M.R.C.S. ENG., L.D.S.

ON Feb. 22nd, after a long illness, Mr. James Smith Turner passed away at his residence in Ealing. He was for many years one of the most notable members of the dental profession and to him perhaps more than to any other man dentistry owes the position which it holds at the present day. He was one of the pioneers of dental reform and with the late Sir John Tomes was primarily responsible for the passing of the Dentists Act in 1878. Born in Edinburgh in 1832 James Smith Turner was at the age of 14 years apprenticed as a mechanic to a dentist in that city. In 1853 he came to London without money or influence and in a short space of time was destined to see two important events occur—the passing of the Medical Act of 1858 which gave to the Royal College of Surgeons powers to grant licences in dental surgery, and the establishment of the Dental Hospital. He joined the Middlesex and the Dental Hospitals, and in May, 1863, became M.R.C.S. and in the following August L.D.S., supporting himself all the time by mechanical work and a growing dental practice. It was during his career at the Middlesex Hospital that he became associated with Mr. (subsequently Sir) John Tomes, and those two ardent reformers with several colleagues set to work to convert what was then the trade of a dentist into an honourable profession. In 1872 he went to the United States to study the conditions of dentistry in that country and on his return the campaign for dental reform was started in true earnestness. The movement met with hostility in some medical quarters but in spite of this a Bill was drawn up and thanks to the labours of Lord Avebury (then Sir John Lubbock) the Act was passed in one session. In the lobby of the House Mr. Smith Turner was indefatigable in his attendance, being always present to answer inquiries and to remove difficulties and there is little doubt that but for his splendid self-sacrifice the Bill would not have so speedily become law. Directly the Act was passed he set to work to found the British Dental Association and was for many years president of the representative board and in 1891 presided at the annual meeting of the association in London, when he delivered a thoughtful and masterly address. In the Royal Dental Hospital he was ever deeply interested and held the position for several years of lecturer on dental mechanics and at the time of his death was one of the consulting dental surgeons and vice-chairman of the committee of management.

At the Middlesex Hospital he held the posts of dental surgeon and consulting dental surgeon. He was for years an active member of the Odontological Society of Great Britain and held office continuously from 1873 to 1884 when he was elected president. A friend closely associated with him for nearly 20 years in professional matters writes that "a very short acquaintance convinced me of his intense devotion to the highest professional interests. His professional instincts were of the highest order and everything that even had the suspicion of loose ethics received from him strenuous and untiring opposition. This integrity of purpose naturally brought him into conflict with those in his profession who had hardly risen from the trade position from which dentistry had only just emerged and consequently his motives were often not [illegible] appreciated." Mr. Smith Turner was a man [illegible] and [illegible] able application. He was an [illegible] to hold his own in any discussion, and though a born fighter he never carried his hostility into private life. A true and loyal friend, an honourable and upright man, all his innate instincts were professional and he was always ready to sacrifice time and pleasure to the good of the profession which he loved so well. Ill though he was he followed with the closest attention the agitation about university degrees in dentistry and some of his last words sent to one of his closest friends who disagreed with their establishment were "Stick to your guns!" He died early on Monday morning and on the Sunday afternoon he had listened with the closest interest to the article in THE LANCET of Feb. 20th on the Future Position of the Dental Profession. He said "things have changed" and he had lived to see the change for which he had given up professional practice and the pleasures of domestic life.

GEORGE NIVEN, M.A. ABERD., M.B. CANTAB., M.R C.S. ENG.

THE death occurred on Feb. 7th of Dr. G. Niven of Manchester at the age of 45 years. The deceased, who originally belonged to Peterhead, had a very distinguished career as a student at Aberdeen, where he took the degree of M.A. in 1877, and at Cambridge, where he took the degrees of B.A. in 1881 and M.B. in 1886; also in the latter year he obtained the diploma of M.R.C.S. Eng. On the completion of his university studies he entered upon professional work at Didsbury, Manchester, where he not only built up a large practice but came to be known in medical circles as one of the ablest practitioners of the time. Dr. Niven married the eldest daughter of Mrs. Knox, St. Ann's, Inverugie, Peterhead, and she and three children survive him. Sincere and widespread regret will be felt at the early death of so promising a practitioner. One of the brothers of the deceased is Sir William Niven, for many years director of studies in the Royal Naval College, Greenwich; another brother is Mr. Charles Niven, professor of natural philosophy in the University of Aberdeen; while a third brother has attained a high position in the medical profession at Manchester.

CHARLES GODSON, F.R.C.S. ENG., L.S.A.

DEATH has just removed from our ranks one of the kindest hearted and most genial of general practitioners, a man whom all other medical men living within seven miles of Barnet respected and whose opinion was highly valued, not only by his own patients, but also by his fellow practitioners who called him in to assist them in the diagnosis and management of doubtful cases. Mr. Godson was 84 years of age and although he was little known to those in active practice at the present time, having retired from the profession about 20 years ago to enjoy a well-earned rest and to lead the life of a country gentleman, he was in his day highly thought of by Gull, Paget, Erichsen, Pollock, and other shining lights of bygone days.

Born in June, 1819, at Heckington, in Lincolnshire, he was apprenticed for the sum of £294 for a term of five years in 1834 to Mr. William Wade of the Westminster Dispensary, Gerrard-street, Soho, for the purpose, as stated in the words of his indenture, of being "instructed in the arts, businesses, or professions of a Surgeon, Apothecary, Accoucheur, or Man Midwife," and he was "to be allowed good and sufficient meat and drink at the table of the said William Wade." During this time he dissected and attended the lectures and practice at his own dispensary and also at St. George's Hospital. He became a Member of the Royal College of Surgeons of England and a Licentiate of the Society of Apothecaries in 1840 and 20 years later he was elected an honorary Fellow of the Royal College of Surgeons. In 1842 he married and he also bought Mr. Morison's practice at Barnet and while there he held various appointments, among which may be mentioned that of surgeon to the 2nd Middlesex Royal Rifle Regiment of Militia, divisional surgeon to the Metropolitan Police, and surgeon to the Great Northern Railway and to the Leathersellers' Company. He was also medical officer to the Barnet union infirmary and a Fellow of the Medical Society and of the Obstetrical Society of London. His memory will always be held dear by those who knew him.

In Vol. XVIII. of the Transactions of the Obstetrical Society of London (1877) will be found "Midwifery Statistics of 35 Years' Practice, compiled by Clement Godson, M.D., from the records of his father, Charles Godson, F.R.C.S.," the result of which showed the death-rate to be as low as 1 in every 460 women confined, or seven deaths in 35 years' practice, 3223 women having been attended. The paper shows how carefully the details of each case were recorded and how satisfactory were the results.

PRESENTATION TO A MEDICAL PRACTITIONER.—Mr. Charles F. France, M R.C.S. Eng., L R C.P. Lond., was on Feb. 18th presented with a meerschaum pipe, a silver match-box (suitably inscribed), and tobacco by the members of the St. Thomas's ambulance class of Wigan as a token of appreciation of his services.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the first examination of the Board at the quarterly meeting of the examiners in the subjects indicated:—

Chemistry.—Joseph Henderson Bulcock, Owens College, Manchester, and Technical School, Blackburn; John Head Burdett, St. Mary's Hospital; William Burton, University of Liverpool and Technical School, Liverpool; Henry Carter, Birkbeck Institution; Henry Robert Cotton and Arthur Downes, St. Bartholomew's Hospital; Cecil Howard Douglas, Guy's Hospital; Arthur Edwin Foerster and José Leighton Houlton, M.P.S., St. George's Hospital; Charles Richard Gardner, Westminster Hospital; John Rhodes Liddell, University College, Sheffield; Arnold da Vesci Gibson and John Harry Meers, St. Mary's Hospital; Thomas Mackinlay Miller, St. Bartholomew's Hospital; Cyril Macdonald Plumptre, Guy's Hospital; Gerald Henry Pridham, St. Thomas's Hospital; Edward John Joseph Quirk, Charing Cross Hospital; Alfred Henry Valentine St. John, Guy's Hospital; Thornley Fretson Skinner, University College, Sheffield; John Startin, St. Thomas's Hospital; Frank Stuart Tamplin, St. George's Hospital; Harold Skarratt Thomas, London Hospital; and Alfred Richardson Wise, Birkbeck Institution.

Practical Pharmacy.—Cecil Crees Austen, Westminster Hospital; Arthur Reginald Beaumont, L.D.S. Eng., Laurence Henry Burner, and George Hammond Cheyney, Guy's Hospital; William Byam, St. George's Hospital; Emil Christofferson, William Thomas Clarke, and Edward James Dermott, University College, Bristol; Howard Dennis Clapham, private study; James Edward Collins, London and Guy's Hospitals; [illegible] Courtney, St. George's Hospital; Her [illegible] University College, Sheffield; Verner G [illegible] holomew's Hospital; James Aubrey Irel [illegible] ol; James Eaton Lascelles, St. Mary's Hospital; Walter Lister, St. George's Hospital and Yorkshire College, Leeds; Alexander Henry McCandlish and George Richard Painton, London Hospital; Herbert Alban Parker, Christopher Trehane Pellow, and Harold Sigismund Sington, St. Thomas's Hospital; James Sydney Pascoe, Charing Cross Hospital; Martin Remers, Owens College, Manchester; Walter Duckett Southern, private study; Maurice Spotswood, University of Liverpool; James Leonard Octavius Tilley, L.D.S. Eng., University College, Bristol, and Charing Cross Hospital; William Tregea and Horace Welshman Ward, Birmingham University; and William Charles Augustus Ward, St. Thomas's Hospital.

Elementary Biology.—Harold Percivall Aubrey, L D.S. Eng., Birkbeck Institution; Herbert George Balls, Middlesex Hospital; Francis Brachi, St. George's Hospital; Ernest Frederic Westmore Buckell, University College Hospital; Henry Carter, Birkbeck Institution; Cecil Howard Douglas, Guy's Hospital; Bertie Cecil Eskell, Merchant Venturers' Technical College, Bristol; George Douglas Gordon Fergusson, St. Mary's Hospital; Arthur Edwin Foerster and José Leighton Houlton, M.P.S., St. George's Hospital; Howell Woodwell Gabe, Middlesex Hospital; Herbert Wilks Heasman, Edward Pierce Llewellyn Hughes, and Victor Patrick [illegible] Toase Jackson, L D.S. E [illegible] k Institution; George L [illegible] ospital; Henry Goff Kil [illegible] esex Hospital; John Rh [illegible] ield; Reginald Arthur [illegible] n Mozumder, St. Bart [illegible] s, Guy's Hospital; Pe [illegible] chard Bancroft Nevel Re [illegible] ls and Arthur Denys R [illegible] el, University College, Cardiff.

The following gentlemen passed the second examination of the Board at the quarterly meeting of the examiners in the subjects indicated:—

Anatomy [illegible] irch, Owens College, Manchester; Walter [illegible] Camb., Cambridge University and St. Geo [illegible] Rowley Bristow and Gustavus William [illegible] Thomas's Hospital; Bevil Molesworth Collard, London Hospital; John Frederic Cutler, Guy's Hospital; Francis Carminon Doble, King's College Hospital; Herbert James Duské, St. Mary's Hospital; Leonard Edwards and Carlton Atkinson Ellis, London Hospital; John Stewart Farnfield, L.D.S. Eng., Guy's Hospital; Rupert Farrant, Westminster Hospital; John Rowland Foster [illegible] College Hospital; [illegible] King's Philip Julius Franklin, Univer [illegible] Philip College Hospital; Edward Slade [illegible] omew's Henry George Gosse and Henry [illegible] Hospital; William Robert Greening, Guy's Hospital; Robert Eugene Vaughan Hale, B A. Camb., Cambridge University and St. Andrews University; Arthur William Hayward, B.A. Camb., and Carl Cornelius Hickey, Westminster Hospital; Reginald Beaumont Heygate, Middlesex Hospital; Cyril John Roby Hoffmeister, Ca [illegible] Middlesex Hospital; Gerald Holroyde, [illegible] le Veil King and James Johnston [illegible] Harold Howard Leeson, St. George [illegible] Middlesex Hospital; John Falconer McQueen, Ki [illegible] Beare Martin, Owens College, [illegible] Milburn, [illegible] Matthews, London Hospital; Oscar Le Fevre [illegible] St Mary's Hospital; College Hospital; William Alexander Owen, University of Birmingham and London George Downing Perry, Stanley Arthur Piper, and Hospital; George Ramsey Phillips, Horace John D'Arcy John Lawson Rankine, Guy's Hospital; Birmingham Gerrard Price and Thomas Reginald St. Johnston, Manchester; University; Felix Rawsthorne, Owens College, Norman Vaughan Hurry Riches, University College, Cardiff; [illegible] Reginald [illegible] Skinner, [illegible] Hospital; [illegible] tratford, [illegible] Bartholo- [illegible] eckshaw [illegible] St. Bar- [illegible] James [illegible] Guy's Hospital.

Anatomy only.—Mr. John William Heekes, Charing Cross Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations and having conformed to the by-laws and regulations have been admitted Members of the Royal College of Surgeons and have received their diplomas:—

[illegible] University and [illegible] College [illegible] erbert [illegible] St. [illegible] Vigors [illegible] B.A. [illegible] James [illegible] St. [illegible] ersity [illegible] dlesex [illegible] Cardiff, [illegible] pbell, [illegible] M.D. [illegible] orman Clifton Carver, Cambridge University and St. Thomas's Hospital; James Hornidge Chauncey and Arthur Allen Foster Clarke, St. Thomas's Hospital; George Russel Haines Chell, Birmingham University; John Wheeler Cleveland, St. Bartholomew's Hospital; George Martin Clowes, London Hospital; Percival [illegible] Claude [illegible] Walter [illegible] King's [illegible] Westminster Hospital; Stanley Trefusis Crump, Yorkshire College and General Infirmary, Leeds; Alan Davidson, M.D McGill, McGill College, Montreal, and University College Hospital; George Brocklesby Davis, M.A. Camb., Cambridge University and London Hospital; John James Davis, M.D West. [illegible] St. Bartholomew's Hos- [illegible] Lond., and John Jones, [illegible] Desmond King, Middlesex [illegible] B A. Camb., Percy Arnold [illegible] yal Infirmary, Liverpool; [illegible] University and St. Mary's [illegible] Ceylon, Ceylon Medical [illegible]

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—R. H. Cooper (Section I.), Charing Cross Hospital; and [illegible] I.), Guy's Hospital; R. H. [illegible] Hospital; W. G. Kinton [illegible] berts (Section II.), Cam- [illegible] S. Zweilack (Section II.), [illegible] Guy's Hospital. [illegible] and St. George's Hospital; and [illegible] anted to the following candidate, [illegible] surgery, and midwifery:—W. G. Kinton.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following candidate having passed the necessary examination has been admitted a Fellow of the College:—

A. T. Mulhall, L.R C P. & S. Irel.

The following candidates have passed the primary part of the examination:—

T. A. Burke, S. C. Clarke, J. F. Devane, M. D. Healy, J. J. Hogan, J. Prendiville, and J. R. Tobin.

The following candidates having passed the necessary examination have been admitted Licentiates in Dental Surgery of the College:—

C. de Foubert and H. D. Griffith.

The following candidate has passed the primary part of the examination:—

W. Matthew.

UNIVERSITY OF OXFORD.—The Board of Faculty of Medicine has issued a regulation that the *vivâ-voce* examination in the examination in pathology for the B.M. degree shall no longer take place during the practical examination but shall be held as a separate part of the examination. By a statute just passed the University has instituted changes of importance in the final examination for the B.M., B.Ch. degrees. Hitherto, the examination in forensic medicine and public health has been conducted by the examiners in medicine, surgery, and midwifery, but in future there are to be two specially appointed examiners for these subjects and the examination will consist of a three hours' paper and a *vivâ-voce* examination. This examination has also been placed on the same footing as that in pathology, in that a candidate may take it at any time after he has passed the first B M. examination. It has been enacted, further, that a time-table of the days and hours of examinations for the B.M. degree shall be prepared by the Board of Faculty of Medicine in each Easter term for the ensuing academic year and that each examination shall begin on the Thursday of the eighth week of full term (Michaelmas or Easter as the case may be). The medical examinations have also been subject to the same supervision as the other public examinations of the University in that the conduct of the examiners in regard to the examinations is now brought under the control of the Vice Chancellor and proctors. —On the question of exemption from Greek, by very narrow majorities in a largely attended house, Congregation has recently passed resolutions to the following effect: "That members of the University should not be required to have satisfied the masters of the schools in Greek before presenting themselves as candidates in the honour schools of natural science and mathematics provided that they have satisfied the masters of the schools in the matter allowed as a substitute for Greek. That the matter allowed as a substitute grants, I understand, amounted to £4788. No grants have since been made from county sources for building purposes. A further sum of £17,393 has been expended on new buildings since the date of the report, all of which was privately provided.

A Vaccination Case.

Mr. CORRIE GRANT asked the Secretary of State for the Home Department whether he was aware that Mr. Pratt, of Balderton, applied three times to the Newark county petty sessions for an exemption certificate from vaccination for his child and was refused and that on the first two occasions his application was rejected because he had not a medical certificate that his child was unfit for vaccination; and whether in view of the misapprehension among many magistrates as to their duties in this matter he would propose amending legislation, substituting a statutory declaration of conscientious objection for the present application to the magistrates.—Mr. AKERS-DOUGLAS replied: I have been made aware of this case by a letter from Mr. Pratt. The question of amending the Vaccination Acts does not fall within my department.

MONDAY, FEB. 22ND.

Mishap at Portsmouth Lunatic Asylum.

Mr. REMNANT asked the President of the Local Government Board whether his attention had been directed to the recent deaths by poisoning of four inmates of the Portsmouth Lunatic Asylum and to the evidence given at the inquiry by the coroner disclosing want of care in the dispensing arrangements in that public institution; and whether, in view of the danger to life involved in leaving the important duty of compounding medicines to unqualified persons steps would be taken by the department to insure that every dispensary under the control of a local authority shall be in the charge of a person holding the qualification under the Pharmacy Acts.—Mr. AKERS-DOUGLAS answered: The inquest in this case is not yet concluded, but my honourable friend may be assured that the point to which he draws attention will be carefully considered.

Overcrowding of Union Schools.

Sir ERNEST FLOWER asked the President of the Local Government Board whether he was aware that the certificate of the union schools of the West Ham guardians, which in November, 1901, was exceeded by 169 children and in November, 1902, and September, 1903, was still exceeded, is at present exceeded by over 200 children; that the boys are entirely without day-room accommodation; that 144 girls have day-room accommodation of 23 feet 6 inches by 18 feet 2 inches only; that 86 infants have a day room in which they also take their meals of 27 feet 2 inches by 18 feet 2 inches only; and whether, seeing that this overcrowding makes it impossible to isolate infectious diseases and that skin and eye complaints are present in the same dormitory, he would urge on the guardians the necessity of ascertaining if all those children at present dependent on the rates are entitled to such maintenance and of providing temporary accommodation by hiring houses in which small groups of children might be placed.—Mr. LONG replied: I am aware of the overcrowding at these schools and have impressed upon the guardians the serious responsibility which attaches to them in this matter. The guardians inform me that they are endeavouring to make arrangements for boarding out some of the children beyond the union. I am still in communication with them and I have urged them to hire homes in or near the union or to provide temporary buildings in order to remedy at once the present state of things. I have also suggested that they should have a "call over" of the children with a view of ascertaining if the numbers cannot be reduced.

Experiments on Animals.

Dr. J. G. SHIPMAN asked the Home Secretary whether his attention had been called to the statement made by Mr. Bayliss, in his evidence in Bayliss *v.* Coleridge, that the inspector appointed under the Cruelty to Animals Act, 1876, visited University College on an average once a week during the period Mr. Bayliss was conducting his researches and lectures there; whether he would state the exact number of visits paid by the inspector to University College during the year 1902; whether the inspector was officially connected with University College; and how many times the inspector visited each of the other places registered for vivisection in 1902.—Mr. AKERS-DOUGLAS replied as follows: 12 visits to University College in 1902 were reported by the inspector, but I understand that owing to his constant attendance at the College he was able to pay many visits to the laboratory, and these, when he found nothing special to report, were not included in his return. The inspector is professor of anatomy in University College, London. During 1902 the inspector and the assistant inspector paid 106 visits to the other registered places in England and Scotland, making an average of just under two visits to each place.

Dr. SHIPMAN asked the Home Secretary whether, in view of the fact that the inspector appointed under the Cruelty to Animals Act, 1876, only witnessed the whole of one and part of 11 experiments out of the total of 14,906 performed in 1902, he would consider the advisability of increasing the number of inspectors.—Mr. AKERS-DOUGLAS said: It has to be remembered that, of the 14,906 experiments mentioned in the question, 12,776 were of the character of inoculations or feeding experiments. Further, apart from the actual experiments witnessed, large numbers of the animals have been seen by the inspectors and their condition after the initial experiment has been examined. I am satisfied that the inspection is sufficient to keep me fully informed as to the practical working of the Act and the observance of its provisions, but if at any time I come to the conclusion that more inspection is desirable I shall not hesitate to endeavour to obtain the necessary increase of staff.

No Legal Standard for Whisky.

Mr. KILBRIDE asked the Chancellor of the Exchequer whether he would appoint a committee of analytical experts to fix a legal standard in the case of whisky, such as is done in other articles of consumption, in order to protect the public against spurious substitutions.—The CHANCELLOR OF THE EXCHEQUER replied: The Board of Inland Revenue does not think that it would be of any practical use to attempt to fix a legal standard for whisky. There is already a legal standard of strength below which whisky may not be sold without notice and other conditions must necessarily vary according to the taste of the consumer.

BOOKS, ETC., RECEIVED.

ALBRIGHI, SEGATI E C., Rome and Milan.

Manuale dell' Igienista ad Uso di Ufficiali Sanitari, &c. Per Cura del Prof. Angelo Celli, Direttore dell' Istituto d'Igiene della R. Università di Roma. Con la collaborazione di O. Casagrandi, A. Scala, I. Nosotti, D. Spatàro, T. Gualdi, C. Fradella. Seconda Edizione interamente rifatta del Manuale dell' Ufficiale Sanitario. 2 Vols. Prezzo dei 2 volumi L. 30.

COLTON PUBLISHING CO., Washington, D.C.

The Aristocracy of Health. A Stu[illegible] Favorite Poisons, and a National [illegible] the Advancement of Physical Cultu[illegible] Price not stated.

COX, HORACE, "The Field" Office, Bream's Buildings, E.C.

Pheasants: Their Natural History and Practical Management. By W. B. Tegetmeier, Member of the British Ornithologists' Union. Fourth edition, enlarged. Illustrated from life by J. G. Millais, T. W. Wood, P. Smit, and F. W. Frohawk. With Coloured Plates of the Various Species. Price 7*s.* 6*d.* net.

F. A. DAVIS COMPANY, 1914–16, Cherry-street, Philadelphia, Pa., U.S.A.

Infant Feeding in its Relation to Health and Disease. By Louis Fischer, M.D., Visiting Physician to the Willard Parker and Riverside Hospitals of New York City. Third edition. Price $1.50 net.

FISCHER, GUSTAV, Jena.

Se[illegible] der verschiedenen Arten von [illegible] temkurve. Von Dr. Ludwig Hofbauer, z.Z. Assistent der III. Medizinischen Abteilung im Wiener allgemeinen Krankenhause. Price M.8.

GALE AND POLDEN, LIMITED, 2, Amen-corner, Paternoster-row, E.C., and Wellington Works, Aldershot.

Compounding and Dispensing Made Easy. An Aid for the Promotion Examinations in the Subjects. For Non-Coms. and Men of the Royal Army Medical Corps. By H. Harold Scott, M.B. Lond., M R C S. Eng., L.R.C.P. Lond., Lieutenant, Royal Army Medical Corps. Price 7s. 6d. net. Post free to any part of the world.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.

Gesammelte Arbeiten zur Immunitätsforschung. Herausgegeben von Professor Dr. P. Ehrlich, Geheimer Medicinal-Rath. Price M.17.

Hydrotherapie. Ihre Physiologische Begrundung und Praktische Anwendung. Von Dr. Simon Baruch, Professor der Hydrotherapie in New York. Autorisirte deutsche Ausgabe von San.-Rath Dr. W. Lewin, Arzt in Berlin. Price M.12.

HÖLDER, ALFRED, 1, Rotensturmstrasze, 13, Vienna.

Handbuch der Urologie. Herausgegeben von Dr. Anton v. Frisch, A O. Professor der Chirurgie an der Wiener Universitat, und Dr. Otto Zuckerkandl, Privatdozent fur Chirurgie an der Wiener Universitat. Unter Mitwirkung von Prof. Dr. E. Burckhardt, Hofrat Prof. Dr. S. Exner, Prof. Dr. E. Finger, Prof. Dr. A. v. Frisch, Prof. Dr. L. v. [illegible] Dr. H. Koeppe, Privatdozent D[illegible]innsberg, Prof. Dr. J. Mauthner, Pr[illegible]of. Dr. A. v. Winiwarter, Prof. D[illegible]f. Dr. E. Zuckerkandl, Privatdozen[illegible]ter Band. Price not stated.

KIMPTON, HENRY, 13, Furnival-street, Holborn, E.C.

The Physiological Feeding of Infants. A Practical Handbook of Infant Feeding and Key to the "Physiological Nursery Chart" By Eric Pritchard, M.A., M D. Oxon., M.R.C P. Lond. Second edition. Greatly enlarged and entirely rewritten. Price 3*s* 6*d.* net.

LEHMANN, J. F., Munchen.

Atlas und Grundriss der Bakteriologie und Lehrbuch der Speziellen Bakteriologischen Diagnostik. Teil I.: Atlas. Teil II.: Text. Von Prof. Dr. K. B. Lehmann, Vorstand des Hygienischen Instituts in Wurzburg, und Dr. Phil. & Med. R. O. Neumann, Abteilungsvorstand am Städt. Hygieneinstitut, Hamburg. 3. Vermehrte und Verbesserte Auflage. Preis, gebunden, M.16. (Lehmann's Medizinische Handatlanten, Bd. X.)

LEWIS, H. K., 136, Gower-street, W.C.

The General Pathology of Inflammation, Infection, and Fever, being the Gordon Lectures for 19 2. By E. W. Ainley Walker, M.A., D.M. Oxon., Fellow and Prælector of University College, Oxford, late Gordon Lecturer in Experimental Pathology at Guy's Hospital, Price 4*s.* 6*d.* net.

LIVINGSTONE, E. AND S., 15, Teviot-place, Edinburgh.

Husband's Forensic Medicine, Toxicology, and Public Health. Seventh edition, revised and enlarged. By R. J. M. Buchanan, M.D., B.Ch. Vict., M.R.C.P. Lond., M R.C.S Eng., Assistant Lecturer on Forensic Medicine and Toxicology in the University of Liverpool, and E. W. Hope, M D., D.Sc., Professor of Public Health, University of Liverpool. Price 10*s.* 6*d.* net.

MALOINE, A., 25–27, Rue de l'École de Médecine, Paris.

L'Entéro-Côlite Muco-membraneuse. Par le Dr. Froussard, Ancien Interne des Hôpitaux de Paris, Médecin Consultant à Plombières les Bains. Price Fr.2.

MURRAY, JOHN, Albemarle-street, W.

Recent Excavations in the Roman Forum, 1898–1904. A Handbook By E. Burton-Brown. With Preface by Comm. Boni, Director of the Excavations. Price 3*s.* 6*d.* net.

NAUD, C., 3, Rue Racine, Paris.

Le Sens des Attitudes. Par Pierre Bonnier. Price Fr. 3.50.

REBMAN, LIMITED, 129, Shaftesbury-avenue, Cambridge-circus, W.C.

An Atlas of Human Anatomy for Students and Physicians. By Carl Toldt, M.D., Professor of Anatomy in the University of Vienna. Assisted by Professor Alois Dalla Rosa, M.D. Translated from the Third German Edition and adapted to English and American and International Terminology by M. Eden Paul, M.D. Brux., M.R.C.S., L.R.C.P. Third section. D.—Myology. Price 8s. 6d. net.

[illegible] By [illegible] Montgomery, M.D., LL.D., Pro- [illegible] Medical College. Second revised [illegible]

[illegible] ing the Microscopic Technic. By [illegible] of Anatomy at the University of [illegible] the Tenth German Edition by Dr. [illegible], with additions, by Dr. Alfred Schaper, Professor of Anatomy, University of Breslau Price 14s. net.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W.

List of the Fellows, Members, Extra Licentiates, and Licentiates of the Royal College of Physicians of London and of Holders of the Diploma in Public Health granted Conjointly by the Royal Colleges of Physicians and Surgeons. MCMIV.

STUBER, A. (C. KABITZSCH), Würzburg.

Beiträge zur Klinik der Tuberkulose. Herausgegeben von Dr Ludolph Brauer, a o. Professor an der Universität Heidelberg. Band II. Heft 2 Einzelpreis M.4. Subskriptions-Preis pro Band M.16. (3–5 Hefte bilden einen Band.)

THACKER, W., AND CO., 2, Creed-lane, E.C.

Food for the Tropics. Being a Short Description of Native Produce Suitable for Food in Tropical Countries. By T. M. Macknight. Price 3s. 6d. net.

WRIGHT, JOHN, AND CO., Bristol (SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London).

Dispensing Made Easy: With numerous Formulæ and Practical [illegible] By Wm. G. [illegible] son, Queen's [illegible] net.

[illegible] By Mark Robinson, L.R.C.P., L.R.C.S. Edin. Second edition. Price 1s. net.

Memoranda on Infectious Diseases. For the Use of School Teachers By James W. Allan, M.B., Physician, Glasgow Royal Infirmary, late Physician Superintendent, Belvidere Fever Hospital. Price 6d. each, or 4s per dozen.

Ailments of Women and Girls. By Florence Stacpoole, Certificated London Obstetrical Society; Lecturer for the National Health Society and for the Councils of Technical Education. Price, stiff boards, 2s. net; cloth, 3s.

The Infectivity of Enteric Fever; with Observations on its Origin and Incidence at Caius College, Cambridge, Festiniog and Wicken-Bonant. By Alexander Collie, M.D. Aberd., late Clinical Instructor at the Eastern Hospitals Price 1s. 6d. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others [illegible] this column, are [illegible] ected to the Sub- [illegible] morning of each [illegible]

BROWN, D. DORWARD, M.R.C.S., L.R.C.P. Lond., L.S.A., has been appointed Deputy Medical Officer of Health of the Borough of Sunderland.

BULLMORE, CHARLES [illegible]

Co[illegible]

Cr[illegible]

[illegible] ab., has been appointed Certifying [illegible] Act for the Hastings District of the [illegible]

[illegible] B.S. Durh., F.R.C.S. Edin., M.R.C.S. [illegible] en appointed Surgeon in Ordinary to [illegible]

SMITH, M. HAMBLIN, M.R.C.S., L.R.C.P., Deputy Medical Officer H.M. Prison, Manchester, has been transferred to H.M. Prison, [illegible]

WEAVER J. J., M.R.C.S., L.S.A., has been appointed Medical Officer of Health of Southport.

WINTLE, COLSTON, L.R.C.P. Lond., M.R.C.S., has been appointed Chairman of the Bristol Health Committee of the City Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ABERDEEN, KINGSEAT ASYLUM.—Assistant Medical Officer. Salary [illegible]

[illegible] Assistant [illegible] Salary [illegible]

[illegible] HOOLS, Isleworth. [illegible] Salary £300 per [illegible] d fees.

[illegible] l Officer of Health [illegible]

[illegible] House Surgeon [illegible] num, with board, lodging, and washing.

CARMARTHEN, JOINT COUNTIES ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, apartments, and washing.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—Resident Junior House Surgeon, for six months. Salary £50 per year, [illegible] ss.

CUMBERL[illegible] Medical Officer. Salary at rat[illegible] ashing.

DU[illegible] for six months [illegible]

EAS[illegible] annum.

GORDON HOSPITAL FOR FISTULA, &c., Vauxhall Bridge-road, S.W.—Honorary Anæsthetists.

HOSPITAL FOR EPILEPSY AND PARALYSIS AND OTHER DISEASES OF THE NERVOUS SYSTEM, Maida Vale.—Resident Medical Officer for six months Salary at rate of £50 a year, with board and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—House Physician, unmarried, for six months. Salary £20, with board and residence.

HULL ROYAL INFIRMARY.—Casualty House Surgeon. Salary £50, with board and lodging

LANCASTER, COUNTY LUNATIC ASYLUM.—Assistant Medical Officer, unmarried. Salary £150, with board, lodging, washing, &c.

LEEDS, HOSPITAL FOR WOMEN AND CHILDREN.—Honorary Assistant Physician.

LEITH HOSPITAL.—House Physician, Assistant House Physician, [illegible] washing.

[illegible] Clinical Assistants [illegible] ace road, S.W.—[illegible] Casualty House [illegible] with board and lodging.

SALOP INFIRMARY.—House Physician, for six months. Salary at rate of £50 per annum, with board and apartments.

WESTMINSTER HOSPITAL, opposite Westminster Abbey.—Medical Officer in charge of Electrical Department. Salary £120 per annum.

WE[illegible] Hospital. House Surgeon, unmarried [illegible]

WE[illegible]

WES[illegible]

THE [illegible], gives notice of [illegible] Factory Act at [illegible]

Births, Marriages, and Deaths.

BIRTHS.

CARTER.—On Feb 23rd, at Chapel-Allerton, Leeds, the wife of Eustace G. Carter, M.R.C.S., of a daughter.

DUNKIN.—On Feb. 17th, at Studley-road, Clapham, S.W., the wife of Silas Ethelbert Dunkin, M.R.C.S. Eng., L.R.C.P. Lond., &c., of a daughter.

DUNLOP.—On Feb. 9th, at Somerset-place, Glasgow, the wife of the late Alex. W. Dunlop, M.D., Levenwick, Shetland, of a daughter.

DEATH.

MORISON.—On Feb. 24th, at Edinburgh, Louie, wife of Rutherford Morison, Newcastle on-Tyne.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE ACTION OF SELENIUM, TELLURIUM, AND ARSENIC ON MUSCULAR TISSUE.

THE February number of the *Medical Chronicle* contains a short account of some physiological experiments with selenium, tellurium, and arsenic made by Dr. H. J. Crompton, resident medical officer in the Royal Infirmary, Manchester. He commences with a reference to the increased attention recently given to selenium owing to the suggestion made by Dr. F. W. Tunnicliffe and Mr. Otto Rosenheim that this substance was associated with arsenic in the cases of beer poisoning which occurred in the North of England in 1900 (THE LANCET, Feb. 2nd, p. 318, Feb. 9th, p. 434, and March 30th, p. 927, 1901). In view of this statement Dr. Crompton investigated the action of selenium compounds on the nervo-muscular tissues of the frog by experiments (1) on voluntary muscle and motor nerve trunks, (2) on the involuntary muscles contained in the walls of the blood-vessels, and (3) on the cardiac muscle. At a later date he made similar experiments with compounds of tellurium and arsenic. For the experiments on voluntary muscle the gastrocnemius of a frog was removed from the animal, supported at its ends on brass wires, and immersed in a 0·75 per cent. solution of sodium chloride ("normal saline"), containing also a known proportion of selenate, selenite, tellurate, arsenate, or arsenite of sodium. Electrical currents were passed at intervals and the shortening of the muscle thereby produced was recorded on a revolving drum. Experiments on the heart muscle were made by means of the tonometer described by Roy, in which an isolated frog's heart tied to a cannula through which the solution under investigation can be perfused is placed in a small air-tight vessel filled with olive oil; variations in the volume of the ventricle are indicated by the rising and falling of a piston. The general results of the experiments were to the effect that although the above-mentioned salts are destructive to animal life, solutions of them nevertheless have no directly poisonous effect on either the voluntary muscle, the motor nerve trunks, or the cardiac muscle of the frog.

QUACKERY AND CREDULITY.

THE following advertisement appeared in the *Birmingham Daily Mail* of Feb. 13th:—

> ADVERTISER would sell Cancer, Tumour, and Polypus Cure, price One Thousand Guineas, or would Cure. Personal Testimonials —M. Vernon, 49, Church Vale (Square), Handsworth. At Home, Mondays, 12 till 4.

We cannot congratulate our contemporary upon the insertion of such an advertisement as the above. We have no doubt that M. Vernon will sell, but what he sells will not be a cancer cure but his dupes, of whom there will probably be not a few.

PAYMENT OF MEDICAL WITNESSES.

To the Editors of THE LANCET.

SIRS,—To those who lightly set out to tender evidence in a magistrate's court may I indite a warning. The fee that you will get for a twelve-mile drive and a ruined morning's work is not that which many would have you believe—namely, one guinea and mileage - but depends entirely upon your power of awakening the sympathy of the bench for your sufferings. They have the power to award you anything from a modest ½*d*. up to the stately two guineas. How best to avoid the half-guinea appearance and to assume the guinea deportment I fain would learn. Anyway, a kind word to a magistrate whenever you meet one may, when the subpœna cloud hangs over you, meet with its reward even in this life.

I am, Sirs, yours faithfully,

Castle Cary, Somerset, Feb. 20th, 1904. DAVID PRICE, M B. Lond.

AN OBSERVATION ON THE VALUE OF GARLIC AS A REMEDY.

To the Editors of THE LANCET.

SIRS,—I have read with interest the article by Dr. Giulio Cavazzani and the letter from Dr. W. C. Minchin upon the use of garlic in tuberculosis and I should like to record that it is not only in this disease that it is of service. I have used it with success in bronchial conditions, notably in bronchitis of the finer tubes where the patient complains that his chest "feels stuffed up" and where on auscultation there is heard a large number of sibilant râles. Also in cases where there is much purulent expectoration. In these cases, after the exhibition of the drug, there has been much relief. The active principle, sulphide of allyl, is undoubtedly excreted into the respiratory passages and may very possibly act as an antiseptic. I note that Dr. W. Ewart in Allbutt's "System of Medicine," quoting Dr. G V. Poore's work on Nervous Affections of the Hand and Other Studies, recommends it in the treatment of bronchiectasis. I have given 15-grain doses of the bulb chopped up and administered in cachets three or four times a day.

I am, Sirs, yours faithfully,

Retford, Feb. 19th, 1904. HANWAY R. BEALE, M D. Lond.

THE MICROSCOPE IN INDIAN PRACTICE.

ARTICLES and letters under the above heading have been appearing in recent numbers of our contemporary, the *Pioneer*. The writer of one letter, a medical man, though it is not apparent whether he is a civilian practitioner or a member of the Indian Medical Service, brings a rather strong indictment against some of his professional brethren whom he accuses of being too lazy or incapable to examine the blood of every patient suffering from "fever," even when they have a microscope. The supply of microscopes is doubtless rather limited, but possibly the varieties of climate to be met with in India may be responsible in some measure for this. A one-twelfth inch objective would be difficult to keep in order during the monsoon on the Kanara coast and we fancy that most of the Indian medical men who have the capacity and training to use a microscope for the diagnosis of the malarial parasite do so, the microscope being supplied by themselves.

◆

F R C.S (Eng) has asked us questions to which it is very difficult to give definite answers in the absence of complete local knowledge. We will communicate with him.

Clock will find an extended memoir of Sir Andrew Clark in THE LANCET of Nov. 11th, 1893, p. 1222. The late physician was well known to us.

Interested has omitted to send his name.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 25th, 1904.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Feb. 19	30 02	NNW	.	62	51	34	33	35	Hazy
" 20	29 77	S W	0·12	62	54	35	49	51	Overcast
" 21	29 89	W.	0·05	67	54	48	46	47	Raining
" 22	29 81	N.W.	...	88	51	46	42	47	Cloudy
" 23	30 16	S.E.	...	65	43	37	36	38	Overcast
" 24	30 17	S.E.	...	74	43	37	36	38	Foggy
" 25	30·23	S.E.	...	42	38	36	35	37	Snowing

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex ([illegible] M.), Chelsea (2 P.M.), Samaritan [illegible] 2 P.M.), Soho-square (2 P.M.), Rc[illegible] Orthopædic (1 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.)

TUESDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden square (9.30 A.M.), Soho square (2 P.M.), Chelsea (2 P.M.).

WEDNESDAY (2nd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St George's [illegible] St. Mary's (2 P.M.), National Orthopædic [illegible] (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.) [illegible] A.M.), Gt. Northern Central (2.30 P.M.), Westminster [illegible] Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.) Guy's (1.30 P.M.)

THURSDAY (3rd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.) University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), St. Mark's Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Throat, Golden square (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.)

SATURDAY (5th).—Royal Free (9 A.M.), London (2 P.M.) Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St Mary's (10 P.M.), Throat, Golden-square (9.0 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (29th).—Medical Society of London (11, Chandos-street, Cavendish square W.).—9 P.M. Mr. C. B Lockwood: Aseptic Surgery in Theory and Practice. Lecture III. Environment and Results. (Lettsomian Lecture.)

WE [illegible] x (20, Hanover- [illegible] egnant Fibroid [illegible] Walker (intro [illegible] roscopical and Lantern slides showing Mitotic Changes in Cancer Cells Papers:—Mr. H. Cripps and Dr. H Williamson: Two Cases involving the Question of the Site of Impregnation —Mrs. Boyd: Two Cases of Abdominal Hysterectomy for Fibroids complicated by Pregnancy, with Specimens.

THURSDAY (3rd).—Röntgen Society (20, Hanover-square, W.)—8.30 P.M. Presidential Address:—Some Laboratory Notes of the last Six Months.

Childhood Society (Library of the Sanitary Institute, 72, Margaret-street, W.).—8 P.M. Lecture:—Prof. W A. Potts: The Protection of Feeble minded Children during and after School Age.

British Balneological and Climatological Society (20, Hanover-square, W.).—5.30 P.M. Discussion on Obesity (opened by Dr. L. Williams).

FRIDAY (4th).—Society of Anæsthetists (20, Hanover-square, W.).—8 30 P.M. Paper:—Dr. D. Buxton Communications by the President (Mr. C. C. Braine) and Dr. Flux. Annual General Meeting.

Laryngological Society of London (20, Hanover-square, W.).—5 P.M. Cases, Specimens, &c., will be shown by Dr. McBride, Dr. F. Potter, Dr. Smurthwaite, and others.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (29th).—Royal College of Surgeons of England.—5 P.M. Prof. L B. Rawling: Fractures of the Skull, including Mechanism, Pathology, Complications immediate and remote, and Treatment. (Hunterian Lecture)

Post-Graduate College (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Practical Surgery.

[illegible] LINIC (22, Chenies-street, [illegible] (Skin.) 5.15 P.M. Dr. [illegible] the Common Forms of [illegible]

University of London.—5 P.M. Lecture:—Dr. A. E Wright: Physiology of Immunisation.—On Anti-tubercle Inoculation.

TUESDAY (1st).—Royal College of Physicians of London (Pall Mall East)—5 P.M. Dr. W. Williams: Deaths in Childbed, a Preventable Mortality. (Milroy Lecture.)

Post-Graduate College (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. C. Williams: High Frequency Currents (illustrated by lantern slides).

Medical Graduates' College and Polyclinic (22, Chenies-street, W.C.).—4 P.M. Dr. C. Thompson: Clinique. (Medical.) 5.15 P.M. Dr. D. Grant: Some Common Errors in the Diagnosis and Treatment of Diseases of the Throat.

National Hospital for the Paralysed and Epileptic (Queen-square, Bloomsbury).—3 30 P.M. Dr. Tooth: Cranial Nerves.

[illegible] Treatment. (Hunterian Lecture)

Post Graduate College (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Beddard: Practical Medicine.

Medical Graduates' College and Polyclinic (22, Chenies-street, W C.).—4 P.M. Mr. A H. Tubby: Clinique. (Surgical.) 5.15 P.M. Dr. F. J. Smith: Cough and its Significance.

Hospital for Consumption and Diseases of the Chest (Brompton).—4 P.M. Dr. P. Kidd: Types of Pulmonary Tuberculosis.

London Temperance Hospital (Hampstead-road, N.W.)—4 P.M. Lecture:—Diseases of the Stomach. (Post Graduate Course)

THURSDAY (3rd).—Royal College of Physicians of London (Pall Mall East).—5 P.M. Dr. W. Williams: Deaths in Childbed, a Preventable Mortality. (Milroy Lecture.)

Post-Graduate College (West London Hospital, Hammersmith-road, W.)—5 P.M. Mr. S. Edwards: Gleet and its Treatment.

Medical Graduates' College and Polyclinic (22, Chenies-street, W C.).—4 P.M. Mr. Hutchinson: Clinique (Surgical.) 5.15 P.M. Dr. F J. Smith: Cough and its Significance.

Samaritan Free Hospital for Women (Marylebone-road, N.W.).—3 P.M. Dr. F. J. McCann: The Treatment of "Irritable Bladder" in Women.

Charing Cross Hospital.—4 P.M. Dr. Bosanquet: Demonstration [illegible] urse.)

[illegible] PTION AND DISEASES OF THE [illegible] P.M. Dr. F. Price: Mitral [illegible] Graduate Course)

[illegible] THE SKIN (Leicester square. [illegible] ycosis (Chesterfield Lecture)

The Hospital for Sick Children (Gt. Ormond-street, W.C)—4 P.M. Mr. Collier: The Surgical Anatomy of the Ear in Children.

Royal Institution of Great Britain (Albemarle street, W.)—5 P.M. Prof. H. L. Callendar: Electrical Methods of Measuring Temperature.

FRIDAY (4th).—Royal College of Surgeons of England.—5 P.M. Prof. L. B. Rawling: Fractures of the Skull including Mechanism, Pathology, Complications immediate and remote, and Treatment. (Hunterian Lecture)

Post Graduate College (West London Hospital, Hammersmith-road, W.)—5 P.M. Dr. Saunders: Rickets and its Treatment.

Medical Graduates' C [illegible] street, W.C.).—4 P.M. Mr E [illegible]

National Hospital fo [illegible] Queen-square, Bloomsbury).— [illegible]

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1903, which was completed with the issue of Dec. 26th, were given in THE LANCET of Jan. 2nd, 1904.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1903 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London and Westmin [illegible]) should be made payable [illegible] THE LANCET Offices, 42 [illegible]

During the week marked copies of the following newspapers have been received *Western News (Galway), Westmeath Independent, Southampton Times, Aberdeen Free Press, Aberdeen Free Press (Weekly), Westminster Gazette Windsor and Eton Express, South Wales Daily News, Walsall Advertiser, Surrey Advertiser, Reading Mercury, Mining Journal, Local Government Chronicle, Yorkshire Herald, Daily News Daily Chronicle, Standard, Liverpool Post, Westminster Hospital Gazette, &c.*

Communications, Letters, &c., have been received from—

A.—Messrs. Allen and Hanburys, Lond.; Mr. J. Astier, Asnières; Dr. Francis J. Allan, Lond.; Dr. Donald Armour, Lond.

B.—Mr. J. W. Benson, Lond.; Mr. F. E. Bissell, Kingstone; Mr. T. Bell, Lancaster; Mr. E. Baker, Birmingham; Messrs. Brady and Martin, Newcastle-on-Tyne; Messrs. Burroughs, Wellcome, and Co., Lond.; Dr. F. C. Bury, Riverhead; Buntingford House, Buntingford, Medical Superintendent of; Messrs. Burgoyne, Burbidges, and Co., Lond.; Mr. E. H Blake, Lond.; Mr. A. H. Bostock, Chichester; Mr. Bradburne, Ryde; Dr. Geoffrey Bate, Brighton; Dr. H. C. Bastian, Lond.; Mr. C. L Bedford, Lond.; Dr. D. H. Beegling, Huddersfield; Mr. A. Bird, Sidmouth; Dr. Byrom Bramwell, Edinburgh; British Medical Benevolent Fund, Hon. Secretary of; Dr. D. Bower, Bedford.

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U.—University College, Sheffield, Registrar of.

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Letters, each with enclosure, are also acknowledged from—

A.—Aymard Patent Milk Steriliser Co., Ipswich.

B.—Dr. J. F. Boa, Kildonan; Mr. S. H. Byam, Lond.; Birkenhead Union, Clerk of; Mr. T. Bell, Lancaster; "Brown," Lond.; Mr. G. W. Brown, Hanley.

C.—Mr. G. F. Cotlett, Lond.; Condensed Peptonised Milk Co., Lond.; C. H. P.; Mr. G. W. Collins, Wanstead; Cheltine Foods, Cheltenham, Secretary of; Coachman, Bedford; Messrs. Cassell and Co., Lond.; Mr. E. G. Carter, Chapel-Allerton; Dr. R. Clarke, Lossiemouth.

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E.—Mr. F. K. Etlinger, Stroud; E. E.; Dr. H. L. Evans, Goring.

F.—Dr. A. Forsyth, Leytonstone; F. P. R. J.; F. T. H.; Dr. P. Frank, Lond.

G.—Mr. A. J. Gilbert, Swindon; G. T. B.; G. F. G.; G. S. T.; Mr. H. Gowlland, Selsey; G. W., Lond.; G. G. J.; G. J. R.

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ABSTRACT OF

The Hunterian Lectures

ON

THE EVOLUTION AND ACTION OF CERTAIN MUSCULAR STRUCTURES OF THE HEART.

Delivered before the Royal College of Surgeons of England on Feb. 22nd, 24th, and 26th, 1904,

By ARTHUR KEITH, M.D. Aberd., F.R.C.S. Eng.,
HUNTERIAN PROFESSOR, ROYAL COLLEGE OF SURGEONS OF ENGLAND, LECTURER ON ANATOMY, LONDON HOSPITAL MEDICAL COLLEGE.

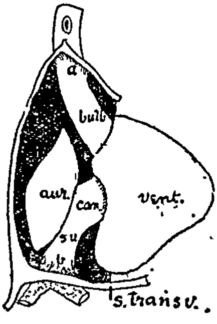
LECTURE II.[1]

Delivered on Feb. 24th.

The Movements of the Auricles and Ventricles during Systole.

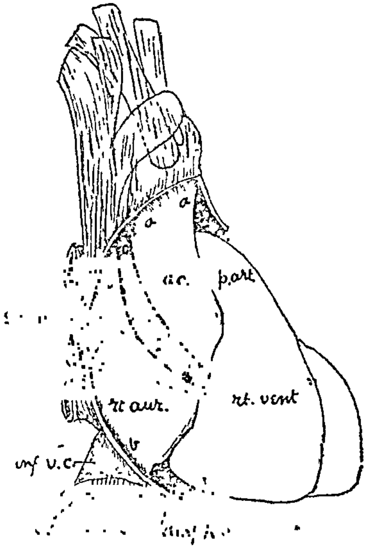
The manner in which the heart is fixed within the thorax.—The initial difficulty in studying the action of the musculature of the heart is an ignorance of the fixed points or fulcra from which the various parts of the heart act Literature on the heart takes little or no cognisance of such points. A clue to them is afforded by a study of the simple manner in which the heart is fixed in the embryo and in lower vertebrate forms (*Fig. 6*), *for it is out of the* simple condition that the elaborate fixation of the adult heart is evolved. In the embryonic condition the septum transversum (Fig. 6, *s. transv*) which at a later stage forms the central tendon of the diaphragm and basal part of the pericardium, provides a fulcrum for the auricular or venous end of the heart. The auricles are bound to the septum transversum by the venous mesocardium, through which the veins pass to the auricles (Fig 6). The aorta of the simple tubular heart perforates the anterior or cephalic end of the pericardium and is there fixed by the arterial mesocardium. In the adult heart (Fig. 7) these two attachments have become approximated and more extensive but neither in the fœtal nor adult mammalian heart do the ventricles ever obtain an attachment to the pericardial wall, except indirectly through the auricles or aorta. The points at which the great veins or arteries pierce the pericardium serve as fulcra from which the musculature of the heart may act Through the attachment of the cervical fascia to the pericardium the heart is fixed to the upper aperture of the thorax and neck, while below it is attached to the central tendon of the diaphragm by the extensive adhesion of the pericardium to that structure (Fig 7). The diaphragm acts freely on all the fulcra of the heart, as may be seen from Fig. 8 The lungs may be regarded as ligaments which attach the base of the heart to the whole extent of the chest wall. The left auricle is suspended between the roots of the lungs and bound to them by the pulmonary veins and pericardium. The minute that the pleural cavity is opened the lungs collapse and the pulmonary fulcra, on which the base of the heart is poised, are undone. Hence the movements of the heart seen in the opened thorax are not those which take place normally.

Fig. 6.



Fixation of the heart in a fish a, Arterial mesocardium. b, Venous mesocardium s v., Sinus venosus. aur, Auricle proper. can, Auricular canal.

Fig. 7.



Showing the points of fixation of the human heart. a, a, a, Arterial mesocardium. b, b, b, Venous mesocardium.

The production of the negative pressure in the right auricle.—It is admitted by all physiologists that after the systole of the right auricle is over there appears in that cavity a negative pressure which lasts during the opening two thirds of the systole of the ventricles Much of the difficulty which has been found in explaining the suction or negative pressure in the auricle and of its true relation to the ventricle is due to a neglect of the structure and mechanism of the right side of the heart. Burton-Opitz[2] regards the negative pressure in the right auricle as the chief force in filling the heart. He found that over 90 per cent. of the blood that flows during a cardiac cycle in the external jugular vein of the dog passed during the short phase of negative pressure in the right auricle He differs from Dr. Leonard Hill[3] in regarding the auricular negative pressure as [illegible] drawing on the venous blood than that

[illegible] veins of the abdomen The venous hum or bruit heard where the veins of the neck enter the thorax indicates by its loudness the rate of flow of the blood and the degree of negative pressure in the great veins of the thorax. The hum ceases during auricular systole; it is greatest in the opening phase of ventricular systole when the negative pressure appears in the auricle; it is increased

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[1] Lecture I was published in The Lancet of Feb. 27th, 1904, p. 555.

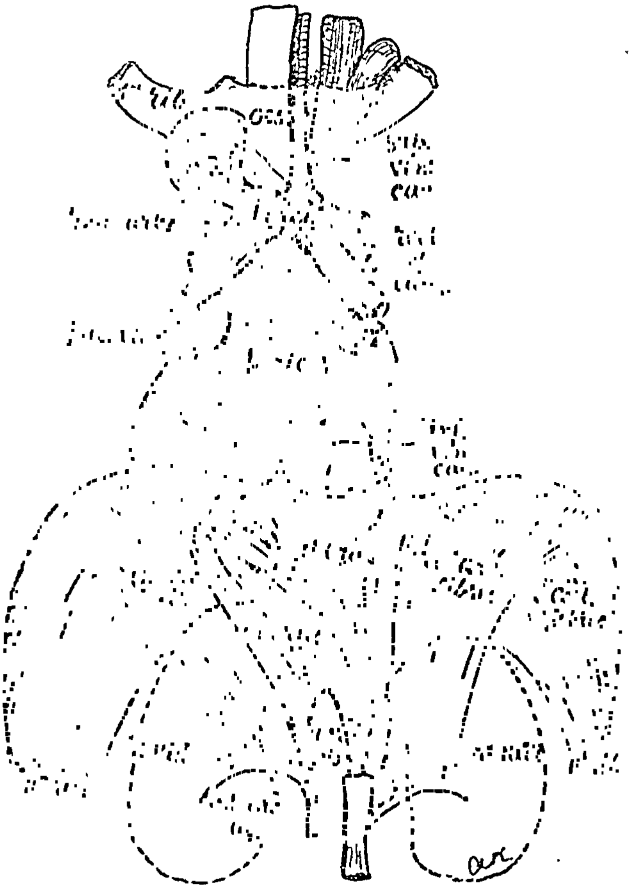
[2] [illegible] The Flow of Blood in the External Jugular Vein, [illegible] vol vii p. 435 1902.

[3] [illegible] Physiology, edited by E. A. Schäfer, 1900, vol. ii.

K

during inspiration.[4] John Hunter[5] states that the contraction of the heart by causing a negative pressure in the thorax draws onwards the blood in the veins. Chaveau[6] ascribed the negative pressure in the auricles to the contraction of the ventricle, especially to the pull exerted by the papillary muscles, and Porter[7] accepts a modification of Chaveau's theory. A study of the structure, mechanism, and morphology of the right side of the heart shows that the right auricle is actively expanded by the contraction of the right ventricular wall in all mammalian and avian hearts.

FIG. 8.



The attachments of the diaphragm to the pericardium, heart, and roots of the lungs in the human subject. (From a preparation in which the spinal column has been removed and the parts exposed from behind.) (From THE LANCET of March 7th, 1903, p. 632.)

The constitution of the right auricle.—The right auricle of all vertebrates, and man's is no exception, is made up of two distinct parts, the auricle proper and the auricular canal, each of which plays its own part in systole (Fig. 6). We know from the classical work of Gaskell that the musculature of the auricle proper is more difficult to excite but more rapid in its contraction than that of the auricular canal. The canal represents a primitive part of the cardiac tube on which the auricle proper was developed as a specialised diverticulum. The auricle proper is easily recognised in the human heart by the fact that in it only are the muscle fibres thrown into pectinate bundles. The appendix forms part of the proper auricle. The pectinate bundles arise from the tænia terminalis, which passes, it will be remembered, from the orifice of the superior to that of the inferior vena cava. From that origin they pass on the roof of the auricle to the auriculo-ventricular groove where they turn inwards and fuse with the annular fibres of the auricular canal. That part of the right auricle which forms the auricular canal is sunk within the auriculo-ventricular groove and surrounded by annular fibres; its inner aspect is smo
The inter-auricular septum and the two bands which
across the mouth of the sinus venosus are developed f
and form part of, the auricular canal. Within the sep
the annular fibres of both right and left auricles a
drawing the auricles towards the septum when they cont
The true auriculo-ventricular junction, both in a mor
logical and physiological sense, lies not at the fibrous ring
at the apex of the funnel-shaped tricuspid valve,
auricular canal thus extending to within the cavity of
ventricle. Further, the musculature round the superior
cava and on the coronary sinus is a remnant of that of
sinus venosus, and since it is the most excitable of all
musculature of the heart the auricular systole prob
commences in it.

The manner in which the right auricle contracts.—
wave of auricular contraction, commencing in the mu
lature derived from the sinus venosus, spreads first to
auricular canal, then to the auricle proper. The ann
fibres of the canal act as a sphincter, constricting the ca
and drawing the auriculo-ventricular groove inwards a
backwards, for the only fixed points to which the annu
fibres are attached are the terminations of the superior
inferior cavæ. The pectinate bundles of the auricle pro
draw the base of the right ventricle towards the terminati
of the venæ cavæ, for they arise from the tænia termin
which is attached to, and helps to close, the caval orifi
Thus the pectinate bundles not only force the auricular bl
forwards but also draw the base of the ventricle upwards
to its load. Since the pectinate bundles measure from 35
40 millimetres in diastole and from 15 to 20 millimetres
artificial systole we may infer that the base of the ventri
is drawn upwards to the extent of 15 millimetres or fully h
an inch. That is in harmony with what may be observed
the exposed living mammalian heart.

The diastole of the right auricle and the production of negative pressure.—At the commencement of ventricu
systole the base of the right ventricle moves towards
apex of the heart. That we know from the observations
Haycraft[8] on the heart within the unopened thorax and fr
the records of Roy and Adami[9] and of many others in
exposed heart. The base of the ventricle does not move a
whole; it is rather a hinge movement in which the sept
between the interventricular orifices serves as the axis of
hinge. Now it is to that part of the auriculo-ventricul
canal which is furthest from the septum and undergoes
greatest extent of systolic movement that the pectina
fibres of the auricle are collectively inserted. Hen
as the base of the ventricle swings forwards and for as lo
as it continues to move the pectinate fibres in the roof of
right auricle increase in length and the auricular cavi
increases in dimensions. The elastic tension of the lun
certainly assists in the expansion of the auricle. It
during the period of active expansion by the ventricul
contraction that the venous blood is sucked within
auricle.

Why is it that the base moves towards the apex a
not, as one might expect, the apex to the base? Th
the apex is the part of the ventricles which undergo
the least amount of movement during the natural systo
movement within the unopened thorax is a point on wh
physicians and physiologists are agreed. It is a law whi
runs through the whole vertebrate kingdom, that the apex
rendered an approximately fixed point during ventricul
systole in order that the ventricular contraction may be e
ployed as a means of filling the auricles. The manner
which this effect is obtained in birds and mammals will
shown in a later paragraph to depend on the structure a
manner of action of the left ventricle. Three sets of fibr
take their origin in the apex of the heart and end in t
fibrous tissue of the auriculo-ventricular membranous ri
and by the contraction of which the base is drawn towar
the apex. First, there are the fibres of the superfici
layer which spring from the apical vortex of the le
ventricle and ascend to curve inwards at the base
the right ventricle, terminating on the outer edge of th
membranous ring; secondly, irregular longitudinal band
forming a trabecular meshwork, ascend on the inner aspec
of the lateral wall of the ventricle to end in the membrano
ring at the base; and thirdly, the papillary muscles, whic

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[4] E. A. Gibson: Diseases of the Heart and Aorta, 1898.

[5] John Hunter: Palmer's edition, vol. iii.

[6] Chaveau et Marey: Mémoires de l'Académie de Médecine, Paris, 1863, tome xxvi., p. 302.

[7] W. T. Porter: Researches on the Filling of the Heart, Journal of Physiology, vol. xiii., p. 513, 1892.

[8] J. B. Haycraft: The Movements of the Heart within the Ches Journal of Physiology, 1891, vol. xii., p. 438.

[9] Roy and Adami: Heart Beat and Pulse Wave, Practitioner February, 1890, p. 81.

also end, through the tricuspid valve, in the membranous ring. All these three sets of muscles act during ventricular systole on the auricle, taking their fixed origin in the apex of the ventricle. Ludwig's statement that the "base apex" diameter of the heart is not shortened in systole of the ventricles has been frequently misunderstood owing to the fact that the base of the heart is made up of two different parts. There is the auricular base of the heart on which the auriculo-ventricular orifices are situated and the arterial base of the heart on which the openings of the aorta and pulmonary artery are placed. The one represents the commencement of the ventricular tube, the other its terminations. Now, if the measurements be taken between the apex and the arterial base during systole it will be found that the distance is but slightly altered, but if the measurements be taken between the apex and the lateral auricular base it will be found that the distance is very materially shortened.

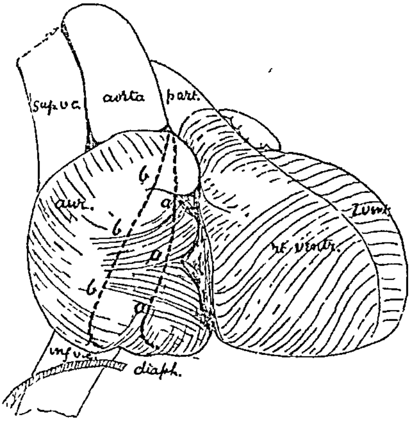
This question remains to be answered: Why is it that the negative pressure within the auricle, if it be due to the contraction of the ventricular wall, does not last throughout the whole period of ventricular systole? During the latter third of that period the pressure rises rapidly in the auricle and the flow of the blood in the great veins is arrested and they swell, giving then an upstroke if a tracing be taken of the vein. Dr. James Mackenzie has named this rise of pressure in the veins the ventricular wave and regards it as due to the back pressure following on the completed diastolic expansion of the auricle. Were the filling of the auricles due to a force which acted independently of the ventricular systole one would find it difficult to account for the very constant relationship which exists between the systole of the ventricle and the auricular negative pressure. The right auricle is attached to only one part of the right ventricle, that part into which the auriculo-ventricular orifice opens, which is rough-walled and contains the papillary muscles. The infundibular part which lies above the level of the auriculo-ventricular opening in the upright position of the body is smooth-walled and its contraction could not affect the auricle in any way. From embryological evidence one would expect the papillary compartment of the ventricle, which is the most capacious, to contract before the infundibular, for the embryonic peristaltic cardiac waves pass from the auricular to the aortic orifice of the ventricles. The triphasic wave of negative variation which Starling and Bayliss observed during systole of the mammalian ventricle can only be understood if one grants that the wave of contraction passes from auricular base to apex and from apex to arterial base of the heart.

Three other phenomena which occur during ventricular systole have to be accounted for. Mackenzie's[10] tracings show that the liver is elevated and the region of the thorax in contact with the right ventricle is drawn inwards during the period in which negative pressure appears in the auricle—that is, during the period in which the papillary compartment of the ventricle is in a condition of active contraction. On the other hand, the inspiratory (cardio-pneumatic) movement[11] caused by the systole of the ventricle reaches its maximum during the latter third of ventricular systole when the infundibular part, which lies in contact with the lungs and cannot draw the auricle into the space it vacates, is in an active state of contraction. In short, the negative pressure set up by the contracting ventricle is expended during the opening two-thirds of systole, when the papillary compartment is in active contraction, in drawing blood into the auricles and in the later third, when the infundibular part is emptying, in drawing air into the lungs.

The second phase of negative auricular pressure.—When ventricular systole is over and the tricuspid valves again open a second and slight phase of negative pressure appears in the auricle and great veins. Burton-Opitz found that it had a very slight effect on the flow of blood in the veins. One would expect that the throwing open of the great ventricular chamber, especially if the negative pressure which occurs in it at the end of systole acted effectively on the venous flow, that there would be marked fall of pressure in the auricle and a rapid flow in the veins. None of these are present because at the end of ventricular systole the base of the ventricle returns to its diastolic position, encroaching on and emptying the auricle. The return of the ventricular base is probably assisted by the elastic tissue which is well developed in the auricular wall.

The effects of distension on the movements of the right auricle.—In Fig. 9 is represented a heart in which the right auricle is greatly distended as a result of mitral and tricuspid stenosis. It will be observed that the lateral part of the base of the right ventricle, even in the diastolic position, is pushed towards the apex of the heart by the greatly distended auricle—that is to say, that it occupies a position in diastole which could not be reached even in the most profound contraction that the right ventricle could make in the natural heart. Hence, in such a heart there can be no forward movement of the ventricular base during systole and no traction on, and dilatation of, the auricle. As the auricle becomes more and more dilated the first negative phase, as indicated in tracings of the pulsation of the jugular vein, becomes less, while the second phase, which occurs when the mitral valves are opened, becomes greater and greater till at last, as shown in Mackenzie's tracings, the second or ventricular wave has completely absorbed the auricular wave. In short, when the walls of the auricle become permanently distended, the contraction of the ventricle can no longer exert its force in drawing onwards the venous blood, because the means whereby it produced the negative pressure in the auricle no longer exist. If Burton-Opitz is right in regarding the negative pressure in the auricle as the chief means of drawing onwards the venous blood when the body is in a state of rest, then one can understand the grave effects which follow the annihilation of this force by the permanent dilatation of the auricle.

FIG. 9



Heart (viewed from the right and in front) in which there was mitral and tricuspid stenosis with great distension of the right auricle and elongation of the auricular canal. Jugular pulsation of the ventricular type was present before death (from one of Dr. Mackenzie's specimens). *a*, *a*, *a*, The normal position of the auriculo-ventricular groove in diastole. *b*, *b*, *b*, Its normal position at the beginning of ventricular systole.

The effect of distension of the auricles on the position of the [illegible] to the left, [illegible] materially alter its position, it is not realised that the alteration is mostly due to the distension, not of the ventricular but of the auricular chambers. The right auricle is fixed to the terminations of the venæ cavæ and to the pericardium between them. It is wedged into the right posterior angle of the heart between the base of the right ventricle in front and the left auricle behind (see Figs. 10 and 11). If it becomes distended it pushes the base of the right ventricle forwards and turns the apex of the heart to the left whether the right ventricle be hypertrophied or not. The left auricle, on the other hand, is suspended between the roots of the lungs and occupies a central position on the posterior part of the cardiac base. If it becomes dilated it pushes the whole heart forwards. When atrophy of the heart is present (Fig. 11), so that there is ample room in the chest to allow the movement to take place, the apex of the heart turns somewhat to the right (Fig. 11) but if there is hypertrophy, the heart exceeding in its base-apex diameter the corresponding measurement of the chest, then this movement is prevented by the apex coming in contact with the chest wall (Fig 10).

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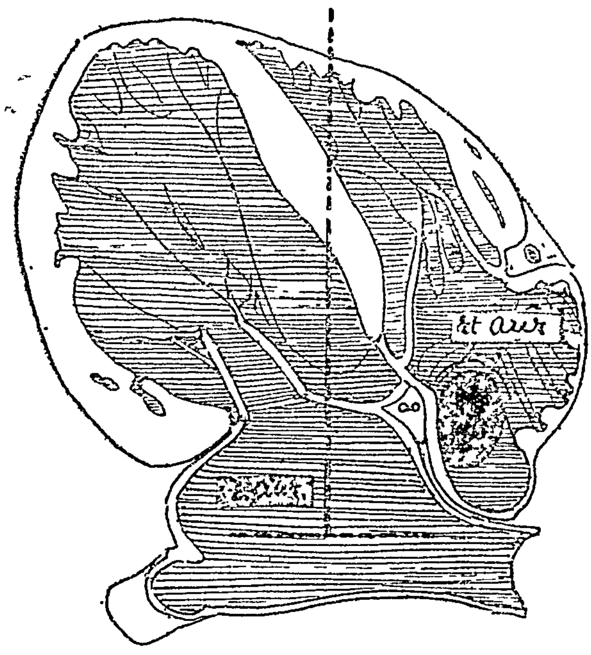
[10] James Mackenzie: The Study of the Pulse, 1902.

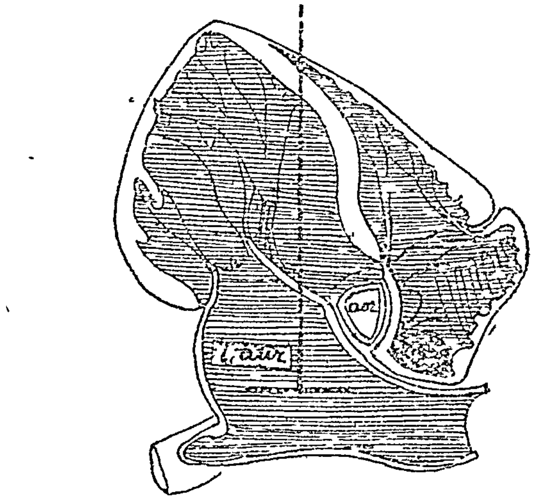
[11] J. B. Haycraft and R. Edie: The Cardio-pneumatic Movements, Journal of Physiology, vol. xii., 1891, p. 426.

FIG. 10.



Hypertrophied heart showing great dilatation of all its chambers, but relatively more of the right auricle than of the left. The apex is turned markedly to the left.

FIG. 11.



Dilated and atrophied heart in which the left auricle is more enlarged than the right. The apex of the heart is turned to the right of its normal position.

FOREIGN UNIVERSITY INTELLIGENCE.—*Budapest:* Dr. Tangl has been promoted to the Ordinary Professorship of Physiological Chemistry.—*Iurieff (Dorpat):* Dr. Yarotski has been appointed Extraordinary Professor of Internal Medicine.—*Paris:* Dr. Berger has been transferred from the chair of Operations to that of Clinical Surgery in succession to Dr. Duplay who is retiring.—*Vienna:* Dr Siegmund v. Schumacher has been recognised as *privat-docent* of Anatomy.

ABSTRACT OF

The Hunterian Lectures

ON

THE AFTER-EFFECTS OF HEAD INJURIES.

Delivered at the Royal College of Surgeons of England on Feb. 15th, 17th, and 19th, 1904,

BY T. CRISP ENGLISH, F.R.C.S. ENG.,
HUNTERIAN PROFESSOR OF SURGERY, ROYAL COLLEGE OF SURGEONS OF ENGLAND, ETC.

LECTURE III.[1]

Delivered on Feb. 19th.

MR. PRESIDENT AND GENTLEMEN,—In the following lecture I shall first speak of that form of traumatic cerebral abscess in which the onset of symptoms is preceded by a period of latency; I shall then refer briefly to traumatic epilepsy; and lastly I shall discuss the surgical aspect of traumatic insanity.

LATE TRAUMATIC CEREBRAL ABSCESS.

In the 400 consecutive cases of fracture of the skull upon which my Jacksonian essay was based were three instances of cerebral abscess. In two of these symptoms were latent, in one for a period of ten years, in the other for a much shorter period—namely, four weeks.

The following are the details of the first case. The patient was a woman, aged 31 years. Ten years before admission into hospital she was injured in a boiler explosion. An operation was performed shortly after the accident and she ultimately returned to her work apparently cured. She remained in excellent health and free from all cerebral symptoms until eight years after the accident, when an attack of acute pain in the left side of the head with great tenderness at the site of the injury occurred. There were tingling down the right arm and vomiting, no paralysis, and no rise of temperature. The attack passed off in three or four days and beyond occasional headaches no further symptoms were noticed until one month before admission; very severe headache now started with frequent vomiting; movements and sensation were apparently perfect and no other disturbances were noted. Such was the history given by the medical man who sent her to hospital. When examined in January, 1901, ten years after the accident, the patient was looking extremely ill and complained of intense pain in the left temporal region; cerebration was accurate but very slow. The left side of the face was marked with bluish scars, the result of the gunpowder explosion. Two inches above and one and a half inches behind the external auditory meatus was a surgical scar, under which the bone was extremely irregular and depressed; the scar was excessively tender. No paralysis was detected. Bilateral optic neuritis was found, being most intense on the left side. The pupils were normal; the deep reflexes were exaggerated; the pulse was 64, regular and full; and the temperature was 98° F. Examination of the ears showed nothing abnormal and hearing was good. A cerebral abscess was diagnosed and operation was performed two days later. The bone was found depressed and presented tattoo marks from the old injury. An abscess in the temporo-sphenoidal lobe was readily found and about one ounce of thin green odourless pus was let out. A silver drainage tube was introduced. A fortnight later she was doing excellently; there had been no return of the headache or vomiting and the optic neuritis was subsiding. Then suddenly symptoms returned and persisted; the brain was again explored on two occasions and a reaccumulation of pus was found, larger drainage tubes being inserted. On the thirty-second day after the primary operation very acute symptoms suddenly supervened, the temperature rose to 104°, and death rapidly occurred. Unfortunately, no necropsy was allowed This case is an excellent example of the latency of a cerebral abscess. That it was traumatic in origin there can be no doubt; there was clear evidence of a severe depressed fracture, both ears were healthy, and the abscess was found under the seat of the injury. Until the end of the ten years there had been practically no symptoms suggestive of the condition excepting during the one short attack of headache and vomiting.

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[1] Lectures I. and II. were published in THE LANCET of Feb. 20th (p. 485) and 27th, 1904 (p. 559), respectively.

The following are the three stages which occur in the clinical history of these chronic abscesses: (1) early slight cerebral disturbance often unnoticed; (2) latent period, which may be complete or incomplete; and (3) terminal stage, usually developing suddenly, sometimes gradually. The period of latency is explained thus: shortly after the primary injury a small abscess forms but the inflammation remains localised if the virulence of the infecting micro-organism is mild. When the acute process stops a membrane is gradually formed round the abscess, shutting it off from the healthy brain tissue, and if this membrane is complete the abscess may be regarded practically as a cerebral cyst; and as long as there are no acute inflammatory changes in the brain or cerebral membranes surrounding it, it may be a very stationary lesion, causing slight or no symptoms; this is especially the case when it is situated in one of the so-called silent areas of the brain. The latent period varies in duration from two or three weeks to several years; the latency is often imperfect and slight symptoms such as headache and slight mental disturbance, usually in the direction of melancholia, are frequently observed.

It is clear that the early diagnosis presents the greatest difficulty owing to the latency of symptoms. Yet suggestive symptoms and signs will often be discovered if the examination be thorough and complete and in such cases routine inspection of the optic discs must be made. In cases of doubt an exploratory operation should at once be performed. If we wait until the symptoms of abscess become unmistakeable the prospects of successful treatment become remote. Fortunately, in the vast majority of traumatic cases the abscess lies a short distance beneath the seat of injury and exploration is easily carried out. I have the notes of ten cases in which a traumatic abscess remained latent for over six months. The following case is perhaps the most striking. At a necropsy on a patient who died in the London Hospital a penholder and nib (three inches long) were found in an abscess at the base of the brain. The abscess was obviously an old one; there were no traces of injury and it was not known how long these articles had been in the brain, but this must have been a great many years; there had been no symptoms until a few weeks before death.

There are certain cases which suggest that the cerebral membranes are more liable to disease after injuries to the head. In one of my cases the patient died from pneumococcal meningitis 11 months after fracture of the base of the skull and in another tuberculous meningitis proved fatal ten months after an extensive fracture of the skull. These cases may be merely examples of coincidence but the association is suggestive. It is interesting in this connexion to refer to the statement of Beger of Leipsic that injuries to the head under the influence of an epidemic of cerebro-spinal meningitis are very apt to be followed by symptoms of meningitis. Brief details of my two cases may be given. In February, 1899, a man, aged 30 years, was admitted into St. George's Hospital with symptoms of a fracture of the anterior and middle fossæ of the base. He returned to work three months later, some headache and deafness in the left ear being the only after-effects. In January, 1902, he was readmitted and died with what proved to be pneumococcal meningitis. The other case occurred in the practice of Mr. Francis Jaffrey. A child, aged three years, fell 40 feet on to his head and sustained multiple fractures of the vertex and base of the skull; there was free bleeding from both ears. He recovered in a comparatively short time, but ten months later died from tuberculous meningitis. In all other respects the child had been exceedingly healthy and there was no tuberculosis in the family history.

TRAUMATIC EPILEPSY.

I have previously spoken of the vast amount of literature available on the subject of traumatic epilepsy and I do not intend to add much to it at the present time. The cases which occurred in my series will first be referred to and then I shall speak briefly of certain points in its operative treatment.

Epilepsy occurred in five cases in the first series, in two in the second series, and in 14 in the third or miscellaneous series. There were thus 21 cases in all of epilepsy following head injuries; of these, seven were of the Jacksonian type and in one arachnoid cyst without a fracture was found. The remainder were of the idiopathic or essential type of epilepsy and the preceding injuries had been fractures of the base in six cases and injuries diagnosed as concussion in eight cases. In two-thirds of the cases, therefore, the epilepsy which followed was of the idiopathic variety and for these mental shock, which is well recognised as a potent factor in epilepsy, is largely responsible.

Amongst the cases of Jacksonian epilepsy the following is instructive from the point of view of treatment. The patient, a man, aged 19 years, fell seven feet, striking his head against an iron rail; he was unconscious for 36 hours. He was taken into the Antwerp Hospital and discharged three weeks later without operation. Fits commenced shortly after and he was trephined in New York two months after the injury; the bone was replaced and he left the hospital apparently cured. The fits then returned, and 18 months later he was brought into St. George's Hospital, having been found unconscious by the police. The replaced crown of bone was felt over the left Rolandic area as a considerably depressed circle. Further operative treatment was advised but refused. In criticising this case, it is clear that operation should have been performed in the first place —a line of treatment without any possible exception in punctured fractures over the Rolandic area. It is also clear that the crown of bone removed when operation was performed later should not have been replaced, for it was now felt as a depressed circle and the fits were continuing. An arachnoid cyst was discovered in a boy, aged 15 years, who had fallen 40 feet from the rigging of a ship on to the deck and who had later developed focal epilepsy. There were slight paresis of the right leg and a small tender scar over the upper part of the left Rolandic area. Trephining was performed at this spot and an arachnoid cyst containing about two ounces of serous fluid was opened. I am unable to say how long a period of relief followed the operation, for the boy was lost sight of six months later.

The history of the operative treatment of traumatic epilepsy is one long tale of disappointment and we are driven to the conclusion that we cannot cure this disease. The earlier statistics which gave so much hope have been long known to be useless and misleading. There are many fallacies in these figures. It is clear that certain surgeons who published 50 cases or more operated upon in the course of a few years must have included a large proportion of cases totally unsuitable for operation. Further, we know that the word "cure" means nothing but a temporary cessation of the fits, for it is the universal experience that convulsions almost invariably recur sooner or later. In a few exceptional cases a long period of relief follows, as in Sir Victor Horsley's well known case, in which the patient was free for 14 years. In the vast majority the convulsions return within three or more years. Being compelled, then, to admit that at the present permanent cure is out of the question, we must take up an entirely different standpoint. Our best position would seem to be this: if cases are carefully selected and if continued bromide treatment be combined with operation we can reasonably expect to afford the patients relief for a few years. This result will be certainly worth the slight risk incurred in the operation. Freedom from fits for two years or more will mean much to the patient and we shall further postpone the mental deterioration which inevitably accompanies frequently recurring fits.

The selection of suitable cases is a matter of the greatest importance, for indiscriminate operation will not only result in numerous disappointments but will often aggravate the disease. For those forms of epilepsy which conform to the idiopathic type nothing, of course, can be expected from surgery. The cases which are suitable for operation are those in which there is evidence of a definite injury, in which the epilepsy is Jacksonian with localised convulsions, in which the disease has not lasted for more than two years, and in which there is no neurotic family history. When the convulsions are generalised the prospects of success are slight, hence the importance of early operation, for convulsions which are at first local become generalised later. Thus in the case of a scaffolder who fell from the roof of the hospital, the attacks were at first strictly localised to the right side of the face; later the right side of the body was affected, and I found that five years after the injury the convulsions were general and that it was sometimes noticed that they started with twitching of the right side of the face. Although the patient was formerly a

Considerable difference of opinion appears to exist as to the propriety of excision of the cerebral scar and the surrounding unstable portion of the cortex. The majority of surgeons content themselves with the removal of local sources of irritation. Some of the more recent statistics appear to show that the results obtained by cortical excision are better than those in which the superficial structures only have been dealt with, but I have already instanced the dangers of statistics. Each case must be judged on its own merits. We must remember that relief is rarely for long, that the resulting paralysis which the operation causes is not likely to improve much, and that the risks of the operation are considerable. Whatever operation is performed, it is essential that post-operative bromide treatment should be persisted in for years.

The main point, however, in the whole question is this: inefficient surgery is responsible for the great majority of the cases. Fortunately, the incidence of the disease is diminishing with the greater frequency with which primary operations are performed, and when it becomes the routine practice to operate in all cases in which a depressed fracture is suspected traumatic epilepsy will become comparatively rare.

TRAUMATIC INSANITY.

There is reason for believing that mental impairment more frequently follows head injuries than is generally admitted. The only possible way of determining this question is to follow up patients for long periods after the accident, and this I attempted to do, though on a somewhat small scale, in my investigation of the after conditions of the 200 cases of head injury.

In the 100 cases in which there had been a fracture of the skull some degree of mental impairment was observed in 11. One patient, a man, aged 42 years, died in an asylum five years after a fracture of the base; the injury had been severe and when the patient was discharged from hospital obvious mental disturbances were present. Dementia gradually developed, but I have failed to obtain further details of his condition before death. Another patient died four years after fractured base, having suffered from severe epileptic attacks and mental deterioration. Two patients had attempted to commit suicide in melancholic attacks. In two other instances patients who presented marked mental disturbances shortly after their accidents were found to be suffering from dementia subsequently. In one case, one month after a fracture of the base the patient was extremely eccentric in his behaviour, had illusions, was liable to dash suddenly out of bed, and gave a circumstantial account of having done service in the Egyptian and Zulu campaigns, although he had never been abroad. I saw him four years later and found that he presented early dementia, was a chronic alcoholic, and the subject of frequent fits. The other case was that of an old lady who had also sustained a fracture of the base. On the thirty-fifth day after the accident the patient was constantly chattering at everybody passing her bed, was noisy, and could give no rational answer to questions; on the sixtieth day there was much mental improvement but she was still unable to recognise persons or things; on the seventy-fifth day she was discharged, being quiet and fairly sensible, but with much impairment of the intellectual faculties. One year later her mental condition was unimproved.

In the second series there were found one instance of severe mental derangement and three instances in which there was obvious mental deterioration. A boy, aged 18 years, was examined two years after a blow in the right parietal region resulting in concussion; he had been in hospital for 11 days. Mental symptoms had dated from the accident; there was intense depression with frequent attacks of violent and dangerous passion. His memory was extremely impaired; he had delusions and frequently talked wildly and unintelligibly; he shouted and raved in his sleep and had been found sleeping under his mattress. He was previously bright and in excellent health. Nothing was known of his parents.

In my third series of cases, the miscellaneous cases, are four examples of traumatic insanity. The first case was that of a man, aged 38 years, in whom typical and severe melancholia followed slight concussion, the result of a blow in the left parietal region; the patient had previously been confined in an asylum with melancholia, but had been sane for about one year before this accident. The second case was one of mania occurring in a coachman, aged 38 years, ten weeks after a severe cerebral contusion. The condition seemed directly referable to the injury; there had been no previous mental trouble and no apparent predisposition, hereditary or acquired. There has been no recurrence of acute symptoms so far but there is obvious mental derangement. In the third case melancholia followed a shell wound of the head and terminated in suicide. The fourth case was one of dementia seen four years after a fracture of the base in an alcoholic subject. In several other cases there was obvious impairment of the mental faculties but not sufficient to be included under the heading of insanity.

Associated with these cases is that of the boy whom I have brought here to-day. I am showing him not as a case of traumatic insanity, for he is not insane, but as a case which I believe is gradually drifting in that direction. I will briefly repeat his history. Eleven months ago he fell eight feet on to his head and sustained a depressed fracture of the left side of the frontal bone; the primary symptoms were so slight that the parents refused operation for the first 24 hours. He was then operated upon and the depressed fragments were removed; the dura mater was intact. He has been kept under careful observation since. Two months after the accident the child was dull and quiet but somewhat irritable in contrast to his former alertness and cheerfulness; there were frontal headache and giddiness. Four months later there was no improvement; his parents said that he was still dull and strange, that he was more irritable and extremely spiteful to other children and to animals. The child looked sallow and out of sorts, with dark rings under the eyelids; there was still some headache. Last week his father brought him to hospital, being alarmed at his mental condition. The irritability has greatly increased; his parents can no longer manage him. After two or three days' trial he was not allowed to continue attending school owing to his pugnacious habits; he attacked his schoolmaster on the slightest provocation and was continually fighting his school fellows during lesson time. There are other symptoms of mental disturbance; he has lately been attempting to drive knives into his neck and to hang himself with a rope; he appropriates money and other valuables and prefers to take his tea under the table or under a bed. There is no history of nervous trouble in the family and the boy had previously been very intelligent and in excellent health.

There are thus 20 cases in which serious mental disturbance followed injuries to the head; in eight of these the disturbances amounted to actual insanity. A study of the cases as a whole enables one to appreciate certain points in reference to this subject of traumatic insanity.

Comparatively little attention has been paid to the surgical aspect of the condition. The most thorough work on the subject is to be found in an admirable thesis published by H. A. Powell in 1893[2]; to this I shall take the liberty of referring later. Moreover, many operations have been performed for the relief of this condition, but the cases selected have often been unsuitable and the results are frequently disappointing The medical aspect of the question is indefinite and ill-defined, for the difficulties which attend the study of traumatic insanity are very great. There is always a tendency on the part of surgeons and surgical registrars to record carefully the physical symptoms and signs but to pay less attention to the psychical symptoms and the mental condition of the patient. Many patients on discharge from hospital within a few weeks of the accident present symptoms of mental aberration, but no estimate can be formed of the incidence of traumatic insanity from the patient's condition on discharge, for several of these completely recover within a few months. On the other hand, others apparently quite well when leaving hospital develop insanity at some later period. These patients frequently pass through the hands of many practitioners, attend the out-patient departments of one or more hospitals, and finally may drift to the asylums. During this interval between original admission into hospital and the termination in an asylum it is usually extremely difficult to get a connected account of the case.

The relative incidence of trauma to other causes in the production of insanity is variously estimated by different authorities. Thus, Schlager of Vienna states that 10 per cent. of all cases of insanity are traumatic, whilst Clouston found that during nine years at the Royal Edinburgh Asylum less than 1·3 per cent. of the cases of insanity were due to head injuries. Until recent years there has been an evident and widespread aversion to ascribe mental changes to gross lesions and the influence of traumatism has usually been fixed at a minimum by authorities on nervous diseases. Personally I do not think that asylum statistics can give us any accurate idea of the frequency of traumatic insanity. There are undoubtedly a large number of insane persons at large who are never certified as such and this is particularly the case with those who owe their trouble to head injuries, for the duration of the acute attacks is often short and the patients rapidly make an apparent recovery so that removal to an asylum is postponed. In the frequent cases of slight dementia also the symptoms are of a type which do not demand confinement in an asylum, whilst many such patients, and especially the older ones, end their days in the infirmaries and poorhouses.

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[2] H. A. Powell. The Surgical Aspects of Traumatic Insanity, Oxford, 1893.

The most divergent opinions exist as to the relations between traumatism and insanity and authorities who have studied the question express entirely contradictory views. The matter mainly resolves itself into the answering of two questions: first, can head injuries be the direct cause of insanity? and, secondly, has the insanity which follows head injuries a special symptomatology? In regard to the first question, it will be of interest to refer briefly to the opinions of certain writers. Christien considers that injuries only act by diminishing the resistance of the brain and bringing into play any latent predispositions, and that one sees as a result any one or other of the mental diseases, such as mania, dementia, and general paralysis, not indifferently but depending on the nature and mode of action of other causes. Blanche says that considering the large number of people who do not develop insanity after head injuries it is illogical to consider these as exciting causes but that they should be looked upon as affording heredity and latent predispositions the opportunity of asserting themselves. Tredgold states that in nearly all the cases of insanity due to accidental circumstances, such as difficult labour and conditions occurring after birth, insanity has been present in the ancestors and these injuries can only be considered as contributory factors. Phelps's opinion on this subject is referred to later. He believes that mental disturbances following head injuries are almost invariably due to lesions of the left frontal lobe, but that lesions of the right frontal lobe and other parts of the brain are not followed by insanity. W. W. Keen considers traumatic insanity rare; he says that it sometimes follows accidents more on account of mental shock than of physical brain injury, the cases of true traumatic insanity thus displaying no demonstrable brain lesion. He holds that many of the cases of reported cure are faulty and ridiculous and concludes with the somewhat sweeping statement that the patients either were not insane or still are so. On the other hand, the greater number of authorities hold that insanity may be the direct consequence of head injuries.

To my mind that lesions of the brain may be the actual and direct cause of mental derangement can scarcely be doubted. In certain cases in which there has been gross lesion of the brain or its membranes, and in which insanity has developed immediately or later in connexion with certain symptoms dating from the injury, we are justified in concluding that there is a direct causal relation. This view is strongly supported by the fact that complete and prompt recovery has followed operation in many cases of this nature. As a factor of mental disease, however, injury often acts as a contributory cause. In some cases the operation of this factor is slow, slight, and simply predisposing, or it may lead to the production of a neurasthenia or hysteria on the basis of which may originate a morbid psychosis of traumatic origin. Again the effect of the traumatic factor may be to precipitate a partially prepared or nascent insanity or it may be the direct excitant of an insanity already formed ready to break forth on the stroke. A careful study of a large number of cases brings us to the conclusion that there are two distinct types of traumatic insanity. 1. Direct insanity due to the actual injury to the brain or its membranes and occurring apart from hereditary or other predisposing causes. In four of my eight cases of traumatic insanity the injury appeared to have been the direct cause of the mental symptoms. 2. Indirect insanity—that is to say, any form of insanity occurring as the result of lowered resistance of the brain due to the head injury in patients with a predisposition to insanity, hereditary or otherwise.

Next, there is the question as to whether the insanity which follows head injuries has a special symptomatology. We must clearly differentiate between direct and indirect traumatic insanity. In the indirect form, where the injury is merely a predisposing or contributory cause, it seems clear that it can exert no influence upon the type of insanity which follows. In the direct form, where the injury is the sufficient and exciting cause, the facts are less evident. The larger number of authorities state that there are no characteristic symptoms; some take an intermediate view, suggesting that they were not at all clear in their own minds upon the point. On the other hand, certain authorities state that insanity directly due to traumatism presents special features and that lesions of certain regions will be followed by distinct symptoms.

The etiological importance of injuries to the frontal lobes in the production of mental disease has always been a subject of great dispute both amongst physiologists and surgeons. Every possible variety of opinion has been expressed; for instance, Phelps of New York states that injuries to the left frontal lobe are practically always followed by mental changes and that these changes occur only in injuries of the left frontal lobe. Other surgeons have collected series of cases illustrating the innocuity of injuries to this part of the brain. The results of experiments instituted by physiologists to determine the functions of the frontal lobe have been contradictory or at least variously interpreted. The great majority of physiologists consider the anterior parts of the frontal lobe to be the region in which is located the control of the intellectual faculties. Halliburton, however, and certain others locate the intellectual faculties in the occipital lobes, stating that experimental physiology lends no support to the view that the frontal brain is the seat of the intellect. Crochley Clapham also strongly supports the occipital theory of the seat of intelligence, saying that he considers that the evidence scales heavily in favour of the superior intellectual value of the posterior lobes. Others, on the other hand, such as Schäfer, believe that the intellectual faculties are bound up in the integrity of the brain as a whole, basing their arguments on the experimental results in animals. The diverse interpretations of what must be essentially the same post-operative phenomena are explicable in great part by the difficulty experienced in estimating the changes in the exercise of the imperfectly developed faculties of the lower animals and in part perhaps in distinguishing movements controlled by the higher or lower centres. The weight of authority, however, seems to support the contention that destruction of the prefrontal lobes is followed by mental decay.

Returning to the evidence afforded by clinical observation we find that opinion again is divided. Welt collected 59 cases of injury confined to the frontal region in man. 47 of these (80 per cent) showed no change in intellectual capacity or character and only 12 of the total (20 per cent.) had changes recorded against them. Phelps most strongly upholds the view that injuries to the left frontal lobe alone give rise to traumatic insanity; brained in intellectual faculties His conclusions are founded c frontal lobe, in which the conditions allowed an estimate of the direct results, apart from those due to other intracranial lesions coexistent. He has recently recorded a further list of 18 cases supporting the theory that lesions of the left frontal lobe are followed by mental changes, whilst lesions to the right frontal lobe are innocuous. Analysis of his original 28 cases gives the following results: 1. In 11 cases injury was confined to the left lobe, frontal laceration. Mental aberration or deficiency was present in every one apart from mere stupor or delirium. 2. In seven cases laceration was confined to the right lobe. There were no mental changes. 3. In ten cases both lobes were involved. Mental changes due to implication of the left lobe were present in eight. One patient died too early and in one inexplicable case there were no changes. The resulting mental changes varied somewhat with the situation of the laceration. In subcortical lacerations the patients' con- abrogation of the mental power occurred, dition being sluggish and apathetic; whilst with cortical lacerations there was alteration of the mental powers—per- verted memory, lack of attention and concentration, incoherence, delusions, or the stupor of confusion rather than that due to paucity of ideas. He found further that compression and contusion only exceptionally produced specific intellectual changes and that there was no instance in which laceration in any other part of the brain produced characteristic mental effects.

In regard to my own cases you will notice that the boy shown to-day was injured in the left frontal region. In my four cases of direct traumatic insanity the injury involved the parietal region in two cases and the base of the skull in the other two. In summing up the evidence presented both by physiological experiment and by clinical observation I believe that the question must at present remain unsettled; it is not yet known whether injury to the frontal or pre frontal lobes is more likely to be followed by special mental disturbances than injuries to other parts of the brain and I believe that the problem will ultimately be solved by extended clinical observations rather than by experimental physiology.

Morbid anatomy.—In cases of direct traumatic insanity examined after death or relieved by operation lesions of the most varied kinds have been found. Of the local changes the one which has excited most interest from the surgical point of view is depressed bone, for here is a clear indication for operative measures and greater success has been obtained in such cases. Amongst the other local changes found are adhesions of the membranes to the bone or brain, cysts of hæmorrhagic origin, either on or beneath the dura mater or cortex, thickened and hyperæmic bone, necrosis, adherent pericranium, and unsuspected foreign bodies. The important point is that most of these lesions are superficial and therefore within reach of the surgeon.

With the depressed bone may be associated splinters from the internal table pressing on, or wounding, the dura mater or the brain and osteophytic growths. The latter are not at all uncommon in these cases and are probably the result of local traumatic meningeal inflammation. They may occur when there is no depression of the bone whatever but are most marked when resulting from the constant irritation of depressed fragments. The importance of arachnoid cysts in the etiology of insanity has been long recognised. Quain related a case of a patient who suffered from melancholia, irritability, and fits which were found due to a large loose arachnoid cyst. It has sometimes been found that the moveable cysts were associated with attacks of acute mania, possibly due to the cyst altering its position. Amongst the more general changes we find sclerosis of the brain tissue accompanied by cerebral softening. There is usually a diffuse degeneration of certain parts of the cerebral cortex starting from the point of injury and leading to a true cirrhotic atrophy Powell states the situation of the lesion in 67 cases of operation for traumatic insanity: the parietal and interparietal regions were involved in 41 cases, the frontal in seven, and the fronto-parietal in five. The preponderance of the parietal regions is, of course, mainly due to their large area. A notable point is the relatively small number of cases in which the frontal region, a locality easily accessible to operation, was involved.

Traumatic insanity is frequently associated with traumatic epilepsy and the two conditions present many points of similarity in their etiology, morbid anatomy, and course. Further, just as epileptic convulsions may occasionally be produced by pressure applied to a sensitive scar, so may psychical phenomena such as delusion be called into existence by like pressure. But the relation of the two diseases is not that of cause and effect, they are rather two distinct affections the effects of a similar cause. Where the two coexist insanity most commonly follows epilepsy, but one frequently exists without the other and traumatic insanity may precede, or run concurrently with, traumatic epilepsy. It is now recognised that general paralysis of the insane is due in a certain number of cases to head injuries, but the proportion of traumatic cases is variously estimated by different authors. Thus Crichton-Browne found three traumatic cases in 42. L. Meyer states that 11 out of 60 cases were traumatic and Christien gives 47 in 104 cases In the Devon County Asylum, between 1845 and 1870, there were 344 cases of general paralysis, in 103 of which the cause was ascertained; of these 12 were the result of head injuries. Clouston considers that the cases in which the changes exactly resemble the motor symptoms of general paralysis are not progressive and that he saw only one case of real (progressive) general paralysis following traumatism. Risien Russell states that he believes that injury is a very common cause of general paralysis but only in predisposed persons. He could not recall a single case of insanity due to injury pure and simple which turned out to be general paralysis

I propose to refer somewhat fully to a case reported by Mr. A. Marmaduke Sheild and Dr. T. Claye Shaw, in which symptoms of early general paralysis of the insane followed a head injury and in which the symptoms completely disappeared after removal of depressed bone. The patient, a man aged 30 years, had been thrown from a dog-cart and sustained a scalp wound in the left frontal region below the frontal eminence. He was also concussed but only confined to bed for a short time. The bone was carefully examined and was apparently uninjured. About a month later serious mental symptoms commenced. His wife and friends noticed an alteration in his manner and temper. He exhibited sudden and violent outbursts of temper and became quite unfit to carry on the ordinary business and duties of life. After rest and treatment he became better for some weeks, but on resuming a more active life the old symptoms returned with increased violence. He was examined by Dr. Claye Shaw three months after the injury and the following is a brief summary of his remarks: "The patient wore a confused and demented facial expression and had a considerable amount of facial and general tremor. He was unable to stand firmly with his feet together; reading was *extremely difficult*, and the handwriting *was deciphered* with difficulty owing to the crowding of the letters and the shakiness of the upstrokes. The prominent mental condition was one of dementia, but there was an unwarrantable *bien-être;* no illusions could be elicited. There was no history of alcoholic excess or of syphilis and the symptoms appeared directly traceable to the head injury." Trephining was recommended and was performed by Mr. Sheild on the following day. When the bone had been exposed and examined critically a faint crack was seen. On removal of a crown of bone a fracture of the inner table was apparent and two small pieces of bone which were depressed deeply upon the dura mater were removed. Prompt and complete recovery resulted. The case illustrates the excellent results of early operation in cases where the mental symptoms are distinctly referable to the injury.

Treatment.—Traumatic insanity is the only form of insanity which may be rationally treated by trephining and this only when other causes can be excluded and when localising symptoms are present, such as cicatrices, depressed bone, or a circumscribed area of tenderness. Only a small proportion, therefore, of the cases of traumatic insanity are open to relief by operation, for it is essential that some localising indication of a lesion should be present which can readily be reached to justify surgical interference. The prognosis in any case apart from operation is most unfavourable. The disease may follow one of two courses—it may persist indefinitely or it may steadily progress, ending either in dementia or in inflammatory changes which may ensue suddenly after a long period, causing coma and rapid death.

In suitable cases with obvious injury trephining may cut short the mental symptoms by removing the cause where there is no accompanying deep-seated sclerosis of the cortex. Operation will be contra-indicated when the mental disturbance follows a fracture of the base, as is not infrequently the case, the lesion being then inaccessible; and when there is extensive damage to the brain, so that its functions have been directly and permanently interfered with; and when general intracranial changes have taken place. For such cases as these but little can be expected from operative interference. On the other hand, where we have some local indication in an accessible region, more especially if this be depressed bone or tenderness localised to the neighbourhood of a scar, then operation may be performed with some hope of success. A free opening should be made into the skull and any lesion dealt with according to circumstances. Even if nothing abnormal is found at the seat of injury the operation will not necessarily be unsuccessful, for undoubted cases have occurred in which good mental recovery has followed although no local lesion has been found. This fact, of course, must not prevent in any way a very thorough search.

The prognosis of operative treatment may be judged to some extent by Powell's cases, but, as he mentions, the results so obtained are far too encouraging. In summing up the results in his series of 62 cases in which recovery took place we find that there were 41 cases of mental recovery, 12 of great mental improvement, five of slight improvement, and only four in which no permanent improvement to the mental state was recorded.

CONCLUSIONS.

1. Whilst some degree of mental impairment is comparatively common after injuries to the head the changes are seldom sufficiently marked to be included under the heading of insanity.
2. Insanity may result from injury to any part of the head.
3. Traumatism leads to insanity in two ways: (1) direct insanity due to the actual injury to the brain or its membranes apart from hereditary or other predisposing causes; and (2) indirect insanity—that is to say, any form of insanity occurring as the result of lowered resistance of the brain due to injury in patients with a predisposition to insanity, hereditary or otherwise.
4. Every variety of mental change may be produced by traumatism, although some forms are commoner than others.
5 It is at present undetermined whether injury to the prefrontal region is more likely to be followed by mental disturbances than injury to other parts of the brain.
6. Only a small proportion of the cases of traumatic insanity are open to relief by operation, for a localising indication in an accessible region must be present.
7. The results so far have been encouraging and although the operation must necessarily be exploratory it is fully justified in suitable cases, especially in face of the otherwise hopeless condition of these patients.

THE ANTI-MALARIAL OPERATIONS AT MIAN MIR (PUNJAB).[1]

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ALTHOUGH the final report on these operations is not yet issued, this report of Captain S. P. James, I.M.S., enables us to judge of the results achieved and unless the final report is very different in character we shall not be far wrong in summing up on the evidence we possess. My excuse for writing on this subject is that I know Mian Mir well, being at first myself engaged in the preliminary malarial survey previously to the operations subsequently carried out by Captain James. Had I taken any part in the actual operations I should have refrained from estimating the value of the results, but as my connexion with the scheme was only an initial one I am able to take the position of an unbiased observer. At the outstep it is, I think, only fair to point out a misconception that has arisen as to the choice of Mian Mir as a suitable place for *anti larval* operations. When Dr. (now Lieutenant) S. R. Christophers and myself arrived in India and had determined to test the efficacy of anti-larval measures as a means of abating malaria we consulted those in authority as to a suitable station. Our requirements were, first, a station markedly malarial, so that there might be no doubt of the result of the measures if successful; and, secondly, a station which was dry—i.e., one where we should not have to undertake such tedious and expensive measures as drainage. Mian Mir appeared to meet these conditions, but it was only on reaching Mian Mir and inspecting it that we found that this apparently dry station (the rainfall is only 20 inches) was one of the wettest we could have chosen, for the cantonment was covered with a network of irrigation canals; in fact, there was water everywhere. At the last hour we would have withdrawn could we have found the conditions we required but this seemed at the time impossible from the information at our disposal; and looking back I cannot think the choice in some respects was unfortunate, for when we consider this report we shall at least convince ourselves that these measures are not to be undertaken lightly or without an appreciation of the great amount of work involved. What in the case of Mian Mir this actually meant in desperate hard work only those who know the climate of this "terrible" place can fully appreciate.

Before actually discussing this report I may recall what had been the conclusions of Lieutenant Christophers and myself in Africa as to the measures necessary for malarial prophylaxis. We had been convinced that the fundamental method in anti-larval measures was drainage—necessarily an expensive though an effective and permanent remedy. In Freetown, Sierra Leone, this method seemed to us the only one applicable to the suburbs or outskirts of the town where the "endemic index" of the children was high. The central portion of the town situated on sloping ground, with large houses and open streets fairly well drained was, we found, quite free from anopheles, as we showed by the use of "test pools," and in fact we never captured insects in this portion of the town though existing in myriads half a mile away. Tower Hill barracks and Government House are also areas completely free from anopheles, though they abound a quarter of a mile away. These seemed to us most important facts as they showed that even a slight measure of separation or segregation from the huts of the natives was here at least an efficient protection against the anopheles. It is true that the West Indian troops at Tower Hill suffer from malaria but the explanation is simply that the men constantly visit their wives and women folk in the huts of the outskirts where malaria is rife. Two convictions then impressed themselves on us as the result of our observations in Freetown: (1) that protected areas—e g., central Freetown and Tower Hill—may exist in the midst of areas rife with malaria; and (2) that the reduction of the endemic index of outer Freetown—i.e., the true native quarters—would involve extensive drainage works. I may recall also the conditions we found at Accra, Gold Coast, for they were very different from those of Freetown. Suffice it to say that here we were again struck by the protection enjoyed by the officials who for the most part lived in a segregated area—that is to say, their bungalows were well removed from the na
population living amidst
Finally, in Lagos we
measures could be simpl
concluded that by filling
the breeding places in Lagos could be abolished. It does not concern us here to inquire what measures have been taken in these places, but there is one further point which impressed itself upon us very forcibly and that is that before any measures of any kind whatsoever were undertaken it was necessary to know exactly to what extent malaria prevailed in the particular place. For if we know the intensity of malaria in any place we can then ascertain if it decreases as the result of prophylactic measures. Now the intensity of malaria, or, as we called it, the "endemic index" of a place, can be easily and accurately determined. It is only necessary to examine a number of blood films (25 is sufficient) taken from the children (under ten years of age) from any district to give us the percentage of those with parasites in their blood—i e, the endemic index. We have in this figure a true test of the intensity of malaria in any place and, knowing this, we are in a position to determine exactly the result of prophylactic measures.

Turning now to Captain James's report we find that he rightly claims that these operations are the first where not only were all other conditions first determined by an exhaustive "malarial survey" but in addition the malarial index of all the native quarters (bazaars) was determined before the commencement of operations. These figures, as we shall see from this report, form a most valuable and sensitive test of variations in malaria. Not only was this done but these experiments were characterised by the care taken to have adequate controls. How essential this is will be seen later where entirely false conclusions might have been drawn had not this been the case. Before commencing operations, then, a minute survey was first made of all breeding grounds, of the species of anopheles present (a very important matter), and of the particular breeding ground of each species. It was found that *M. culicifacies*, which is the carrier of malaria in Mian Mir, bred almost exclusively in the irrigation canals and it was the destruction of the larvæ of *M. culicifacies* in these canals that was the most important part of the operations. But in addition all breeding grounds were so treated by filling up with earth, draining, baling out, "oiling," &c, that it could be safely said that after a time no possible source of larvæ had been overlooked. The operations were commenced in April, 1902, and were prosecuted with such vigour by Captain James that a distinct decrease in the number of anopheles occurred during the summer. They still could be found in November but in December they had completely disappeared. A satisfactory result, one would at once say, were it not that Captain James had made control observations and in the *untreated* areas a similar disappearance occurred, so that the operations could not be credited with the result. This was in December, 1902. Adult anopheles had vanished but still larvæ could be found here and there in the canals "hibernating"—i.e., alive but not growing and changing to pupæ. It was Captain James's aim now to destroy these hibernating larvæ by the use of oil and other methods, with the result that at the end of the winter no larvæ could be found within a radius of two miles of the centre of operations. This happy result could not, however, be maintained, for with the onset of the hot weather in April, 1903, larvæ were again found. What was the origin of these larvæ? Captain James is of opinion that they were brought into the area of operations by the flowing water in the canals. That larvæ are so washed in we had early observed at Mian Mir. Here, then, was a serious difficulty in having always a fresh supply of larvæ washed down the canals from outside. This was one method by which the anopheles were increased, but it appeared also that insects came in by flight from outside districts and possibly by flying as far as one to two miles; and thirdly, there was a gradual and increasing filtration into the area from house to house and breeding place to breeding place. In these three ways the anopheles may have increased but to apportion to each of these its right value is a matter of great difficulty. This increase by flight and by "filtration" is difficult to understand and appears to be exceptional, for our experience in Freetown and Accra was the opposite and, indeed, in this report an experiment is recorded where a "segregated" camp was established three-quarters of a mile from any breeding ground with the result that there was a complete absence of anopheles in the camp. To the flow of the water in the canals I should be inclined to attribute a greater part of the increase, but Captain James's views as to flight and "filtration" cannot be lightly passed over. Anopheles were also constantly introduced in carts, wagons, and conveyances of various kinds. In April, 1903, then, anopheles had reappeared in that portion of the cantonment in which operations had been conducted for the space of a year. The operations were, however, continued for yet another year with all the advantages gained from a year's experience and in July, 1903, Lieutenant Christophers took charge of the proceedings. The measures were of the same kind but were now extended to a distance of three-quarters of a mile from the Royal Artillery bazaar, practically the centre of the area under treatment. Although the effect on the larvæ was distinct yet the increase in the adult insects could not be checked, due again apparently to "filtration" from outside the area. We think that the result may be fairly summed up by saying that the anti-larval measures were to a certain extent successful but that no check could be placed on the number of adults.

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Let us now turn to the effect upon the malaria of the cantonment. As regards the effect on the malaria of the troops one must admit that the result was extremely disappointing. Without entering into details it will suffice to say that though at first there was some check as the result of these measures, yet as the "fever season" advanced malaria became rife and the practical outcome of two years' persistent work as measured by this test was *nil*. Let us now turn to the malaria in the bazaars. The figures for 1903 are not yet published but those of 1902 are of extreme interest as showing what a sensitive test the endemic index is and in this connexion we may consider also two most interesting experiments made in prophylaxis—viz., (1) the administration of quinine to the native children and (2) segregation of an infected community of native children. The results will be evident from the following table:—

Bazaar.	Measures carried out.	Endemic index, October, 1901.	Endemic index, October, 1902.
British Infantry	None (control).	52·0	42·3
Royal Artillery...	Destruction of larvæ.	35 0	20 0
Syce lines A ...	Segregation.	56·5	4·0
Syce lines B ...	Administration of quinine.	20·0	0·0

We see that the endemic index of the Royal Artillery bazaar in October, 1901, was 35 per cent. In October, 1902, it was 20 per cent.—a considerable reduction and at first sight due to the operations; the control observation, however, showed that in an untreated area there was likewise a reduction due to unknown factors, but a closer comparison shows that in the area of anti-larval operations the decrease was greater than in the control area, 1·75 to 1 in the first case, 1·23 to 1 in the latter, a difference which may fairly be attributed to the credit of the anti-larval measures. In the last line of the table we have the result of the administration of quinine throughout the year, a reduction of 20 per cent to 0 per cent, a most striking and satisfactory result. Equally striking was the result of removing the whole of the "Syce lines A" to a distance of three-quarters of a mile from the nearest breeding grounds. The great decrease from 56 per cent. to 4·0 per cent shows in a convincing way the beneficial effects of segregation and in this method—viz., the removal of an obvious source of infection—we have a valuable means of ameliorating the condition of a cantonment, for it is obvious that the risk to the troops must be less if a constant infecting focus—viz., a number of native children—is at a distance of half a mile or a mile instead of a stone's throw away. The experiment was also tried of administering quinine to the troops under the strictest medical supervision to insure that the quinine was really taken. The result was striking. Only two out of 82 who had taken the quinine were admitted for malaria, while out of 360 who had not taken it there were 67 admissions. The experiment was then extended to the whole of the British infantry; a diminution also resulted but it was not nearly so marked.

To sum up, then, we may say that we agree with the opinions expressed by Captain James that (1) in quinine administration to the children in the bazaars and (2) in the segregation (or abolition) of infecting sources, a method first advocated by Lieutenant Christophers and myself when in Africa, we have valuable means at our disposal for improving the health of the troops. Finally, with regard to the anti-larval measures which it was the special object of these experiments to test, it must be admitted that in this case they have not succeeded in reducing the number of mosquitoes, but the test has been exceptionally severe owing to the unfortunate presence of the irrigating canals in the cantonment. Under the existing conditions in Mian Mir anti-larval measures have proved futile. The malaria problem in Mian Mir must then be attacked in other ways. By quinine administration to the children of the bazaars and by removal to a distance (segregation) of the bazaars (and we understand that this latter is now being carried out) much can be done But finally we should imagine that some fundamental change will also be necessary in the system of irrigation, for, in a word, it is the canals that are responsible for the malaria of Mian Mir. Abolish the canals and Mian Mir would become a sun-parched desert. If this is an impossible plan some radical change in the construction of the canals, so as to permit of their being emptied rapidly and completely as suggested in a footnote by Captain James, would appear to be the only other alternative.

What, then, is the conclusion to be drawn from these experiments? Not as would at first appear natural, that anti-larval measures are useless, for the evidence—e.g., of the operations at Ismailia and, indeed, of this report—by no means supports this conclusion, but that great care should be taken in the choice of a suitable station. Finally, in attacking malaria where anti-larval measures are for any reason impossible, we still have two powerful measures at our disposal—viz., quinine and segregation.

ROYAL PORTSMOUTH HOSPITAL.—The fifty-fifth annual meeting of the supporters of this hospital was held at the town-hall, Portsmouth, on Jan. 23rd, Sir John Baker presiding. The total number of in- and out-patients treated during the year was 11,784, as compared with 11,564 in 1902. It was stated that owing to the energetic efforts of the ex-mayor, Major Sir W. T. Dupree, donations amounting to £2672 8*s.* 7*d.* (thus wiping out a bank overdraft of £1921 5*s.* 6*d.* and adding £751 3*s.* 1*d.* to the income for the year) and new and increased subscriptions amounting to £616 4*s.* 6*d.* had been received. Notwithstanding these amounts obtained through the mayor's fund there was a deficit of £637 on the working during the year. A proposal was made to proceed with the rebuilding of the hospital by the erection of a new block of wards.

MOTOR SYMPTOMS OF MANIA AND MELANCHOLIA;

WITH A THEORY OF THEIR ORIGIN AND OF THE ORIGIN OF DELUSIONS ARISING IN THESE CONDITIONS

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"EVERY phenomenon is best studied where it exists in the greatest intensity It is there that the effects which either depend on it, or depend on the same causes with it, will also exist in the greatest degree It is there, consequently, and only there, that those effects of it, or joint effects with it, can become fully known to us, so that we may learn to recognise their small degrees, or even their mere rudiments, in cases in which the direct study would have been difficult or even impossible Not to mention that the phenomenon in its higher degrees may be attended by effects or collateral circumstances which in its smaller degrees do not occur at all, requiring for their production in any sensible amount a greater degree of intensity of the cause than is there met with" Thus wrote John Stuart Mill in Book IV of his "System of Logic" The
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investigation c
it is there that we shall find characteristic symptoms most marked Knowledge gained by such investigations may then be used for the study of milder cases of the same kind

Some years ago I drew attention to the fact that melancholiacs suffer from paralysis and rigidity of the muscles of the spinal column and of the large proximal joints, the movements of the wrists, fingers, ankles and toes being comparatively unimpaired It appears that a certain amount of scepticism still exists in the minds of some observers with regard to the accuracy of my observations and I venture to suggest that such scepticism has arisen from neglect of the above principle of investigation Observers have endeavoured to discover paralysis and rigidity in the milder cases of melancholia and have failed to do so because these symptoms are very slight in mild cases Indeed, in the lesser degrees of melancholia slight paralysis has to be inferred from the patient's slowness of movement and from his inability to occupy himself in any way It is only in the severest cases that there are obvious well marked paralysis and rigidity, but these are the cases which should be studied first

The coexistence of paralysis and rigidity is a common occurrence in disease of the nervous system Paralysis and rigidity coexist in melancholia but the rigidity is more easily investigated than the paralysis To recapitulate my previous observations, rigidity is most marked in the muscles of the trunk and neck, less marked but strikingly present in the shoulders and hips again less marked at the elbows than at the shoulders, less marked at the wrists than at the elbows and usually absent from the fingers Similarly, rigidity is less marked at the knees than at the hips, very slight at the ankles and usually absent from the toes The rigidity affects flexors more than extensors and adductors more than abductors, hence the attitude of the melancholiac is one of general flexion and adduction, the shoulders being raised owing to the rigid contraction of the upper part of the trapezius I have called the condition *proximal* rigidity in contradistinction to *peripheral* rigidity such as occurs in hemiplegia where the fingers and wrists are most affected

In making observations on the above points voluntary resistance to, or assistance in movement of the limb must be discounted, and it is further to be observed that, as in paralysis agitans, rigidity disappears from a joint after three or four passive movements For this reason it is difficult to demonstrate the rigidity to a class of students The paralysis is most easily studied where it is most intense—viz, at the large proximal joints. It is difficult to detect at the elbows but it is easily observed at the shoulders by asking the patient to hold the hands straight above the head In a severe case the patient cannot raise the elbows above the level of the shoulders In severe cases of melancholiac stupor the patient stands in an attitude of general flexion with adduction and there is complete absence of voluntary movement (Fig 1) But if there is associated with the melancholia some degree of restlessness or agitation, this naturally shows itself in those movements which are least paralysed—viz, in movements of the wrists and fingers, ankles and toes In other words the patient stands (for the rigidity at the hips renders sitting an uncomfortable posture for melancholiacs) rocking the body from foot to foot by alternate flexion and extension of the ankles while constantly picking the skin of the fingers or fumbling with the clothes, the fingers are in constant movement (Fig 2) I

FIG 1

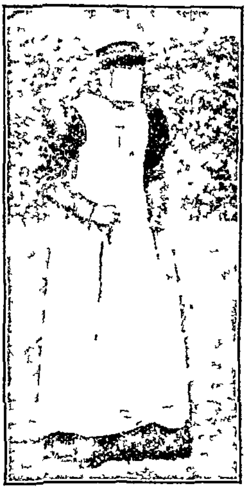
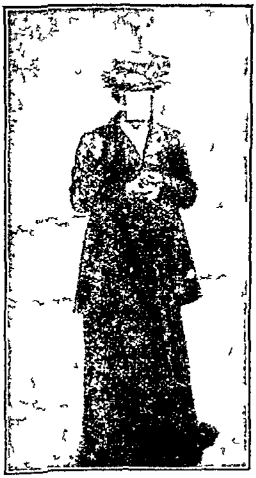


FIG 2,



the agitation is yet more marked it shows itself in grosser movements of the hands and feet, the the
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hands and some cl

movement at the knees may contribute to the rocking movement. In a few cases of melancholia in which the rigidity is sufficiently slight to allow the patient to sit with comparative ease, a to and fro rocking movement takes place at the hips as well as at the small joints. In all these cases, however, it is to be observed that the restlessness shows itself most in peripheral activity.

The movements of mania contrast very strikingly with those above described. Observations on movements of the insane in general and of maniacs in particular are best made on female patients in the airing court, because females react more readily than males to ordinary stimuli and because movements are less restrained when the patient is in the open air. The movements of a maniac in a state of motor excitement[1] take place for the most part at the large proximal joints (Fig. 3). The trunk sways freely as the patient walks and when she runs there is exaggerated movement at the hips, whereas in the running of a sane woman there is little movement at the hips. In the waving of the arms, which is a frequent occurrence in mania, the greatest movement takes place at the shoulders and there is little movement of the wrists and fingers. The maniac shakes hands from the shoulder (Fig 4), the melancholiac from the wrist (Fig. 5). In the maniac the attitude of prayer is with the hands upraised to heaven, in the melancholiac the attitude of prayer is with the hands clasped in front of the sternum. The typical attitude of the melancholiac is with the elbows close to the side, that of the maniac is with the elbows away from the side.

FIG. 3.

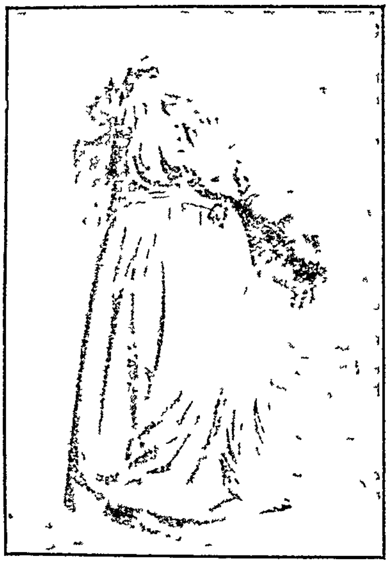


FIG. 4.

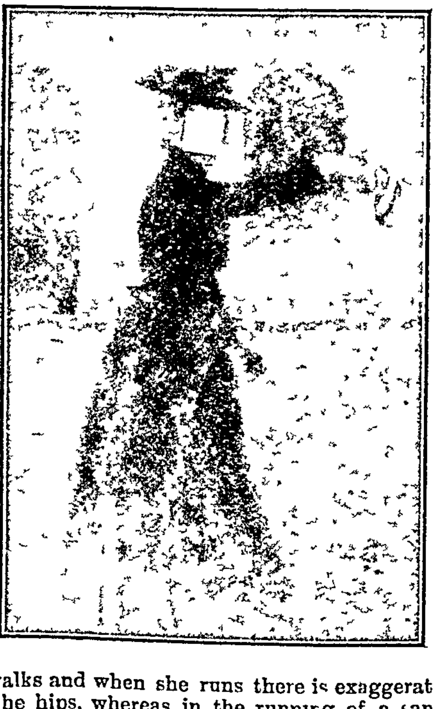
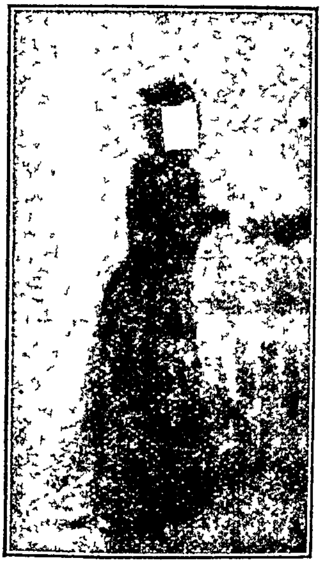


FIG. 5.



Correlated with these observations, there is an interesting one in the domain of experimental psychology. If the arm of a normal individual in an indifferent mood be allowed to rest upon an automatoscope (an instrument of the nature of a planchette but of more convenient shape), it is found that the instrument records on the paper a slight normal tremor of the arm. If now the individual receive an unpleasant stimulus—e.g., the smell of assafœtida—slight *adduction* of the arm is noticed and recorded by the instrument. If, on the other hand, the experimenter give a pleasant stimulus—e.g., the smell of heliotrope or white rose—slight *abduction* of the arm is noticed and recorded by the instrument.

I have so far attempted to demonstrate that characteristic movements of melancholia occur at the small peripheral joints and that characteristic movements of mania occur at the large proximal joints. I must, however, here call attention to a special variety of mania which does not at first sight appear to fall in line with the cases of mania above referred to. Some cases of acute mania have peripheral movement as well as proximal. These cases are not very frequent but they are usually very severe. The patient is, as a rule, too ill to be allowed out of his room. He crawls about on all fours and persistently polishes the floor with his fingers. If the patient lies on his back the arms are abducted and the legs are extended. Movements when present may be observed in both proximal and peripheral joints. Many of these patients die They appear to be unable to withstand the most trivial intercurrent physical disease an acute sore throat or a trifling attack of diarrhœa being in some cases sufficient to carry the patient off I have however, seen several such cases recover with very little dementia Although these patients, have both large and small joint movements the large joint movement is in excess, so that there is no difficulty in recognising them as cases of mania.

Having regard to the generally accepted view that insanity is due to some nutritional disturbance of the cortical neurons, I think that the observations above described suggest a possible explanation of the phenomena of mania and melancholia This explanation depends upon Dr J Hughlings Jackson's hypothesis that the slow proximal movements of large joints are represented in the cortical motor areas in large nerve cells and the rapid peripheral movements of small joints in small nerve cells Now the nutrition of a cell may be disturbed in one or more of four different ways: (1) the cell may contain an irritating stimulating body; (2) the cell may contain a depressing paralysing body; (3) the plasma surrounding the cell may contain an irritating stimulating body; and (4) the plasma surrounding the cell may contain a depressing paralysing body. Now it is to be observed that, with regard to their cubical content, small bodies have a large relative surface and large bodies have a small relative surface. The large cells of the cortex representing proximal movements have a smaller relative surface than the small nerve cells representing peripheral movements. Let us now consider how these cells would be relatively affected by the four above-mentioned conditions of disturbed nutrition. If an irritating stimulating product were formed within the cortical neurons the result would be general motor activity affecting the proximal movements most, because the large nerve cells in which proximal movements are represented have a relatively small surface by which they may get rid of the deleterious substance, while the small cells would readily excrete it from their relatively large surface. If, on the other hand, a depressing paralysing product were formed within the cortical neurons the result would be weakness or paralysis affecting the proximal movements most, for similar reasons. The same argument applies if the depressing influence within the nerve cell be deficiency of nutrient matter (trophoplasm); the large cells again suffer most because they have the smaller relative surface by which they may absorb nutrient matter [illegible] ma [illegible] a [illegible] nts [illegible] most, [illegible] pheral [illegible] the de [illegible] r similar reasons, if the plasma contained a paralysing body or its equivalent (deficiency of normal nutritive and stimulating bodies) there would result a paralysis affecting the peripheral movements most. The first condition (general motor activity affecting the proximal movements most) is, I have submitted, that which occurs in mania. The second condition (proximal weakness or paralysis) occurs in melancholia, especially in the more stuporous forms. The third condition (peripheral activity) is met with, as above stated, in cases of agitated melancholia and is also occasionally superimposed in mania upon the typical proximal activity. The fourth condition (peripheral weakness) is rarely, if at all, met with in cases of insanity except as a result of coarse brain disease.

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[1] A maniac is not always in a state of motor excitement, he has his periods of rest But here, as elsewhere, symptoms are to be studied when and where they are most intense.

The above considerations appear to suggest that we may form the following *conclusions*: (1) that in mania an irritating product is formed within the cortical neurons—such a view is further supported by the frequency of hallucinations in mania; (2) that in melancholia a paralysing product is formed within the cortical neurons; (3) that in agitated melancholia there is a combination of *deleterious influences*—viz, a paralysing product within the cortical neurons and also an irritating body in the plasma which bathes the nerve cell; and (4) that in a few cases of mania there is in addition to the irritating body within the nerve cell an irritating body in the plasma which bathes the nerve cell Whether we are to imply from the above considerations a new formation of cytotoxins or an increased formation or deficient elimination of substances which normally occur in the *organism* there is at present no evidence to show, but as regards melancholia it may be well to bear in mind the old observation that in that disease there is a general tendency on the part of the cells throughout the organism to fail in the excretion of their normal metabolic products.

Origin of the delusions.—When once the fact is grasped that melancholia is a special form of paralysis it is easy to see in what way many of the more common delusions of melancholiacs arise. Although the melancholiac suffers from paralysis he does not realise that he is suffering from paralysis; he only realises that he is unable to do things which formerly were easy to him, and he naturally begins casting about for a reason for this change If he comes to the conclusion that his condition is of the nature of an illness he does not suffer from delusion and is accordingly a case of "simple melancholia." If the patient is a spiritualist, if he believes (as most people do) that there is an immaterial ghost pervading the organism, a ghost spirit, or soul, which is not mind and which initiates all his actions, then when he finds that he is unable to perform those actions his natural conclusion is that his soul is lost. Following up this train of thought he gets the idea that he is deserted by God, eternally damned, and *cannot recover—that he has committed the unpardonable sin.* In this *frame* of mind the patient may fix upon some past peccadillo as the cause of all the mischief, or by a process of simple paramnesia he may even falsely accuse himself of some dreadful crime. He may, for instance, *falsely* accuse himself of having swindled his firm, &c. Other patients, starting with the same premiss, regard their *inactivity* as a loss of vital energy and so come to the conclusion that they are dead Others, again, with less definite ideas, at first merely believe that they are altered in some way; these patients subsequently develop most grotesque delusions about the nature of the change. For example, one female patient at present in Bethlem Hospital has come to the conclusion that she is a chicken. At first she merely thought that she was changed, but one morning two of the symptoms of melancholia so forced themselves upon her that she there and then concluded that she was a chicken. These *symptoms* were (1) the harsh dryness of the skin and (2) the position of the arms which were rigidly adducted to the side and flexed—a position roughly suggesting that of a chicken's wing. *Occasionally the peripheral movement gives* rise to delusion, as in the case of a male patient whose ankle movements were so gross as to give him the feeling of being thrown forwards on to his head; hence he has developed the delusion that he is upside down. If I take hold of his foot and ask, "What is this?" he replies "My head"

With another class of patients (hypochondriacal melancholiacs) the weakness, although general, appears to attract the patients' notice locally. For example they exaggerate the weakness of the legs and develop the delusion that they are unable to walk or to stand, or that their legs are brittle and hence made of glass. Other patients of the same class suffering from the epigastric sensation in addition to their paralysis get the idea that their breath has all gone or that their bowels are permanently blocked up. The obstinate constipation, which is caused not only by the weakness of the abdominal muscles but also by the lack of intestinal secretions, also assists in the development of this last delusion. Closely allied to the ideas of bowel obstruction are such *ideas as that of the throat being blocked up* and of the food going up into the head.

In all the above cases the patient merely takes account of his own weakness and blames nobody but himself for his condition But if he is normally of a suspicious nature, or if he suffers also from hallucinations or illusions, he is apt to ascribe his condition not to his own weakness but to the increase of resistance in his environment. Hence arise all kinds of delusions of persecution. Such patients believe themselves to have been changed by some hostile person or persons by means of some occult influence [illegible] More usually they have delusions of [illegible] ions from [illegible] into their [illegible] their food [illegible] hallucina[illegible]tion), and so forth. Most of these patients are cases of dementia paranoides. Cases of true paranoia must be excluded from this category; the delusions of the paranoiac [illegible] different manner [illegible] show that most of the [illegible] rise from his feeling of [illegible] exaltation of the maniac arise in a corresponding manner from the feeling of activity which arises from the stimulation of his cortical neurons. The maniac during an attack of motor excitement feels strong and capable of the most wonderful athletic feats. Hence arises the general idea of power and the patient develops the delusion that he is a duke, lord, king, or God, or that he is possessed of untold wealth The development of delusions of this kind, however, is very often disturbed by the frequent occurrence of hallucinations, so that the feeling of activity is thrown into the background by perversions of the senses.

The above outline *of the mode of origin of delusions* in mania and melancholia is not intended to be a complete account. It is only intended to draw attention to the fact that a large number of these delusions are to be explained by the feelings of activity and inactivity which I submit to be the most important characteristics of the two conditions.

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FOUR CASES OF TETANUS TREATED BY INJECTIONS OF ANTITOXIN INTO THE SPINAL THECA.

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THE treatment of tetanus, especially in its acute form, is so unsatisfactory that any new departure, however slight, is of interest and value. We have therefore thought it worth while to put the following cases on record. For permission to make use of Cases 3 and 4 we wish to acknowledge our thanks to Mr. H. H Clutton and Mr. G. H. Makins, under whose care they were admitted.

The method adopted was the injection of antitetanic serum (supplied by the Lister Institute) into the spinal theca The strictest aseptic precautions were observed and the serum was injected by means of an antitoxin syringe, provided with a specially long needle, introduced between the third and fourth lumbar laminæ. In no case were any illeffects observed, either immediately or at a later period. This method was first practised by Professor von Leyden.[1] In his case two injections of ten cubic centimetres each were given, a corresponding quantity of cerebro-spinal fluid being withdrawn. The patient recovered. Penna[2] records five cases treated in this manner, with three recoveries. The injections varied from a total of from 100 to 240 cubic centimetres of serum, as much as 60 cubic centimetres being used at one sitting, and a corresponding quantity of cerebrospinal fluid being always withdrawn. The three cases that recovered had daily injections and the symptoms subsided in from five to 17 days. In the two fatal cases the patients died from pneumonia but the spasms had ceased and the limbs were relaxed and could be moved. In no instance were any bad effects noticed.

The numbers are too small for any definite statement to be made as to the efficacy of the procedure; indeed, it is still doubtful if the intradural method will show any better results than the subcutaneous. Leaving out of consideration for the present any comparison between these two methods there can be very little doubt that the lumbar injection is to be preferred to the intracranial. For the performance of the latter the head must be shaved and the cranial vault perforated with some instrument, whether it be a trephine or a drill. This is very much more complicated than the simple skin incision required for lumbar puncture. The fact that lumbar puncture is frequently used as a means of diagnosis is a sufficient proof of the innocuous nature of the procedure and no bad results have been observed in our cases or in those of other observers.

The incubation periods of the cases here described were respectively three to six, six, nine, and 11 days. Two may therefore be considered to have been acute and two subacute or chronic. Three patients recovered and one died, the fatal case being second in order of severity both as regards incubation period and the character of the symptoms.

CASE 1.—The patient, a female, aged 43 years, fell and cut her head 17 days before admission Nine days later she noticed "stiff neck" and four days after that the jaw began to feel stiff On admission there was a suppurating wound over the posterior part of the right parietal bone. The muscles of the neck, the back, the abdomen, and the face were in a condition of tonic contraction. The temperature was 99° F and the pulse was 100 She complained of a good deal of pain in the back. The first general convulsive attack occurred during administration of chloroform when the scalp wound was freely excised and ten cubic centimetres of antitetanic serum were injected into the spinal theca. Five hours after operation a second convulsive attack took place in which the back was strongly arched and marked cyanosis occurred. There were three more convulsive attacks during the same evening at intervals of two or three hours, similar to, but not so severe as, the first. Urine was voided during the spasms. On the second day four more such attacks were noted in the forenoon, after which no further ones occurred. Owing to the difficulty of introducing food into the mouth, and of swallowing, rectal feeding was employed for the first five days. On the second day she began to swallow milk in small quantities. On the third day chloral and bromide of potassium, ten grains of each, were given every four hours and were continued for several days. Improvement began on the second day and continued without interruption. The temperature varied from normal to 100° for the first six days with one rise to 102° which occurred on the fifth day. 20 days after admission there was still some stiffness in the muscles of the neck. The patient was discharged well on the twenty-fourth day.

CASE 2.—The patient was a male, aged 38 years, 17 days before admission he had torn the nail of the left middle finger. The laceration healed satisfactorily and on admission appeared to be quite healthy. 11 days after the injury he began to have pain and stiffness in the back, which soon spread to the neck, then to the jaws, and later to the face. There had been no convulsive attack. When admitted he was suffering a good deal of pain, particularly in the back. Trismus and risus sardonicus were well marked and there was some degree of opisthotonos, the erector spinæ standing out most prominently. The recti abdominis were tense and hard. The limbs were not affected and the temperature and pulse were normal. Shortly after admission chloroform was administered and the finger was amputated, a small abrasion on the dorsum of the hand being excised at the same time. Ten cubic centimetres of antitoxin were injected into the spinal theca. 14 hours afterwards a second injection of serum was given and a third seven hours later, the same dose being employed each time. Chloral and bromide of potassium, 20 grains of each, were given for the first two days, after which the dose was gradually diminished. Two hours after the first injection there was a slight spasmodic attack in which the back was arched and the jaws were tightly clenched. The patient sweated profusely and complained of difficulty in breathing. Consciousness was not affected. There were two similar spasms during the night and another on the second day. No further spasm occurred until the third day when the passage of a catheter occasioned one. On the evening of the fifth day another spasm was noted, after which there were no more until the ninth day, when four short attacks followed one another at intervals of about an hour. On the tenth day there were two more, of which the second was fairly severe. This was the last that occurred. There was no elevation of temperature throughout, nor did the pulse-rate exceed the normal. Retention of urine demanded the use of a catheter for the first nine days and constipation was obstinate. Food was taken by the mouth throughout. During the third and fourth days hiccough was a marked and troublesome complication but was controlled by small doses of cocaine. The muscular rigidity gradually passed off in the following order—the face, the jaws, the back, the neck, and lastly, the abdominal muscles. When discharged on the twenty-eighth day there was still some slight tenseness of the abdominal muscles. He was seen six months later in perfect health.

CASE 3.—The patient was a male, aged 31 years, who came to St. Thomas's Hospital complaining of trismus of 24 hours' duration His hands were very rough and presented several healed cuts and scratches, all of which had been sustained whilst gardening during the past week. Four days before admission he had driven a splinter of wood beneath the nail of the left forefinger. It was therefore impossible to say how long the incubation period really was or which was the point of inoculation but the time could not have been longer than six days and might have been only three. On admission there were well-marked trismus, retraction of the head, and difficulty of swallowing, but there had been no convulsive attacks. Shortly after admission chloroform was given and the finger was amputated, two healed cuts on the same hand being freely excised at the same time. There was a general convulsive attack at the commencement of the administration of the anæsthetic. Ten cubic centimetres of antitoxin were injected into the spinal theca and 12 hours later a second dose of ten cubic centimetres was given. On this occasion also there was a general convulsive attack as the chloroform was being given. On the evening of the second day the back was more arched, the jaws were more tightly clenched, and well-marked risus sardonicus was present. Chloral and bromide of potassium, 20 grains of each, were now given every four hours and they were continued for 12 days, after which they were reduced in amount and were finally omitted on the twenty-second day. From the third to the sixth days there were frequent slight general spasms in which the limbs remained rigid whilst the back was suddenly arched, the jaws were clenched, and the facial muscles were contracted, each spasm lasting but a few seconds and gradually diminishing in severity. After the sixth day there were no actual spasms but rather momentary twitchings. Food was taken by the mouth throughout, though at times with difficulty. There was no retention at any time, but from the seventh to the eighteenth days there was incontinence both of urine and fæces. The pulse-rate never exceeded 118 and was usually about 90. The temperature ranged from 99° to 101° F. for the first 17 days, on one occasion reaching 103°, but this was fully accounted for by the suppuration of the finger wounds. Profuse sweating occurred during this time. For 26 days the respiration rate varied from 28 to 20 and cough was troublesome, a good deal of viscid material being expectorated, but no physical signs were found in the lungs. From the sixth to the twelfth days he was noisy and delirious and at times quite unconscious, but after the twelfth day the mental condition gradually improved. Muscular rigidity gradually passed off and when the patient was discharged on the forty-second day there was but slight stiffness in the neck and jaws. Seen three weeks later he was in perfect health and showed no muscular rigidity anywhere.

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[1] THE LANCET, August 31st, 1901, p. 623.

[2] Journal of the American Medical Association, 1902, p. 602.

CASE 4.—The patient was a male, aged 42 years. Six days before admission he sustained a contused wound of the foot with the point of a pickaxe. He was treated at once, the wound being washed out with carbolic acid and dressed with cyanide gauze. Two days later the wound was suppurating. On the sixth day after the injury he noticed some stiffness in the neck and jaws and pain in the back. When admitted there were marked trismus and retraction of the head, the muscles of the neck and back being particularly rigid. The limbs were not affected. The temperature and pulse were normal. Chloroform was given, the wound was excised and swabbed out with 10 in 11 carbolic acid, and a dose of 20 cubic centimetres of antitoxin was injected into the spinal theca. The first general convulsive attack occurred at the commencement of the chloroform administration. On the following day the muscular rigidity was more marked; he complained of a good deal of pain and sweated profusely. There were no general spasms but on attempting to swallow the jaws became more tightly clenched and the head was retracted. He was very restless and slept but little. There was no retention of urine and the bowels acted naturally. The temperature did not rise above 99° F. 12 hours after the first injection of serum a second dose of 20 cubic centimetres was given in the same manner. Death occurred about eight hours later. At the necropsy there was no inflammation of the spinal membranes. No visceral disease was found.

THE ANATOMICAL CHARACTERS OF THE SO-CALLED FILARIA PERSTANS AND ON THE MODE OF INFECTION THEREBY.

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IN THE LANCET of Jan. 30th, p. 286, I suggested that the so called *Filaria perstans* might really be a species belonging to the genus Tylenchus, while in THE LANCET of Feb. 13th, p. 420, Dr. George C. Low seeks to show that the supposition is not well founded. I further suggested that some such nematoid might be taken into the body either in or with food and that it was not by any means necessary that infection should be favoured by some insect acting as an intermediate host. This view also does not find favour with Dr. Low. He is not correct when he says that my suggestion was "based on a statement made by Christy that the distribution of Filaria perstans in East Equatorial Africa corresponds almost exactly with the area of distribution of the banana and of clothed people, and also on the fact that Bancroft has found a species of Tylenchus infesting the roots of this plant in Queensland, Australia." This statement only covers one-half of the ground on which I based my suggestion. The most important point of all he omits—namely, the alleged fact that the embryo of Filaria perstans as met with in the blood is provided with an oral exertile body which I thought might be similar to that occurring in representatives of the genus Tylenchus and in two other genera of the free nematoids only. There was also the further fact that the members of this genus Tylenchus are capable of surviving prolonged desiccation, so that if present about the banana leaves which are used by the natives of East Equatorial Africa in such *various ways (and especially for plates and* dishes) infection might readily be brought about.

It may be true that the banana is not the source from which infection by Filaria perstans comes. That it cannot be the only source is clear from what Dr. Low tells us, and I am sorry that I should have overlooked his previous paper[1] containing important facts concerning the distribution of the disease. He now says: "In the virgin forests of British Guiana, in areas where there are no bananas, it exists in 50 per cent. of the aboriginal Indians," while speaking generally in his previous paper he said: "So far Filaria perstans has only been found in or near the equatorial belt, where the temperature is high and the atmosphere saturated with moisture, examples of those places being the tropical forests of the Congo and Uganda, where tropical forests alternate with enormous swamps and open ground." These are just such situations in which free nematoids would be sure to occur in the greatest profusion in the earth and about the roots and the lower leaves of plants. It does not, therefore, by any means follow that Dr. Low is right in his supposition that the disease is so prevalent in these tropical forests because there is a "proper intermediate host" for Filaria perstans in the form of some insect which inhabits these areas. This, in fact, is the real point of importance towards which my former note was directed and to which I would again call attention. Must we look for an intermediate host or may no such host be necessary?

Before dealing further with this question, however, a few words must be said concerning the other point to which I directed attention—viz., the anatomy of the worm and the question of the genus to which it belongs.

On the scanty information existing concerning the anatomy of Filaria perstans.—To call this worm a Filaria means nothing. This name is admitted to cover a mere heterogeneous mixture of nematoids. In order to ascertain the genus to which a nematoid belongs we want descriptions of the adult worms containing, in addition to mere size and external form, particulars as to the nature of the mouth and pharynx, the relative length of the œsophagus and the *number of swellings*, if any, in its course, together with the situation of the anus, the character of the ovarian tubes, the situation of the vulva, the shape of the male spicules and accessory pieces, as well as any other details that may be recognisable. Particulars of this kind will be found concerning the 100 new species of free nematoids described in my "Monograph of the Anguillulidæ."[2] The figures of Tylenchus obtusus which I reproduced in my previous note were figures taken from adult worms, and yet Dr. Low says I have "fallen into a misconception respecting the anatomy of the adult and embryonic forms." The misconception is, however, really on his side in supposing that my figures were those of embryonic forms.

In attempting to put together the very scanty details given by Dr. Low and by Sir Patrick Manson concerning the anatomical characters of Filaria perstans the one fact that comes out clearly is that next to nothing is known concerning the internal anatomy either of the embryos or of the adult worms. The drawing of the embryo given by Manson in Quain's "Dictionary of Medicine," as well as the figures reproduced in the columns of THE LANCET by Dr. Low, show nothing more than the general shape and size of the worm. Manson says: "From time to time a minute, tongue like organ is rapidly protruded and withdrawn at the extremity of the cephalic end"; while Dr. Low says: "The cephalic armature as seen in fresh specimens consists of a non-serrated *prepuce*, difficult to make out, and the little fang first described by Manson." The word which I have put in italics is difficult to understand in this relation, and the "tongue-like organ" is now spoken of as a "fang," while nothing is said about its being retractile. There is no representation of it in the figures of either writer. It was Manson's description of this organ which made me think of the possibility of Filaria perstans being really a species of Tylenchus. My extensive acquaintance with free nematoids has only revealed three genera in which anything answering to a minute tongue-like organ that can be "rapidly protruded and withdrawn" exists—viz., Tylenchus, Aphelenchus, and Dorylaimus. And in the search which I have made through the works of Davaine, Eberth, de Man, Schneider, and other writers on nematoids, free and parasitic, nothing at all similar has been discovered in the species of other genera.

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[1] Brit. Med. Jour., March 28th, 1903.

[2] Transactions of the Linnæan Society, vol. xxv., 1865.

In the paper published last year Dr. Low gave only rough outline drawings of the posterior extremity of the adult female and male specimens of Filaria perstans (the spicules of the latter not being represented), though in his communication in your columns there is what appears to be the reproduction of a photograph of the anterior extremity of an adult worm. It is difficult to say from this figure where the œsophagus ends, and whether the dark mass represents a portion of the ovary or the commencement of the intestine. No description is given. Speaking in his former paper of the adult worm he says: "The alimentary canal begins with a simple circular mouth and extends almost throughout the entire length of the worm." There is no description of the œsophagus and there is no mention of the "fang" or "tongue-like organ." It is absolutely contrary to all my experience with nematoids, either free or parasitic, that anatomical structures should exist in embryos and then disappear in adults. The "fang" or "tongue-like organ" therefore remains a mystery, and it must also be said that almost all internal anatomical details concerning the adult forms of Filaria perstans appear up to the present to remain unknown.[3] It is quite probable that the exertile "tongue-like organ" may not be comparable with the little exertile spear of Tylenchus or Aphelenchus. We must look for more definite information concerning it and also concerning the internal anatomy generally of the adult worms before any positive conclusion can be expressed as to the genus to which this worm belongs. Search for it in the external world also cannot be profitably carried out so long as such details are wanting.

Mode of infection.—In regard to the question of an intermediate host Dr. Low in his paper last year wrote as follows: "Analogy leads one to suppose that the embryo filariæ must be sucked out of the blood by some insect in which they may undergo the *metamorphosis*[4] necessary to enable them to become once more adult worms, and the peculiar distribution of the parasite and its association with dense tropical forests suggests some insect with a similar distribution." He admits that his rather extensive researches in this direction have hitherto yielded negative results; while Dr. Christy has expressed the opinion that available evidence does not favour the notion that mosquitoes are agents concerned with the causation and distribution of this filarial disease in Uganda. Manson also seems disposed to negative the supposition of the need in regard to this species of blood-worm for the existence of an intermediate host.[5] I am well aware that Dr. Low's argument from analogy is similar to, and probably in part based upon, views which were long ago expressed by Sir Patrick Manson in reference to another of the human blood-worms. It is, however, an argument which seems to me in this case to be more than usually fallacious. Of the common nematoids found in man—viz., Ascaris lumbricoides, Oxyuris vermicularis, Trichocephalus dispar, Ankylostomum duodenale, and Trichina spiralis—no intermediate host is known or supposed to exist and there is excellent reason for believing that ova or young embryos of each of these worms may be taken into the body directly with food or water and may go through all their developmental stages in the body of man.[6]

An "intermediate host" has, however, been predicated as necessary for two remaining nematoids—namely, the guinea-worm and the Filaria sanguinis hominis nocturna. In regard to the former worm, as I said in my previous communication,[7] all the most cogent evidence is opposed to this view; while in regard to the latter organism, notwithstanding all the painstaking researches of Sir Patrick Manson, nothing approaching proof exists.[8] Embryo guinea-worms, when brought into close relations with specimens of Cyclops, may be able to bore their way into the bodies of these organisms and live there for a time, and yet this may have nothing to do with the mode in which human beings contract guinea-worm disease. Similarly, when a mosquito sucks the blood of a patient swarming with embryo filariæ such embryos may live and advance slightly in development therein before the fourth or fifth day on which the mosquito dies and liberates them into the water, and yet no such temporary residence in the mosquito may be in the least necessary to enable these particular nematoids to undergo their customary development.[9] All embryo nematoids develop regularly by means of slight successive changes and at no period, when developing within their own proper environments, is there ever anything answering to what could be called a "metamorphosis," such as has been spoken of by Manson and by Low. At first the internal substance of an embryo seems simply granular and undifferentiated, then traces of the œsophagus appear followed by the rest of the alimentary canal, while later still the genital organs begin to appear. But the countless numbers of nematoids that may be found in all stages of development about algæ and other water plants, in almost all kinds of damp earth, as well as about the roots and lower leaves of many land plants, show that from the time they are born they are sufficiently "equipped for an independent life," and that it is wholly unnecessary for any of their early stages to be passed within the body of some intermediate host.

Sir Patrick Manson's arguments are, however, of this nature.

1. There is no evidence of growth or development of the embryos taking place in the blood. This, of course, must be freely granted. But supposing, as I am suggesting, that these organisms are facultative parasites which, getting into the human body with food or water, make their way from the intestinal canal into this or that site amidst the slow currents of the lymph stream, they may be perfectly capable of developing and producing swarms of young in such situations. This is what Sir Patrick Manson must suppose to happen to some of the partially developed embryos which have been liberated into water from the body of the mosquito. The subsequent passage of swarms of embryos into the blood stream may be regarded as a kind of accident and their perpetual involuntary movements in that situation may be sufficient to prevent their development. They have got into the wrong place and the majority of them are sacrificed. Some of them, it is true, may as a result of further accidents be thrown off in the urine and other excretions (even in tears, according to Lewis) and thus make their way into the outside world just as Manson supposes to be the case with those embryos that have been temporarily harboured in the body of the mosquito. In each case, therefore, they could only infect man as stray bodies existing in, and coming directly from, the outside world. It may well be asked, therefore, what is the good of assuming this temporary residence in the mosquito? Absolutely none, as I believe. There is abundant evidence to show that any such residence is wholly unnecessary to enable young nematoids to develop. Manson does not indeed postulate the necessity, as we have seen, for Filaria perstans, though he does postulate it for the nocturnal form of the blood worm. There would in any case be a prodigious waste of life, as is so often the case in nature. How small must be the percentage of the total number of embryos in the body of a patient that could be abstracted by mosquitoes; and then how small again, as Manson shows, is the percentage of such selected specimens which survive and become liberated into the water from the dead body of the mosquito.

2. Next we get a teleological argument. The fact that

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[3] The vagina is said to "open externally some distance behind the head," that is, in a very unusual situation. The tube opening in that region in the figure of Tylenchus given by me is that of a large ventral gland and has nothing to do with the ovary.

[4] No italics in original.

[5] See the conclusion of his article on "Filaria Sanguinis Hominis" in Quain's Dictionary of Medicine.

[6] The case of Trichina spiralis is only an apparent exception to this rule.

[7] THE LANCET, Jan 30th, p 286.

[8] See his paper in the Journal of the Linnæan Society, 1878, vol. xiv. (Zool.), p. 304, and his more elaborate memoir in the Transactions of the Linnæan Society, second series, vol. ii. (Zool.), 1884, p. 367.

[9] Figs. 17–25 illustrating the memoir above cited are wholly unlike anything that is ever seen during the ordinary development of a nematoid and are rather suggestive of some morbid condition of the embryos.

the embryos of this particular parasite appear in the general blood stream only during the night is regarded as an adaptive provision enabling them to be swallowed by what are to be their temporary hosts, the mosquitoes. This is a kind of argument as to the cogency of which opinions are likely to differ much. Have we really to do with an essentially unimportant coexistence of phenomena or must we regard this coexistence as the result of some subtly wrought design, howsoever produced? Those who take the latter view would apparently have to suppose that these senseless [illegible] enabled to select [illegible] lood stream in [illegible] This surely is one of the many difficult problems still unsolved in reference to the life-history of these blood-worms. It would seem, however, that Sir Patrick Manson must be strongly influenced by this latter view. Otherwise he would scarcely believe a temporary residence in an intermediate host to be necessary in the case of Filaria sanguinis hominis nocturna and not for Filaria perstans.

Briefly, then, what I have been [illegible] this: (1) that we know next t[illegible] internal anatomy of Filaria persta[illegible] unable to say to what genus it belongs; (2) that it is practically an error to say that nematoids pass through one or more "metamorphoses," since they invariably (so far as is known) attain maturity by a process of steady and progressive development; (3) that nematoids stand in no need of being harboured by "intermediate hosts" but are from the time of their emergence from the egg or the parent perfectly capable of maintaining an independent existence; and (4) that, as a consequence, plants or vegetables in use as well as water may be the real sources through which nematoids obtain an entry into the human body, where they may be capable of developing as facultative parasites without having to pass through the body of any intermediate host.

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CONGENITAL HYPERTROPHIC STENOSIS OF THE PYLORUS.[1]

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THE case which I am recording presented many unusual features. It illustrates the difficulties sometimes found in making a diagnosis and in deciding on the appropriate treatment. It also shows that the affection may be easily overlooked and why such oversight occurs. That the affection is not uncommon is proved by the number of cases recorded in recent years and by the number which have come under the notice of individual observers. In a paper read before the Royal Medical and Chirurgical Society in November, 1898, although I only recorded 20 cases, including my own and those published by others, I ventured to state that in my opinion "the condition is not so rare as might be supposed" and that it is distinctly the cause of that symptomatic disease—marasmus—in some babies. In a joint paper with Mr. Clinton T. Dent on the affection and its treatment by pyloroplasty, read four years later before the same society, in December, 1902, it was mentioned that the total number of recorded cases exceeded 50. In other words, more than 30 fresh cases had been published in four years. Since then three more cases have come under my care and altogether I have seen ten cases in less than seven years. It is clear that the affection cannot be very rare and that the more the attention is attracted to it the more frequently it will be recognised. Such recognition is a most important matter, seeing that operative treatment has proved curative, while in the absence of such treatment the prognosis is almost hopeless.

The patient, who was born on June 22nd, 1903, was admitted to the Metropolitan Hospital on Sept. 22nd and died on Oct 3rd, aged 14 weeks. He was the first child of healthy parents and though supposed to have been born four or five weeks prematurely was said to have been a very large and fine baby. He was nursed for six weeks, then fed on Allen and Hanbury's No. 1 food, and after that on humanised milk up to August 11th, when he was brought to my [illegible]sence from town for my [illegible] weighed 6 pounds 11 [illegible] from vomiting and wasting. He was ordered a mixture of cow's milk and barley water. On August 18th he weighed the same, had vomited occasionally, and had had rather frequent stools. On August 25th he had gained one ounce. On the 28th he had lost an ounce, had developed thrush, and still vomited occasionally. On Sept. 1st he had lost two ounces, weighing 6 pounds 9 ounces. During the next week he gained seven ounces and a further six ounces in the following week, a noteworthy gain. On the 22nd I saw him for the first time and after careful examination admitted him as a case of congenital hypertrophic stenosis of the pylorus. He then weighed 6 pounds 14 ounces.

The important points in the history and course of the disease were as follows. According to the mother the vomiting began at the age of three weeks, had steadily persisted, and had become more frequent. It did not possess the usual characteristic that several meals might be kept down and then a large quantity of food brought up at once. The bowels had been costive and the stools small. The child had steadily wasted, except from Sept. 1st to Sept. 15th, when he gained 13 ounces. On physical examination it was noticed that he was very wasted, the fontanelle was depressed, the tongue was clean, and the breath was sweet. The abdomen presented a fulness in the epigastric region and the outline of the stomach was ill-defined. The stomach was hyper-resonant, a little dilated, and exhibited visible peristalsis passing in a wave from the fundus to the pylorus. A moveable lump of the size of a filbert could be felt in the region of the pylorus. He was put on a diet of equal parts of peptonised milk and water every two hours. On Sept. 23rd he vomited four times, immediately after food, up to 4.0 A.M. The amount vomited was small and consisted simply of the food. On the 24th there was no more vomiting and he took food well. The bowels were opened but the stools were small. There was no loss of weight. On the 25th the patient vomited twice during the night. He passed a large yellowish stool in the morning containing a few curds. On the 26th there was a loss of three ounces. He vomited once rather a large amount. He had two stools. On the 28th there was a gain of six ounces. There was no more vomiting. On the 29th four stools were passed during the night; they were green and contained some curds. On the 30th there was a loss of six ounces. He vomited once slightly. He passed seven stools containing little fæcal matter. The stools were green; there were no curds. On Oct. 1st he had only one stool and vomited once. On the 2nd there was a loss of seven ounces. He passed four stools during the day. He vomited once, about one and a half ounces, while the stomach was being examined. The pylorus was still felt. There was no increased dilatation of the stomach. On the 3rd he passed two stools and vomited once. He died from exhaustion, due to marasmus, in the evening. The temperature ranged between 97° and 99.6° F. throughout.

On post-mortem examination, 18 hours after death, nothing abnormal was found except the condition of the stomach and pylorus. On opening the abdomen the distended stomach was seen to occupy the left hypochondrium and the epigastrium down to the level of the umbilicus. The pylorus [illegible] cylindrical or sausage-shaped tumour about [illegible] one and a half ounces of dirty fluid, a little [illegible] and a moderate amount of gas. It was not found possible to squeeze any of the contents of the stomach through the pylorus although a probe could be passed through. On longitudinal section the pylorus showed the changes usually seen in this affection—[illegible] of the circular muscular [illegible] The [illegible] large [illegible] yellow fæces.

I wish to draw attention to the difficulties in making a diagnosis in this case. Previous experience had led me to form the opinion that as a rule the diagnosis is fairly obvious in a case under observation for a few days. In a typical instance we find progressive wasting, vomiting unaccompanied by nausea and characteristic of pyloric obstruction, absence of bile from the vomit, constipation, clean tongue, a sweet breath, a dilated stomach, visible peristalsis, and a palpable pylorus. Palpation of the pylorus is difficult on account of its deep position and one is apt to hesitate in stating with absolute confidence that it can be felt. I have felt it in the last five cases I have seen. Other tumours in this situation at an early age are very rare. An enlarged gland, if present, is not as definite and does not give rise to similar symptoms. Gastritis can generally be excluded on account of the clean tongue and sweet breath. In the present case the vomiting was certainly not characteristic. Although it had persisted for a long time and had become more frequent there was no history of a few meals being retained and then all brought up at once. During the 12 days the child was under observation in hospital the vomiting was not marked and had not the typical character. The bowels were stated by the mother to be costive. While under observation they acted fairly often and contained a considerable quantity of fæcal matter. On one occasion, eight days before death, a large, almost normal, stool was passed—conclusive evidence against very serious obstruction. Dilatation of the stomach was not very marked and did not increase while the child was under observation. Peristaltic movements in the stomach were noted on one occasion but were never present to the marked extent seen in some cases.

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[1] A paper read before the Society for the Study of Disease in Children on Nov. 20th, 1903.

Another unusual feature was the extraordinary gain of weight which took place twice in the course of the illness, instead of the usual steady progressive loss. During one fortnight while attending as an out-patient the child gained 13 ounces. During two days, while an in-patient, he suddenly put on six ounces. If a child can gain weight like this there does not seem to be any urgent need for operation. Nor does there appear to be any reason why such improvement in nutrition should not continue. The affection was diagnosed from the wasting, the vomiting, the dilated stomach, and the palpable pylorus. On the absence of characteristic vomiting, on the presence of the considerable amount of fæcal matter in the stools, and on the two periods of gain in weight, I decided that the obstruction was only partial, that food could get through and at times in sufficient quantity for perfect nutrition, and that under such conditions the operation might be postponed. The child was very wasted and I hoped it might be possible to get him into a better state of nutrition or that he might be cured without operative interference. Even when he started to lose ground rapidly food was still passing through the pylorus, the vomiting was not marked, and the general indications for operation did not seem particularly urgent, looking at them from the point of view of relieving an obstruction.

Now note the peculiarity of the conditions found at the necropsy. The pylorus would not permit the passage of even fluid. No doubt this was due to post-mortem contraction. Note, too, that the intestines contained a considerable quantity of normal fæces. Clearly food had passed through the pylorus within a few hours of death and the degree of stenosis found at the necropsy is no measure of the obstruction present during life. The absence of characteristic vomiting during life is suggestive of the absence of spasm during life, the obstruction being due to a mere hypertrophy with secondary contracture of the hypertrophied muscle. The child's life might have been saved by operation. Four out of my last five cases have been operated on by Mr. Clinton Dent and life has been saved. In the present instance no operation was done and the child died. He died from marasmus, induced by starvation, from insufficient food passing through the pylorus. At the time he came under my care it is more than probable that he would have died from the marasmus in spite of surgical treatment, though the latter would have undoubtedly given him a better chance.

From this case it is clear that the affection can exist apart from typical symptoms, that an apparently mild case can induce severe wasting, and that operative treatment is indicated although food can pass through the pylorus. There is little doubt that the extent of the condition may vary in different cases and that both the diagnosis and the decision as to the necessity for operation may be matters of very great difficulty. I believe that mild cases may exist; that the symptoms may not be of much moment and may be limited to dyspepsia and occasional attacks of vomiting; and that such cases may terminate in later life from dilatation of the stomach and hypertrophic stenosis of the pylorus. Such cases have been recorded at five years (Hezekiah Beardsley), at six years (Sonnenburg), and at 11 years (Hansy). Probably hypertrophic stenosis of the pylorus in adults is simply due to a persistence and an exaggeration of a mild type of the affection in infancy.

Upper Brook-street, W.

RED LIGHT IN THE TREATMENT OF SMALL-POX.

(A FRAGMENTARY CONTRIBUTION.)

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WHILE awaiting results of the treatment of small-pox by light on a sufficiently large scale it is, I think, permissible for individual observers to record their results even when dealing with small numbers of cases, particularly if the cases have all occurred during the same epidemic and provided that some of the cases have been submitted to ordinary and others to red-light treatment. I further think that it is important to state in connexion with each case the apparent type of the disease, condition as to vaccination, and so on. Fully bearing in mind that the cases I have to record are too few in number to draw absolute conclusions from, I will content myself with just stating the facts. It is, however, important to mention that 25 of these cases occurred during one and the same epidemic in 1902.

In Table I. the last case of variola nigra may be eliminated as the fatal result was inevitable under any treatment. In all the rest suppuration occurred in the majority of the pocks. In the fatal unvaccinated cases the confluent eruption was very copious, even the abdomen in each instance being covered with pocks.

The Southend-on-Sea town council in February, 1902, on my advice, provided a new block with accommodation for eight additional beds. I had red-glass panes inserted in all the windows. Table II. gives the particulars of the cases admitted into this ward after its erection.

It will be noted that in each series there was one fatality from hæmorrhagic small-pox (variola nigra), death in each instance occurring within 48 hours of admission to hospital. As is well known, this type of small-pox is invariably fatal. Omitting these two cases (one in each series) as uninfluenced by treatment we have in the first series (Table I.), where the cases were treated in wards lighted by ordinary windows, 11 cases with three deaths, while in the latter series (Table II.), where the cases were treated in wards lighted with red-paned windows (at any rate until the pocks began to dessicate), 12 cases without a death. These are the bare facts as to the number of cases and the fatality in each series. But we must inquire more closely into the relative severity of the cases in each series before drawing any conclusions, bearing in mind, however, that the number of cases is too small to warrant absolute conclusions and that this paper is merely a fragmentary contribution towards the subject. Prior to making further remarks I will give in tabular form corresponding with Tables I. and II. the history of five cases of small-pox which have occurred in 1903 all of which have been treated in the "red-light" ward (see Table III.).

All the cases in Table III. were members of one family, vaccination of "contacts" after the first case being refused on religious grounds. Cases 2 and 3 were, however, still considerably protected by vaccination in infancy, but it is my impression that had these two persons been treated in a ward lighted by ordinary daylight some few of the pocks, at any rate, would probably have gone on to suppuration. In the unvaccinated cases, which were all well-marked typical cases with copious eruption, the vesicles became fuller and rounder towards the ninth day. A few were pricked with a needle and there exuded a thin semi-puriform fluid but no actual pus. Secondary fever was quite absent. Medicinal treatment was practically confined to acetozone, about six grains a day. Though I do not think that any of these cases would necessarily have been fatal if they had been treated in wards lighted with ordinary daylight I cannot but feel that the suppurative stage was considerably modified and rendered less severe and dangerous by the beneficial influence of the red rays, or rather by the exclusion of the other elements of light.

TABLE I.—GIVING PARTICULARS OF 12 CASES OF SMALL POX OCCURRING AT SOUTHEND-ON-SEA IN 1902 WHICH WERE TREATED WITH ORDINARY LIGHT.

Case.	Age.	Type of disease.	Vaccinated in infancy.	Revaccination.		Unvaccinated at the time of infection.	Suppuration stage modified by vaccination.
				Before infection.	After infection.		
1	21 years.	Copious eruption; semi-confluent; varioloid.	Yes.	—	—	—	Yes.
2	16 ,,	Very mild, discrete.	,,	—	Yes, but only unsuccessfully *after the eruption appeared.*	—	,,
3	59 ,,	Astacoid; confluent.	—	—	—	Yes.	No.
4	36 ,,	Mild, discrete.	Yes.	—	—	—	,,
5	36 ,,	,, ,,	,,	—	—	—	Yes.
6	21 ,,	,, ,,	,,	—	—	—	,,
7	41 ,,	Semi-confluent.	,,	—	—	—	,,
8	2 months.	—	Not before infection.	—	—	Yes, but vaccinated only one week before eruption, five days after infection.	,,
9	4 years.	Confluent.	—	—	—	Yes.	No.
10	11 ,,	,,	—	—	—	,,	,,
11	7 ,,	,,	—	—	—	,,	,,
12	18 ,,	Hæmorrhagic.	—	—	—	,,	—

Summary of the above Table.

	Vaccinated before infection in infancy only.	Revaccinated.	Unvaccinated at time of infection.	Total.
Cases	6	0	6	12
Deaths	0	0	4	4

One of the four deaths was from hæmorrhagic small pox. Of the six cases unvaccinated at the time of infection one was successfully vaccinated a week before the small pox eruption appeared, with the result that the infant escaped with a modified attack.

TABLE II.—GIVING PARTICULARS OF 13 CASES OF SMALL-POX TREATED WITH RED LIGHT DURING THE LATTER PART OF THE OUTBREAK (FROM APRIL TO JULY, 1902) AT SOUTHEND-ON-SEA.

Case.	Age (years).	Type of disease.	Vaccinated in infancy.	Revaccinated.		Unvaccinated at the time of infection.	Suppuration stage modified by red light.
				Before infection.	After infection.		
1	12	Semi-confluent; sequelæ axillary abscesses.	—	—	—	Yes.	Yes.
2	42	Semi-confluent.	No marks.	No.	No	?	,,
3	36	Semi-confluent on the face. This patient was early exposed to sunlight; the face took a long time to clear.	Yes; one poor mark.	,,	,,	—	,,
4	11	Semi confluent.	No.	,,	,,	Yes.	Yes, and by vaccination after onset.
5	35	Hæmorrhagic; fatal in 48 hours.	Yes.	,,	,,	No.	—
6	21	Discrete; in pustular stage when admitted.	Yes; good marks.	,,	,,	,,	—
7	2½	—	No.	,,	,,	Yes, but successfully vaccinated a week before eruption for the first time, 5 days after infection.	Modified by both vaccination and light.
8	36	Semi-confluent; epileptiform seizures.	Yes.	,,	,,	—	,,
9	37	Discrete.	Yes; good marks.	—	—	—	,,
10	56	Semi-confluent.	Yes, but no marks.	—	Vaccination did not take; no mark of vaccination at all.	—	,,
11	25	Very mild, discrete.	Yes; good marks.	—	—	—	,,
12	17	Confluent, severe.	No marks.	Certified, but no true vaccination cicatrix.	Yes; successfully after invasion.	—	,,
13	25	Confluent.	No.	No.	No.	Yes.	Yes.

Summary of the above Table.

	Vaccinated in infancy only.	Revaccinated.	Unvaccinated at time of infection.	Doubtful.	Total
Cases	6	2	4	1	13
Deaths...	1	0	0	0	1

The one death was from hæmorrhagic small-pox. It will be noted that the two cases under "Revaccinated" showed no evidence of any vaccination. They were stated to be vaccinated but really were unvaccinated in the proper sense of the term. Careful distinction must also be made between primary vaccination after infection and revaccination.

TABLE III.—GIVING PARTICULARS OF FIVE CASES OF SMALL-POX OCCURRING AT SOUTHEND-ON-SEA DURING MAY AND JUNE, 1903.

Case.	Age (years).	Type of disease.	Vaccinated in infancy.	Revaccination.		Unvaccinated at the time of infection.	Suppuration stage modified by red light.
				Before infection.	After infection.		
1	10	Confluent.	No.	No.	No.	Yes.	Yes.
2	35	Mild, discrete.	Yes; 4 marks.	"	"	—	Aborted.
3	33	" "	" 3 "	"	"	—	"
4	7	Confluent.	No.	"	"	Yes.	Yes.
5	3½	"	"	"	"	"	"

Summary of the above Table.

	Vaccinated in infancy only.	Revaccinated.	Unvaccinated at time of infection.	Total.
Cases	2	0	3	5
Deaths	0	0	0	0

I am aware that Dr. Schamberg[1] has recorded two unvaccinated cases of small-pox treated in a red room apparently complete in its appointments and that the result was such as to lead to the abandonment of this method of treatment. But I ask was it not rather premature to abandon altogether this form of treatment because the first two unvaccinated cases were apparently unmodified? The question of disfigurement, though of importance, is inconsiderable when compared with the question of recovery. If the mortality from small-pox, whether or not modified by vaccination, can be reduced at all by the use of red light is it not our obvious duty to give the matter the fullest possible trial? While fully recognising that prior vaccination undoubtedly plays the principal part in lessening the virulence of the disease in vaccinated persons, my experience hitherto justifies me in the belief that the red-light treatment is of distinct benefit. My record shows 18 cases treated with red light with only one death from hæmorrhagic small-pox (moribund on admission to hospital).

Seeing that in any particular epidemic the character of the prevailing form of small-pox, whether mild or severe, is a matter of great importance in determining both mortality and disfigurement, the question of the part played by red light is one which can be settled only by prolonged observation with careful records which must then be subjected to sound, calm, discriminate judgment: (1) by the observer himself; and (2) by others whose experience with variola and varioloid is sufficient to lend weight to such judgment. It is therefore clear that the present record is but a small item of evidence which weighs in favour of the red-light treatment of small-pox. I shall be content if this contribution is felt to be of any value, however small.

A disadvantage about a red-light ward is that the physical appearance of the small-pox eruption cannot be appreciated or demonstrated in the same manner as by ordinary daylight, but this disadvantage attaches only to the observer and not to the patient.

Southend-on-Sea.

ON THE DISTRIBUTION OF BACILLUS COLI IN NATURE.

PRELIMINARY NOTE.

BY J. W. H. EYRE, M.D. DURH., F.R.S. EDIN.

(*From the Bacteriological Laboratories, Guy's Hospital.*)

THE findings of the Commissioners, contained in the Fourth Report of the Royal Commission on Sewage Disposal (Pollution of Tidal Waters, with Special Reference to the Contamination of Shell-fish), which has recently appeared, although expressed in somewhat cautious language, are eminently suggestive. Perhaps the most important point raised is the paucity of our present knowledge as to the distribution of the bacillus coli in nature. For many years the presence of this organism in certain food-stuffs submitted to them for examination has been considered by some bacteriologists as proof positive of contamination by human excrement; and the fact that the bacillus coli leads a saprophytic existence in the intestinal canal of many mammals other than man appears to have had but little influence in modifying their views. In this connexion some of my own observations may be of interest.

For some years past, intermittently it is true, in the intervals of other work and as opportunity afforded, I have examined fæces obtained from various animals, with a view to the detection of the bacillus coli and allied forms of bacteria. In my earlier experiments the method I adopted was to emulsify small quantities of fæces in sterile broth, then to inoculate tubes of MacConkey's bile salt broth with the emulsion, to incubate anaerobically at 42° C. for 24 hours, and afterwards to pour gelatin plates from such of the tubes as exhibited growth accompanied by the production of an acid reaction and the formation of gas. For nearly two years now I have substituted plates of nutrose agar (prepared with some modification from the formula of the Drigalski and Conradi medium) for the gelatin plates, as this medium greatly facilitates the isolation of the bacillus coli from associated intestinal bacteria. Occasionally, too, I have smeared a few loopfuls of the suspension of fæces directly on to the nutrose agar plates—thereby cutting out the 24 hours' preliminary cultivation in bile salt broth.

In order to eliminate those bacteria allied to the bacillus coli, which are often loosely referred to as "coliform," I have refrained from classifying as bacilli coli any bacillus which did not present the following characters: short bacillus with rounded ends, feeble motility, not retaining the stain when treated by Gram's method; a non-sporing, non-liquefying, facultative anaerobe, giving characteristic colonies on gelatin, growing well on agar at 37° C.; producing an acid reaction when grown on milk, accompanied by clotting of the medium; producing indol in peptone water within three days; fermenting dextrose, lactose, maltose, saccharose,[1] galactose, mannite, glycerine, inulin, and dextrin, with production of acid and gas; reducing nitrates in nitrate broth to nitrites; and forming a moist, raised, fawn coloured to brown growth upon potato.

Like MacConkey I found that it was an easy matter to isolate the bacillus coli from the contents of the intestinal canal (obtained immediately after killing the animal) of the small rodents of the laboratory—the mouse, the rat, the guinea-pig, the rabbit, and also the cat and the dog. Examination of the fæces of larger animals—the sheep, the goat, the horse, and the cow—all likewise gave positive results. Specimens of the common fowl, the duck, the pigeon, and the sparrow, killed and examined immediately, also yielded abundant evidence of the existence of the bacillus coli in considerable numbers in the lower portion of the alimentary tract. In this connexion, too, it may be noted that Kern (1896) demonstrated the presence of bacilli coli in the intestinal tract of birds of prey. Recently, through the kindness of Dr. H. T. Bulstrode, I have had the opportunity of examining the bodies of two freshly killed sea-birds—a black-headed diver and a common gull—which were shot three miles from land (Boston Deeps, off Benington). The birds were carefully opened and some of the contents of the large intestines emulsified in sterile broth and plated on nutrose agar. After incubation the bacillus coli was found to be the predominant organism in the resulting growths. Still more recently, again thanks to Dr. Bulstrode, the inspector of the eastern sea fisheries (Mr. Donnison) sent me a batch of fish, freshly caught (off the Lincolnshire coast to the north of Marblethorpe) by means of a trawl net at a distance of about two miles from land and in a depth of four fathoms, the tide being half flood. The species represented were the sprat, the smelt, the mullet, the dab, the sole, the plaice, the John Dory, the dog-fish, and the skate. On receipt each fish was washed with sterile water, roughly dried with sterile cotton-wool, and tacked out on a piece of board. The skin of the ventral aspect over the situation of the alimentry tract was thoroughly seared with a red-hot cautery iron and the stomach and intestines were dissected out by means of sterile instruments. Some of the intestinal contents was then aspirated into Pasteur pipettes and thoroughly mixed with sterile broth. The mixture was then employed to establ [illegible] After incubation bacilli [illegible] from the sets of plate [illegible] endeavour was made to guard against the obvious objection to these observations by taking portions of the flesh from different parts of the body of each fish, dropping these pieces of tissue into tubes of bile salt broth and incubating at 37° C. With a few exceptions these cultivations remained sterile, the exceptions showing growth due to accidental contamination, the bacillus coli being absent from all.

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[1] See also the Journal of the American Medical Association, vol. xli., No. 4.

[1] The original bacillus coli of Escherich, by the way, does not ferment saccharose.

Without going so far as to say that these results point to the presence of the bacillus coli as a normal inhabitant of the intestinal canal of fish in general—such a contention, of course, is neither warranted nor justified by these few observations—I would point to the necessity for further experiment in the directions which I have indicated before assuming that the presence of bacilli coli is synonymous with "sewage" contamination.

Guy's Hospital, S.E.

A CASE OF PAROXYSMAL LABYRINTHINE VERTIGO ASSOCIATED WITH SPECIAL OCULAR SYMPTOMS AND ALLEVIATED BY SETON.

BY T. WILSON PARRY, M.A., M.B., B.C. CANTAB.

THE patient was a Derbyshire man, aged 43 years when he first came under my care. He was of very temperate habits and before his first attack of vertigo which occurred now nearly four years ago he had never had any illness of any kind whatsoever. When he first came under my notice he was a general overseer on a gentleman's estate, had to superintend farm work, to attend himself to the horses, and also to do some office work. His father is said to have died at the age of 80 years from "pneumonia," while his mother died from the result of a second apoplectic seizure at the age of 74 years. I could discover no history of gout, syphilis, epilepsy, fits, migraine, or insanity. A paternal uncle suffered with "deafness." The patient's first attack occurred in March, 1900. He was writing at his desk in the office, when, without any warning whatever, he was suddenly seized with violent dizziness. So great was it, indeed, that he tumbled over on to some harness that was lying on the floor at his feet. He did not lose consciousness. The dizziness lasted about one and a half hours. He described the attack as commencing by his seeming to see everything go round and this in the reverse direction to that in which the hands of a clock turn. He made a great effort to master the illusion by fixing his eyes on some object but found that will power was incompetent to control the attack. He immediately felt sick and vomited. From this moment, firstly, a "singing" began in his right ear. Sometimes this was of a "sighing" nature, like "the fall of water in the distance," sometimes of a "buzzing" character, and again at other times of a "shrill" sound, "like an engine whistle going off." Secondly, sudden attacks of giddiness began to occur at certain times. These varied in character from the slightest vertiginous feelings, lasting only one or two seconds, to the most intense and violent paroxysms that threw him unawares on the ground, leaving him in a confused and dazed condition which lasted sometimes even several hours. Thirdly, he began to be troubled by a thing he had never had before—namely, "specks floating before his right eye." Sometimes these floated from side to side and at other times from above downwards. So realistic, indeed, did these "specks" (and often it was limited to one only) become that he used sometimes to imagine that a piece of soot was flying in the air in front of his face and he has found himself more than once sweeping his hand in front of his eyes to brush it aside. Fourthly, he began gradually to lose the sense of hearing in his right ear until he, in the space of 18 months, became stone deaf. This first attack naturally very much alarmed the man and he came to me with the tale that he thought there must be "something very seriously wrong with his liver." I examined him and found him to be a particularly well-made and well-nourished man, a total abstainer, and a moderate smoker only. I found no evidence of any organic lesion whatever and his urine, too, was free from both albumin and glucose. His knee-jerks were normal and there was no apparent arterial degeneration. I syringed away a small quantity of wax from his right ear and found the tympanic membrane quite normal. He was not entirely deaf but my voice appeared to him to be distant and muffled. I then directed my attention to the throat and nose. The throat was quite normal and I could find no evidence in the nose of ethmoidal disease or of any growth or morbid condition of the Schneiderian membrane to cause reflex irritation. Examination of the eyes elicited the following information: (1) both pupils were equal and reacted normally to light and to accommodation; (2) by the "ring" test I found that he used his right eye more than his left; (3) by rough tests he did not appear to be either myopic or hypermetropic to any extent; (4) there was no paralysis of any of the eye muscles; and (5) the discs were normal.

The treatment I adopted was free evacuation of the bowels by occasional powders of subchloride of mercury at night, followed by a dose of sulphate of magnesium the first thing the next morning. The chief drugs I employed for alleviating at the onset were quinine combined with bromides [illegible] I prescribed every four hours. [illegible] d vegetable bitter for stomachic purposes. For the first few days after the initial attack he had as many as three or four attacks in the day and then for three weeks he had none. At the end of this time he had two decidedly bad attacks. This brings me to the end of the month after his primary attack and from that time to August 6th, 1901, he was not under medical treatment, although, as he afterwards told me, he was conscious of the following symptoms during that period though they were not sufficiently aggressive to prevent him from undertaking his ordinary occupation. The symptoms referred to were: (1) singing in the right ear; (2) increasing deafness in the right ear; (3) occasional slight vertiginous attacks; (4) intermittent occurrence of muscæ volitantes flitting before the right eye; and (5) occasional frontal and occipital headache. During this quiescent interval I once met him in the street and he told me that although he had had no severe attack since he had last seen me he lived in apprehension of one occurring and asked my advice about his changing his employment as he was becoming afraid of dealing with, and managing, horses. I strongly advised him to give up his present occupation and to seek [illegible] did r [illegible] losing [illegible] chose, then, as I afterwards found out, the post of blacksmith for sharpening the men's picks in connexion with a quarry. On August 6th, 1901, that is to say, 17 months after his first attack, he was sharpening a pick on the forge when a sudden violent attack of vertigo came on and he was immediately obliged to lie flat on the ground. It took one and a half hours at least for the effects of this attack to pass off. Notwithstanding this he went to his work the next day and continued this till August 9th, when he had a slight attack which was succeeded on the next day by a particularly violent one. He was now obliged to relinquish work altogether as a series of attacks followed this last one which prevented him entirely from continuing his employment. The attacks were all on the same plan. There was no aura to usher them in. They began with dizziness, everything revolving in the direction aforementioned. During an attack he usually kept his eyes closed, not that this in the least diminished or retarded the sensation of vertigo, but, as he himself expressed it, it seemed "less confusing to him," as he did not then witness the appearance of things revolving. Then came a "coldness and sickness in his stomach" and he "sometimes felt quite faint." He then retched violently or even vomited, after which he broke out into a profuse clammy perspiration.

On Sept. 6th, 1901, Dr. R. H. Cole, who was staying with me at the time, kindly met me in consultation over him and we then elucidated the following definite points. 1. He was now stone deaf in the right ear, not being able even to hear a loudly-vibrating tuning-fork placed close to the auricle or, again, immediately upon the mastoid process. When both ears were closed with the fingers the sound was heard in the left ear. 2. He was repeatedly having paroxysmal vertiginous attacks which took him always suddenly, no warning whatsoever being given. Sometimes these were slight, while at other times they were so violent as to cause him to fall. The directions in which he had fallen were once forward, several times backwards, and again, at other times, as he himself described it, "all of a piece." 3. He was never without some kind of "singing" in his ears. On Sept. 14th a new symptom first made its appearance after an attack that occurred on that day. He had photophobia which remained persistently with him, always being worse after a fresh attack. Early in December I sent him to Mr. E. Collier Green of Derby to have my own diagnosis of the eyes being free from disease confirmed. The following was his report. "I examined the man —— at the infirmary to-day (Dec 6th). He has some very slight myopia in the right eye and some slight astigmatism in the left eye, otherwise his vision is perfect. His discs are normal. He needed glasses for reading which I have ordered. I did not discover any disease in either eye." I now quote short extracts from my case-book to give an outline of the further course of this disease.

On Dec. 13th the patient first began to wear glasses and as he had no attack for a fortnight (from Dec. 10th to 24th) he thought they were doing him good. On Christmas Eve he had an exceptionally bad "fit" and the retching after it was so severe that he told me he had brought up "about a tablespoonful of blood." This "fit" occurred just as he was intending resuming work again, as he had felt so much better. On Christmas Day he had another attack, but then no more for a fortnight. On Jan. 7th, 1902, he went to work until the 14th although he had slight attacks on the 9th, 10th, and 11th. He thought he had put on flesh during the last fortnight; before that he had lost considerably in weight. On the 14th he only saved himself from falling backwards by stretching out his arms and catching hold of the bellows' handle and tongs which were hanging up in the smithy shop. On the 18th I put him on ammonium chloride (12 grains to commence with) and lent him a pair of blue spectacles. On Feb. 1st he had had no attack since he had been wearing the blue spectacles. He found them to be a great relief from the glare of the snow and the lamp-light. He said that he could hear much better in his right ear. I again placed the tuning-fork on the right mastoid process and found that he could hear as well as when it was placed on the left one. He could also hear me speak with the affected ear in fairly low tones. He told me it had been getting gradually better during the past two months. He had three attacks with sickness on the 23rd; he had had none previously to this since Jan. 14th (six weeks). Photophobia was as bad as ever on the 23rd, 24th, and 25th but was better on the 26th. He had made up his mind to go to work on the 24th but was obliged to stay at home. Before these attacks the photophobia was much better but the attacks definitely increased it. He told me on the 26th that "his eyes had never been so that he could face the lamp-light properly since the very first attack." Before that time they were all right. I still kept him on ammonium chloride (15 grains). He could hear better. On March 2nd he had sickness and dizziness. He vomited his breakfast. His eyes were more photophobic after the attack. On the 9th he had a slight attack which left him with "smarting of the eyes, so that he could not go out to face the light and kept in his room with the blind only half drawn up." His hearing was improving.

With regard to the relationship of light to attacks, the patient felt that strong sunlight made his head "go light and a bit dizzy." He felt that a bright day was more predisposing to an attack than a dull one. After attacks the eyes were always more sensitive to light, sometimes more so than others. On March 28th he had had seven or eight attacks since he was last seen, and in the morning he had had one in bed. He said "it seemed as if the foot of the bed suddenly rose up." He had had no more attacks after getting up. The eyes ached a great deal more than usual. The ammonium chloride was continued. On April 6th he had had attacks innumerable lately. He never seemed to be free from them. His life seemed to be getting a perfect misery to him on account of them. I inserted a large seton in the nape of the neck. The first attack since the seton was put in occurred on April 10th. He tumbled down in a neighbour's garden, but the attack and the after-effects only lasted five minutes altogether. His eyes troubled him on the 11th by aching and photophobia. On April 16th no "bouts" had occurred since the last one mentioned. There were still aching of the eyes and photophobia. There was no conjunctivitis or any other special reason to account for this. He said that a certain "swimming in his head is brought on by his eyes." I left Derbyshire on April 25th, 1902. My successor (who modestly declines the publicity of print) kindly continued to advise me concerning the patient. On Sept. 17th, 1902, he wrote me the following: "—— had no fit after you saw him, resumed light work at the end of May and went back to his own work in the second week in June. On June 23rd I removed the seton. On July 26th he had a severe attack of vertigo and three days later he had two severe attacks with one of which he vomited. I introduced a fresh seton on July 30th and since then he has had no severe fit and latterly none at all; he has now resumed light work." This was very encouraging news and at this stage in the treatment we have a right to feel that the insertion of the seton did produce marked alleviation of the distressing symptoms, and if there had been no return of the attacks we might have considered that it had brought about a cure, but this unfortunately was not to be. On March 10th, 1903, I had word to say that after freedom from attacks for some time "he went to work again with the seton *in situ* and after a short spell had to give up owing to recurrence of the vertigo. These attacks were very severe for a time after this and I took out the seton and did not re-introduce it. About Christmas time he was again much freer from giddiness and I noticed that he was becoming much more deaf on the right side; he could not hear a watch tick until placed in contact with the ear. He again went on the club for a short time in February for giddiness but was soon at work again."

It will be noticed from the above that after each introduction of the seton the attacks of vertigo were either diminished or entirely checked so long as the patient remained away from his work, but that when he recommenced work the attacks returned also, from which I think one may deduce, as far as any single case may be considered conclusive, that when drugs fail to do good in the treatment of severe and distressing cases of Ménière's disease, one may get marked alleviation by giving the patient complete rest from his work and by inserting at the same time a good-sized seton in the nape of the neck. Boerhaave once wrote, "Vertigo est omnium morborum capitis levissimus et facillime curabilis."[1] I can only wish that this eminent physician had had an opportunity of confirming his hypothesis on this case. A list of the drugs employed throughout the first two years of treatment may be briefly summarised. Powder of subchloride of mercury, sulphate of magnesium, bismuth, and vegetable bitters for stomachic purposes and to exclude, by elimination, any doubtful diagnosis about the vertigo being "a stomacho læso" in origin; bromides (the potassium and ammonium salts) and hydrobromic acid given in conjunction with quinine and also without it; iodide of potassium given during a short course, but discontinued early as there was not the slightest apparent benefit; and ammonium chloride which seemed to do the most good of anything, or whether it was merely a case, while giving this drug a trial, of benefit being received *post hoc* and not *propter hoc* I am naturally a little diffident about dogmatising. Arsenic and salicylates I did not try, but apart from these I think that the above list includes all the important drugs of the British Pharmacopœia which are expected to do any practical good in Ménière's disease. The two points, therefore, that seem to me to be of special interest in this case are as follows: 1. The very unusual ocular symptoms occurring in a clearly defined case of Ménière's disease. We know that ocular vertigo of "erroneous projection" origin caused by paralysis of a single eye muscle may occur, the vertigo resulting being caused by

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[1] Praelectiones de Morbis Nervorum, p. 475.

"confusion" of vision Mr Collier Green's careful examination of the eyes revealed no trace of muscular asthenopia Added to the easily recognisable auditory vertigo (vertigo ab aure læsa) of Ménière s disease was therefore superimposed an ocular vertigo of what one is obliged to call of "idiopathic" origin, which not only appeared to accelerate the onset of an attack of vertigo but definitely aggravated the ocular symptoms themselves at each successive vertiginous attack. 2 The distinct alleviation by the insertion of a seton in the nape of th
and—to the patient, I may
these sudden and violent attac
above mentioned had entirely failed to produce any adequate salutary effects It seems to me that surgeons at about the beginning of last century must have sometimes had recourse to this method of treatment in obstinate cases of Ménière s disease, although I have no doubt but that "bleeding would have been the first treatment to be adopted, and even this it seems to me, by unloading the intracranial sinuses would tend to relieve any hyperæmia there might be in the labyrinth and possibly procure excellent temporary results The very fact of this disease not having received a name till after 1861, when Ménière's classical case was published, is quite sufficient a reason for there being obscurity as to both diagnosis and treatment of this disease in times gone by Curiously enough, I have been through the titles of every published case of importance on this subject in the "Index Catalogue of the Surgeon General s Library, U S A" which brings one up in the literature of the subject to 1894 and again, I have looked over a number of the later volumes of the "Bibliographia Medica' and "Index Medicus," but can find not a single case whose title justifies the conclusion that the seton has been tried as a remedy in the treatment of Ménière's disease At any rate, whether it has been employed before or not I feel that as the results above enumerated have taken place in the present recorded case, which was, it will be admitted, of an exceptionally severe and persistent type, one has reasons for thinking that a slighter case would naturally yield much more beneficial results and, in any case, the treatment by seton in Ménière s disease is well worthy of a trial.

Hornsey lane N

A CONTRIBUTION TOWARDS THE ETIOLOGY OF ALOPECIA AREATA

BY ARTHUR WHITFIELD, M D, M R C P LOND,
ASSISTANT PHYSICIAN IN CHARGE OF THE SKIN DEPARTMENT KING S COLLEGE HOSPITAL PHYSICIAN TO THE SKIN DEPARTMENT GREAT NORTHERN CENTRAL HOSPITAL

ALOPECIA areata, though merely a disfiguring disease rather than one causing pain or ill health, is sufficiently annoying to make sufferers from it extremely anxious to find an efficacious treatment At the same time, I think it will be admitted that the results of treatment directed against it are very often extremely unsatisfactory and any additional knowledge of its cause, though only applicable to a few cases, is of unquestionable value As is well known, the two main theories as to the causation of alopecia areata are the parasitic and the trophoneurotic, a great impulse having been given to the former by the publication of Sabouraud s careful work on seborrhœa oleosa and its bacteriology While admitting the presence of the organisms described by Sabouraud in every case where there is excessive formation of grease I have failed to find sufficient evidence that the bacilli are the cause of the symptoms Moreover, Sabouraud found himself forced to give up his contention that seborrhœa was the cause in all cases and to differentiate a special variety in children, which he called ophiasis and stated to be due to some cause other than invasion by the micro bacillus of seborrhœa More recently Jacquet has called attention to the frequency of disturbances of dentition—either abnormal eruption of the teeth or caries of existing teeth—in such cases and has credited the nerve irritation thus produced in patients whose general health is not quite up to the normal with the production of the bald areas. It is too soon to criticise this theory since, as far as my knowledge goes, his results and observations have not yet been carefully controlled by others but if it be correct it is probable that other causes of nerve irritation may determine the disease Some time ago I was struck, as I suppose many have been, by the frequency of headache and localised neuralgias in such cases and this led me to turn my attention to the sight as a possible cause of irritation The result was in some cases very striking, as the following will show

CASE 1—A woman consulted me for a large patch of alopecia areata on the vertex which had persisted for over a year in spite of careful local treatment On reading her prescriptions I found that she had used almost all the forms of local stimulants and antiseptics which are usually recommended for such cases Her health was not of the best and her occupation necessitated much close application near a lamp in a somewhat vitiated atmosphere Headache was a marked symptom and on inquiry I found that she had an error of refraction which had been corrected by a well known ophthalmic surgeon some five years before As her age was about 35 years I thought it possible that her glasses were no longer suitable and advised her to consult the ophthalmic surgeon again This she did and the glasses were altered, with the result that in six weeks' time the whole patch was thickly covered with new hair This patient suffered from marked seborrhœa oleosa and the micro bacillus was found by examination of the scales and by cultivation

CASE 2—Another woman came to me for a patch of alopecia areata over the left ear She had a great deal of work in selecting materials necessitating very close examination of the texture Headache again was a marked symptom but no seborrhœa oleosa was found. Her age was 38 years I had already treated her very unsuccessfully for some time when the possibility of eyestrain occurred to me and I got a friend of mine to examine her refraction His report was that she had well marked hypermetropia which had been latent and was becoming effective and that he had ordered her glasses Again the hair grew rapidly but this case was not quite so satisfactory as she came to me a year later with another patch and more headache Her health is still poor, as she has violent migraine, though she has lost the persistent headache from which she suffered before her vision was corrected

CASE 3—I was asked to see a student for a single patch of alopecia areata on the vertex His age was about 20 years and he already wore glasses for myopia, but the prescription for them had been given him a long time ago I sent him to the ophthalmic surgeon who found his glasses unsuitable and some curious changes in the fundus, so other glasses were prescribed The hair grew rapidly and remained healthy

CASE 4—While discussing this with another student recently he informed me that while reading hard for one of the examinations of the University of London he suffered severely from headache and developed alopecia areata After a couple of months his headache led him to have his eyes tested and his vision corrected, and the alopecia, which had so far resisted treatment disappeared in a very short time He did not connect the two and consequently his history is not very full of detail

Acting on the results of my earlier cases I had the vision tested in a large number of cases of children with alopecia areata The disease is very common in the earlier school years and I thought it quite possible that the strain of reading might determine it In one or two cases marked error was found but in by far the greater majority the eyes were evidently not the cause of the trouble and I wish it to be understood clearly that I do not claim to have discovered the cause of alopecia areata At the same time in this troublesome disease it appears that there is a certain percentage of cases in which the nervous irritation consequent on an undue effort to focus fine objects determines the onset of the symptoms in people whose health is not the most robust At all events, an inquiry into the correctness of the vision can do no harm

Bentinck street W

UNIVERSITY OF OXFORD—By a decree of Convocation it has been determined that the statute instituting a separate examination in forensic medicine and public health as part of the final examination for the B M, B Ch degrees shall come into operation in 1905 (see THE LANCET of Feb 27th, p 621)—Scholarships in natural science have been offered for competition on the following dates March 15th, Keble College, March 22nd, Magdalen College, April 19th, Merton College New College, and Corpus Christi College; and June 28th, Brasenose College

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

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NOTE ON THE ACTION OF RADIUM AS AN ANALGESIC AND NERVE TONIC.[1]

BY DR. A. DARIER.

(*Translated for* THE LANCET.)

ON Oct. 6th, 1903, I described a case of cancer of the face which had been rendered painless by means of radium, an observation which has since been confirmed by other authorities. I have also noted the rapid and penetrating analgesic action of radium in certain cases of cyclitis and iridocyclitis and I have been able to reproduce these phenomena in other conditions with the same success for the last four months. It therefore appears certain that radium preparations of low intensity applied to a painful part are often capable of rapidly removing the pain.

The action of radium on the psycho-motor centres is still more remarkable. In two cases of convulsive neurosis in which the attacks occurred every day in one patient and three or four times a week in the other radium applications to the temples for two or three days were followed by cessation of the attacks. In a case of neurasthenic pseudo-ataxia radium brought about complete recovery in three days (probably by suggestion). In a case of acute facial paralysis of quite recent origin radium effected a cure in the course of the following day. Without attempting to explain these remarkable and novel effects, the observed instances of which are as yet but few, I think it right to make them known so that other observers may be induced to study this interesting question.

The activity of the radium preparations which I employed was tested in the laboratory of M. Curie and was found to vary from 10 to 7000 in terms of the accepted scale ("uranies"). For low activities I allowed the tubes containing the radium to act from two to four days and even for as long as 15 days, the pain sometimes reappearing shortly after the applications were stopped. With preparations having intensities from 1000 to 7000 the application was continued for two or three hours a day. In the above-mentioned case of facial paralysis I used high intensities of this degree. Preparations having a low intensity are moderate in price and recent experiments permit me to hope that similar therapeutic results may be obtained even with substances merely rendered radio-active by induction. If that proves to be so the cost of the treatment could be brought within the means of all patients.

Paris.

A CASE OF TRAUMATIC TETANUS TREATED WITH ANTITETANIC SERUM.

BY H. HOWARD MURPHY, M.D. CANTAB.

THE patient was a boy, 12 years of age, and usually healthy and strong. While at play on July 18th, 1903, he slipped off a plank and struck his left leg, causing a wound over the tubercle of the tibia; a triangular flap of skin with the apex downwards and the sides each about two inches long was torn upwards and bled freely. He was attended by a medical man who put in two sutures and applied an antiseptic dressing. The upper part of the wound healed but at the apex a little skin died. On July 27th the boy did not feel very well, his symptoms being malaise and headache. On the 28th he complained of stiffness of the jaws and neck and the masseters were noticed to be rather hard. Tetanus had therefore set in after less than ten days' incubation. On the 31st he was admitted to St. John's Hospital, Twickenham, with decided tetanus. The masseters were stiff, the mouth could not be opened beyond a quarter of an inch, there was slight risus sardonicus, and the muscles of the neck and back were somewhat stiff. The boy walked rather slowly and stiffly, his tongue was clean, and his bowels had been fairly opened. He was given a dose of calomel and a mixture containing bromide and chloral. A telegram was also sent to Messrs. Allen and Hanburys for a supply of antitetanic serum. The wound on the leg was healed, all but a very small spot healthily granulating. On August 1st there was more stiffness of the muscles, the limbs were somewhat affected, and the spasms of opisthotonos occasionally occurred. He was given a hypodermic dose of ten cubic centimetres of antitetanic serum in the right flank. The bowels were well opened by the calomel and the boy took liquid nourishment well. Towards the evening the spasms and pain were worse, so the mixture was given every two hours. His temperature was now 99° F. and his pulse rate was 100. On the 2nd it was noted that he had had a bad night, screaming frequently, with painful spasms and opisthotonos. A second injection of ten cubic centimetres of antitetanic serum was given and the medicine was continued every two hours. The temperature was 100° and the pulse-rate was 116 On the 3rd there were much less pain and spasm and the boy had short periods of sleep. The mixture was pushed till drowsiness was produced. A third injection of antitetanic serum was given. The temperature now went up to 102° and the pulse-rate to 120. On the 4th the boy was obviously better; he slept more, had less pain and spasm, could move his arms and legs a little, and could open his mouth slightly. His temperature was 100° and his pulse-rate was 105. He continued to improve slowly and steadily. The temperature and pulse fell to normal on the 6th and the movements of the muscles gradually improved. On the 9th he was given a dose of liquorice powder; this caused him griping pains and a return of spasm and stiffness for a few hours in the face, neck, and limbs. After this he slowly and steadily improved but had still some little stiffness and soreness of the limbs. After three weeks he was allowed to get up but could not walk because of stiffness and weakness of the legs and ankles, so he hobbled about with sticks. After another week he was discharged well.

In THE LANCET of Oct. 17th, 1903, a case was reported which seems to have been even more acute. My patient was no doubt much benefited by the antitetanic serum and even if the recovery is not to be ascribed entirely to it the result is an encouragement to use the serum in every case.

Twickenham.

RENAL HÆMATURIA PRODUCED BY TEREBENE.

BY ROBERT JOHN MACKEOWN, M.D. R.U.I.,
SURGEON, R.N.

THE attack now to be described was not the first of the kind which the patient had experienced, for at Wei-Hai-Wei in July, 1902, he suffered to a slight extent from the same symptoms after taking three minims of "terebene" out of the same bottle. He did not pay much attention to the matter and the effects passed away in a few days.

The history of the present attack was as follows. The patient, aged 34 years, got wet through at Shanghai on the night of April 27th, 1903. On the evening of the 28th he felt ill, took five minims of "terebene" on a piece of sugar at 8.30 P.M., and slept well. On the morning of the 30th he passed the usual amount of urine and towards the evening he noticed his urine turning red. Since the 30th the urine was red and it was worst on May 3rd. He came to see me on the morning of the 4th. His temperature was then 99 8° F. and his pulse-rate was 94. He complained of pain in the small of the back and the neck of the bladder, with frequent micturition. The urine after standing for five minutes was of a fairly bright colour throughout. The deposit at the bottom of the glass consisted of numerous tiny bright-red blood clots. It contained albumin and under the microscope numerous blood corpuscles were seen.

After standing for six hours the urine showed three layers in a glass six inches high. The lowest layer, one inch deep, consisted of a thick pinkish-white deposit containing numerous blood cells; the middle layer, four inches deep, consisted of a turbidity of a pinkish white colour, also containing numerous blood cells; the top layer, one inch thick, was of clear red-stained fluid, with very few blood cells. On the 5th his temperature was normal and he passed

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[1] Read at the meeting of the French Academy of Medicine on Feb. 16th, 1904.

43 ounces of urine from 6 P.M. on the 4th to 6 P.M. on the 5th. The urine was now not nearly so bright as before; it contained less deposit and no clots.

From the 6th onwards he passed plenty of urine, the blood in which steadily diminished. He remained in bed and on low diet until the evening of the 9th when his temperature rose to 99·6° and his pulse-rate to 100. His face, trunk, and extremities were thickly covered with a most pronounced urticarial rash, the wheals being exceedingly large. The dermatitis caused œdema of the eyelids and face, so that it might at first sight have been taken for the onset of an acute attack of Bright's disease. I could not trace this attack to any error in diet; it lasted two days and then entirely disappeared. On the 13th there was no albumin in the urine. On the 15th the urine was alkaline, with no deposit, no phosphates on heating, and no albumin. The patient was then discharged to duty and as some anæmia was present an organic salt of quinine and iron was given On the 21st the urine was alkaline and of a bright amber colour; it deposited phosphates on heating but there was no albumin.

The treatment consisted of rest in bed and milk diet without solid food. Barley water was also given and ice was applied to the perineum.

It is difficult to say whether this was a case of renal hæmaturia or what is called "strangury" (hæmorrhage from the neck of the bladder). As the blood was uniformly mixed with the urine and as the urine was of a bright red colour and contained clots I think that the hæmorrhage was from the kidneys. The pain at the neck of the bladder might have been due to irritation from the urine. The drug which produced these effects was clear in colour with a taste of turpentine but scented and of a syrupy consistence. It was purchased at Brompton, near Chatham, and was labeled "pure terebene." The dose to be taken was not mentioned on the label. There was no return of the symptoms during at least the ensuing three months.

H.M.S. *Alacrity*, China Station.

A Mirror

OF

HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. MARY'S HOSPITAL.

A CASE OF SEPTICÆMIA WITH INTERESTING COMPLICATIONS.

(Under the care of Dr. W. B. CHEADLE.)

FOR the notes of the case we are indebted to Mr. F. Dering Nicholson, house physician.

A woman, aged 36 years, was admitted to St. Mary's Hospital on Dec 6th, 1903 under the care of Dr. Cheadle. Six weeks previously she had been confined, the labour being easy; she had had a good deal of pain in the abdomen afterwards, which was regarded as after-pains, and she got up on the tenth day. Bleeding from the uterus began and four days after became so severe that a medical man was called in who removed some clots, and three days later a piece of retained placenta which did not smell offensively. The hæmorrhage stopped, but about a week later thrombosis of the right femoral vein took place and the patient had a "white leg." She had several rigors since the removal of the retained secundines. Her past history showed that she had always been a healthy woman except for a cough of some months' duration; she had had eleven confinements, the labours being usually difficult and instrumental. Five of the births had been premature.

On admission she was seen to be very thin and anæmic; the nose was pinched, the extremities were cold, the temperature was subnormal (96·4° F.), and she looked extremely ill. The pulse was 124, small and of low tension but regular. There was no morbus cordis. Cough was frequent, loose, and harassing; the lungs showed signs of general bronchitis with congestion of the bases, but there were no pneumonic crepitations. Nothing abnormal was found in connexion with the alimentary system and a vaginal examination showed the uterus to be well contracted and freely moveable, there being no signs of old or recent inflammation in the surrounding tissues. The urine had a specific gravity of 1012, was acid in reaction, and contained no trace of albumin. She was given a mixture containing iron, digitalis, and magnesium sulphate three times a day. For the next fortnight she continued to be desperately ill; the pulse was about 120 and the temperature chart showed excursions from 97° to 103°, the variations occurring at all hours; rigors were frequent and severe, leaving her prostrate and bathed in sweat. The bases of the lungs showed no im-

she developed a severe pleurisy in the right axilla which did not go on to effusion; an icebag relieved the local distress but on the next morning it had to be discontinued as large petechial spots appeared at the points of contact which eventually ulcerated and slowly healed. Intense pain was felt in the hypochondrium but the gall-bladder could not be felt and there was no jaundice. In the evening she became much worse, was cyanosed, and had to be propped up in bed; she was too weak to cough and a low muttering delirium set in The pulse was 140. There were distinct signs of double basal pneumonia and larger quantities of alcohol with hypodermic injections of strychnine were resorted to. Examination of the blood revealed a staphylococcic infection and accordingly ten cubic centimetres of anti-staphylococcic serum were injected subcutaneously. On the next day she was better and continued to improve for four days; the lungs became freer of crepitations, the pleuritic rub disappeared, cough diminished, and she had no further rigors. The temperature gradually fell to 99°. A second and similar injection was made on the 28th, but her respirations rose to 40, the temperature to 102°, and she had another rigor. A third and last injection of ten cubic centimetres was given on Dec. 31st; no marked improvement followed and she had three rigors in the next two days. On Jan. 4th, 1904, she complained of aching pain in the right knee with some œdema of the leg and foot. The temperature rose to 103° and remained high for the next four days. Rapidly each extremity, and finally the neck, became implicated, the pain being intense and the tenderness so exquisite that she could not bear the lightest touch or movement There were no sign of phlebitis and no further œdema and the complication was diagnosed as influenzal neuritis. (N B.—There were several cases of influenza in the ward at the time.) This condition cleared up as rapidly as it appeared and proved, in fact, the crisis of the disease. The temperature fell on Jan. 7th to normal and has remained so ever since; all other symptoms rapidly disappeared, she began to sleep well, and evinced a hearty appetite. She is now up and about, is putting on flesh daily, and except for a little not unnatural weakness there is nothing to remind her of her severe illness.

Remarks by Mr. NICHOLSON.—One or two points are of especial interest: 1. Did she become infected from the retained secundines or a few days later on their removal? 2 The uterus and its surroundings showed no sign of recent inflammation. 3. The first serum injection was attended by marked improvement which was not the case with the two subsequent ones. 4. The onset of influenzal neuritis, interesting in itself, proved the woman's salvation and one can only suppose that the staphylococcus was no match for the bacillus of *Pfeiffer*.

CRUS HOSPITAL, NABLUS, PALESTINE

A CASE OF CLOSURE OF THE JAWS DUE TO CICATRICIAL BANDS.

(Under the care of Dr. J. CROPPER.)

A PEASANT boy, aged 12 years, was admitted to the Crus Hospital, Nablus, on Nov. 30th, 1903, with firm closure of the jaws of one year's duration due either to cancrum oris or ulcerative stomatitis of the right side of the mouth. There were three cicatricial bands, the foremost coming almost to the level of the canine tooth—i.e., to the angle of the mouth. So tightly were the teeth clenched that only the smallest fragments of food could be introduced through a gap on the left side caused by irregularity of the canine teeth. The finger could not be introduced between the teeth and the cheek and there was a most fœtid discharge from the mouth, the teeth being covered with tartar and pus from the ulceration of the cheek. An abortive attempt was made to cleanse the mouth with strong permanganate of potassium lotion.

Under chloroform the mouth was forcibly opened by carefully inserting a small gag on the left side, two teeth being dislodged during the process, all being more or less loose. When sufficiently opened to admit a knife the bands above mentioned were cautiously divided by Dr. David Katibah, then in temporary charge of the hospital; the cheek was also divided where it was adherent to the gums of the lower jaw. Hæmorrhage, which was free, was controlled by firm pressure from within and the mouth was cleansed as thoroughly as possible and the patient was sent to bed with the gag in his mouth and a cork between the teeth.

On subsequent occasions tartar was removed from the teeth and a variety of antiseptic lotions was used to bring the mouth into a tolerably healthy condition, the only really successful application being pure carbolic acid dissolved in the least possible quantity of glycerine, as is used for injection of hydrocele. This was swabbed on the ulcer every other day for a fortnight before the mouth was tolerably clean, after which time picric acid (saturated solution) was found to be sufficient. During this period and subsequently the patient, being old enough to appreciate the advantages to be derived from the treatment, luckily consented to keep the cork between his front teeth both by day and by night, removing it only for meals and syringing. The pressure of the cork on the already loosened teeth necessitated change in its position from time to time.

At the present time (Jan. 28th), two months from admission, the ulceration of the cheek is entirely healed, the part being covered with healthy mucous membrane. The cicatricial bands can still be seen and felt from the outside but are less prominent than before and the mouth can be opened to the extent of 2·3 centimetres (nearly one inch) between the incisors; the cork is now only worn occasionally at night but there seems to be no tendency to contraction.

Remarks by Dr. CROPPER.—The above case may possibly be an encouragement to some of the readers of THE LANCET who have had these very difficult cases under their care. Jacobson in "Operations of Surgery," remarks, "Division of bands inside the mouth is absolutely futile," but in the case related it is hard to see how effective treatment could have been otherwise carried out and in the event of future contraction the mouth is now in a sweet and healthy condition.

The good result in this case may be attributed first of all to the age of the patient and to his willingness to help in the treatment by day as well as by night, and not less to the assiduous care of the sister of the ward on whom devolved most of the treatment. In a younger patient such treatment would very likely be much more difficult, but on the other hand any operation such as that of Esmarch would have quite left untouched the fœtid condition of the mouth not seldom found in these cases; nor is it possible to avoid the conclusion that many, if not most, of the cases of relapse after division of cicatricial bands have been due to unhealed or half-healed ulcers in the mouth and to want of sufficient perseverance on the part of the patient or nurses.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The Action of Adrenalin on the Metabolism of the Bird.—A Survey of the Recorded Cases of Hæmatoporphyrinuria not due to Sulphonal.

A MEETING of this society was held on March 1st, Dr. W. D. HALLIBURTON, Vice-President, being in the chair.

Dr. D. NOEL PATON read a preliminary communication on the Action of Adrenalin on the Metabolism of the Bird. He said that the object of the investigation was twofold. First, to determine if adrenalin produced a glycosuria in birds as it did in mammals. Herter maintained that it acted through the pancreas and as von Mering and Minkowski found that removal of the pancreas from ducks and pigeons was not followed by diabetes it was therefore evident that in these animals the organ did not play the direct part which it did in dogs in regulating the metabolism of sugar. Hence if Herter's view was correct it was to be expected that the injection of adrenalin in birds would not be followed by glycosuria. Secondly, to determine if adrenalin had an action on the proteid metabolism in birds similar to that which Dr. Paton had observed in mammals, since if such a disturbance was produced it might be expected to throw light upon the relationship of ammonia and urea to the production of uric acid. In mammals the ammonia nitrogen increased while the urea nitrogen was diminished. Was a similar decrease to be found in the uric acid in birds and, if so, was there increase of ammonia or urea nitrogen or of both? The following method had been employed. Geese were used and were prepared by making an artificial anus by cutting the gut above the cloaca and bringing it out on the abdominal surface at the posterior border of the sternum, while the opening into the cloaca was carefully closed by stitches. They survived the operation for many weeks and remained in good health. Throughout these experiments the preparation used was the adrenalin 1 in 1000 of Parke, Davis, and Co. The following results had been obtained. First it was found that the subcutaneous injection of large doses of adrenalin—about 0·6 cubic centimetre per kilogramme—caused a glycosuria in birds as it did in mammals. This observation seemed to militate against Herter's theory that the action of adrenalin was through the pancreas. Secondly, there was found a marked decrease in the proportion of uric acid nitrogen and other bodies precipitated by phosphowolframic acid. Of these, uric acid constituted about 90 per cent. The analyses of uric acid were not yet completed. Along with this there was a distinct decrease in the proportion of ammonia nitrogen and in one experiment a decrease in the urea nitrogen. It thus appeared that adrenalin influenced the metabolism in birds as it did that in mammals by interfering with the synthetic processes in the liver by which the characteristic end products, uric acid in the one case and urea in the other, were produced.

Dr. A. E. GARROD gave a survey of the recorded cases of Hæmatoporphyrinuria not due to Sulphonal. He pointed out that whereas hæmatoporphyrinuria was usually due to the taking of sulphonal there were a few cases on record in which similar urines, red or nearly black in tint and rich in hæmatoporphyrin, had been passed by patients who had never taken that drug. He referred briefly to 12 such cases, including one recorded by Baumstark in which there was some doubt as to the nature of the pigmentation. He drew a distinction between such cases and the very common ones in which there was merely an increased excretion of hæmatoporphyrin above the normal trace and in which the colour of the urine was not materially affected. It was shown that whereas hæmatoporphyrinuria due to sulphonal was hardly ever seen in males, of the non-sulphonal cases the majority occurred in males. Again, it was pointed out that in a large proportion of the cases not due to sulphonal the condition was of long standing and in some had persisted for many years, whereas in others it had occurred at intervals, and had in one instance simulated paroxysmal hæmoglobinuria. Except in Ranking and Pardington's cases the grave associated symptoms which accompanied hæmatoporphyrinuria due to sulphonal were wholly wanting and no specially evil prognostic significance appeared to be attached to the symptom. In the 12 cases discussed the patients suffered from a variety of maladies which had no obvious connexion with each other, but in three cases—viz., those recorded by Baumstark and by McCall Anderson, it was associated with a bullous eruption recurring each summer and leaving grave scarring of the face and hands. It was mentioned that the evidence forthcoming was opposed to the view that hæmatoporphyrinuria implied excessive hæmolysis and rather pointed to a perversion of hæmoglobin catabolism as its cause. However, although the study of the slight excesses of hæmatoporphyrin so often excreted in disease appeared to connect them with diffuse changes in the liver it could not yet be definitely stated that the profound disturbance of pigment metabolism which resulted in hæmatoporphyrinuria, with dark red urine, was wholly due to disease of that organ, although serious degenerative changes in the liver had been observed in some fatal cases in which the phenomenon was due to the taking of sulphonal.

CLINICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Feb. 26th, Dr. FREDERICK TAYLOR, the President, being in the chair.

Mr. F. J. STEWARD exhibited a case of Moveable Knee-joint three and a half years after operation for extensive tuberculous disease in a girl, aged five years. Primary healing was obtained and the limb had remained in a plaster-of-Paris splint for two years.

Dr. H. BATTY SHAW showed a mother and an infant daught [illegible] ity of the Hands and Fe [illegible] When the hands were at [illegible], flexed, the index fingers [illegible]; to be separated more t [illegible] gits. The inter-osseous spaces were wasted. Movements of flexion and extension were satisfactorily performed, but those of abduction and adduction of the digits were greatly reduced. There was also complete paralysis of the frontalis muscle. The child, aged two months, presented a similar deformity of the hands and feet. Radiograms of the mother's hand showed that beyond the slender character of the fourth metacarpal bones and the prominence at the base of the third the bones were normal.

Dr. BERTRAM L. ABRAHAMS showed a Sporadic Case of Friedreich's Disease in a boy, aged 13 years, the third of eight children, of whom the others were perfectly healthy. The illness began five years ago and the ataxy had rapidly increased during the past three years. There was slight lateral nystagmus. The pupils were widely dilated but re-acted briskly to light and accommodation. Romberg's sign was well marked. The speech was slow, nasal, slurred, and monotonous. There was considerable ataxy of the hands. Both knee-jerks were lost and the plantar reflexes were of the extensor type. Pes cavus was present on both sides and there was distinct dorsi-lumbar scoliosis. Treatment by Fraenkel's method was proposed.

Dr. J. P. PARKINSON exhibited an unusual case of Morbus Cordis in a girl, aged nine years, who since the age of seven had had repeated attacks of acute rheumatism. The cardiac impulse was best marked in the fourth inter-space just inside the nipple, and on admission to hospital she had epigastric pulsation and extension of the cardiac dulness to the right of the sternum. At the apex were double mitral murmurs and at the base were systolic and diastolic murmurs, heard best at the second left interspace. There was no abnormal arterial pulsation and the pulse was 70, small, regular, and compressible.—Dr. BATTY SHAW thought the proofs that the case was one of aortic regurgitation were incomplete. He could not help thinking that the condition was due to high tension in the pulmonary artery which gave rise to the murmur which had been described by Dr. Graham Steell.—Dr. ALEXANDER MORISON considered that the absence of a thrill negatived the diagnosis of pulmonary endocarditis and he was inclined to agree with Dr. Shaw that the condition was more functional in character than organic.—Dr. W. HALE WHITE believed that the presence of the systolic murmur indicated the existence of some endocarditis of the pulmonary valves.—The PRESIDENT observed that the murmur in question was heard very distinctly high up on the left side of the sternum. He would hesitate to pass an opinion without further examination.—Dr. PARKINSON, in reply, commented upon the great rarity of pulmonary endocarditis and considered that the condition was probably due to dilatation of the orifice from incompetence of a normal valve.

Dr. W. G. STONE showed a lad, aged 18 years, with Enlargement of the Bones of the Cranium, Jaw, and Thorax. The evidence was very strong that the lesions were syphilitic. The mother had had 12 children, five of whom had died under six months of age.

Mr. O. R KEYSER exhibited a male infant, aged 15 months, the subject of Achondroplasia with Spinal Curvature. The head was large and the fontanelles were widely open. The nasal bridge was depressed. There was marked disproportion between the length of the body and that of the limbs, the bones of which were only slightly curved. The fingers showed the typical appearance of the disease, the index and middle fingers curving to the radial, and the ring and little fingers to the ulnar, side. There was no lordosis nor was bony tenderness marked. There was a prominent antero-posterior curve in the dorsi-lumbar region. The lower rib were everted and the abdomen was prominent. The father was only 4 feet 8 inches in height.—The PRESIDENT inquired if anything unusual was noticed about the child at birth, and Mr. KEYSER replied that shortness of the limbs had been observed. He considered that there were several features in the case, especially the spinal curvature, which resembled those met with in ordinary rickets.

Mr. EDRED M. CORNER showed a case of Pyo-pneumothorax due to pulmonary tuberculosis in a man, aged 32 years, for the cure of which operations on the principle of Estländer's (thoracoplasty) were performed. Complete healing had taken place excepting for the formation of an aerial fistula through which air could be expired.—Mr. W. G. SPENCER referred to a case under his own care in which a bronchial fistula had resulted and which had remained stationary for three years.

Dr. WILLIAM HUNTER and Mr. STEPHEN PAGET showed a lad, aged 17 years, the subject of Progressive Myositis Ossificans. The disease began at the age of four years and since then had steadily advanced. Ten years ago he was seen by Sir James Paget and reported on by Mr. Stephen Paget at the time. There was a definite family history of rheumatic fever. The muscles chiefly affected were the pectoral, the latissimus dorsi, and the teres muscles, all of which were firm, rigid, and contracted, so that both the arms were fixed to the chest at the shoulder-blades. There was a deposit of bony growth around the angle of the left scapula. A considerable degree of scoliosis of the spine was present, with great wasting of the muscles of the back. Radiograms exhibited well-marked shadows at the attachment of the pectoralis major to the humerus.

Dr. O. GOULD MAY showed a female child, aged six years, with Multiple Exostoses on the bones of the limbs which had been first noticed six months before. There was no history of rheumatism, nor was there any pain.—Mr. W. H. BATTLE asked if there was a family history of a similar condition and if any effect had been produced upon the growth of the bones.

Mr. DONALD J. ARMOUR showed a man, aged 20 years, who had a Cyst arising in connexion with the organ of Giraldès, the origin of which was unknown. The swelling, which was at the upper end of the right testis, had been first noticed six months ago.

Mr. T. H OPENSHAW exhibited a female patient, aged 31 years, in whom he had treated Contractures of the Right Hip and Knee-joints by Elastic Traction. The condition had lasted for 15 years as a result of infantile paralysis. In July, 1903, she was placed in a Hessing's apparatus with elastic traction. Considerable improvement had resulted and power in walking was increased.

Mr. BATTLE showed a woman, aged 55 years, the subject of a large Femoral Hernia on the right side. The hernia had been present for 17 years; it was as wide as the patient's thigh and extended downwards as far as the upper margin of the patella. It contained intestine and the skin over it was somewhat eczematous in parts. He proposed to operate upon it when the general condition had improved.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

Public Health Problems.—Modern Education.

A MEETING of this section was held on Feb. 12th.

Sir JOHN W. MOORE, the President of the section, delivered an inaugural address, taking for his subject Some Public Health Problems in Ireland. He instanced the dying out of opposition to the principle of compulsory notification of infectious disease as a substantial advance in preventive medicine. A second great advance had been the official recognition of diplomas in State medicine or public health. As to the prevention of tuberculosis, he considered that it was necessary to have compulsory notification of the disease, verification of the diagnosis by bacteriological examination, hospital treatment of the patients, and periodical disinfection of their homes. The President severely criticised the Poor-law system of Ireland, stigmatising the internal economy of the workhouses as a grave scandal and a national disgrace. In conclusion he dwelt upon the very unsatisfactory state of what may be called the "Home Medical Service"—namely, the Poor-law medical service—particularly in relation to the sanitary organisation of the country. In Dublin, as throughout Ireland, the dispensary medical officers acted as the medical officers of health for their respective districts and he contended that this hard-worked body of public servants should be properly recompensed for their services under the Public Health Acts. If the suggestions for the betterment of the health of the people made by the local medical officers were carried out intelligently and in a generous spirit the dawn of a brighter day for the Irish race would at last be near at hand.

Dr. R. B. McVittie read a paper on the Attitude of the Profession towards Modern Education from a Physical and Mental Standpoint. He pointed out that the great progress made in Denmark, Sweden, and Germany of late years was mainly due to the control exercised by the medical profession over primary education. He said that in the schools in Sweden and Denmark the children were only allowed to stay in one class for about 45 minutes; they then stood up and did exercises tending to correct the cramping from sitting down, after which they went out to the playground for some minutes. He considered that as man was a living and growing being only those who had made a life-study of physiology and biology were fit to be intrusted with this development, while, unfortunately, in the United Kingdom the only qualification which appeared necessary for what was called an educationist was a knowledge of some antiquated classic which, being purely abstract, tended more to arrest than to encourage orderly growth. As the nerve fibres from the surface to the pyramidal cell were myelinated first, all true education must be first concrete and abstract study should be discouraged as much as possible till the period of adolescence was fully completed, as too early a development of the psychic processes diverted the nerve energy from the control of tissue formation which was its natural function during the period of growth.—The President reminded Dr. McVittie that the Irish universities were moving towards improving education in the direction suggested by him; the Royal University had established a diploma in education and examined candidates for the qualification; Trinity College was moving on the same lines and lately a course of lectures was delivered there on the subject of education. He instanced the kindergarten as an example of the attention which was now given to the teaching of the concrete as distinguished from the abstract.

Harveian Society of London.—A clinical meeting of this society was held at St. Mary's Hospital on Feb 25th, Dr. C. Theodore Williams, the President, being in the chair.—Dr. D. B. Lees showed two cases, the first a case of Aphasia with Anomalous Symptoms and the second a case illustrating the use of Large Doses of Sodium Salicylate. This patient had taken at irregular periods so much as 400 grains per diem in combination with bicarbonate of potassium and if the drug was discontinued her rheumatic symptoms immediately recurred. He referred to the stimulating effect of the drug when given in large doses in contradistinction to the depressing action so often seen when small amounts were taken and strongly advocated heroic doses even in the case of children. He deprecated the fear which caused the withholding of the drug when ear symptoms developed and advised pushing it at this period, as when the quantity given was large enough no ear or other untoward symptoms appeared. This case exhibited well the great tolerance patients had, or soon acquired, for sodium salicylate. —Dr. W. Hill inquired as to the cause of absence of tinnitus when administering these large doses of sodium salicylate; was it due to the combination with the bicarbonate of potassium?—Dr. Lees said that he did not know the explanation of the varying results as regards tinnitus.—Dr. Sidney P. Phillips showed a case of Osteo arthritis of the Spine in which there were thickening, pain, tenderness, partial fixation by spasm, and rigidity over the upper four dorsal spines. The head was slightly flexed to the left and rotated at an angle to the vertebræ. The presence of brawny induration suggested caries or new growth but there was osteo arthritis in other joints. The deltoid, pectorals, and triceps on the one side were wasted and there was deformity of the fingers with glossy skin and tingling of the same hand, suggesting pressure on the nerves in the inter-vertebral foramina. Dr. Phillips thought that these cases were much more common than was usually assumed.—Mr. J. P. Lockhart Mummery considered the case to be one of those called spondylitis deformans and he had heard of a case where four brothers in one family all suffered from the disease, suggesting heredity. As a rule, it was uncommon to find other joints affected in this condition.—Dr. Phillips did not consider it to be one of the ordinary type referred to, as it seemed to him to be a case of pure osteo-arthritis of the spinal articulations.—Dr. H. A. Caley showed a case of Raynaud's Disease with Splenomegaly. The patient, a woman, aged 45 years, had suffered from coldness and lividity, chiefly affecting the left thumb and index finger, for some months, and it was noteworthy that there were intense pain and cutaneous hyperæsthesia resembling the condition met with in erythromelalgia. The enlargement of the spleen had apparently come on acutely during a severe illness some weeks before. There were no characteristic blood change and no history of malaria but evidence of perisplenitis. The history suggested that the primary lesion was vascular, thrombosis, but there was probably actual hypertrophy.—Dr. E. Cautley asked Dr. Caley whether the splenic notch was in a normal condition—that was, was the growth symmetrical? He had seen a case with twisting of the pedicle in which the organ enlarged, then subsided, but left some permanent increase in size; this case might be of the same nature.—Dr. Caley thought the axis was normal and the notch proportionately normal, but the patient was too tender to examine carefully. Against twisting of the pedicle was the fact that symptoms came on when the patient was at rest.—Dr. Theodore Williams commented on the case.—Mr. A. Q. Silcock showed a woman, aged 30 years, who had been the subject of a Dermoid Cyst of the right side of the chest. She was admitted to St. Mary's Hospital under the care of Dr. Lees in February, 1903, presumably suffering from empyema which was opened and found to contain a large quantity of caseating sebaceous material mixed with pus. Subsequent examination proved the empyema to be a suppurating dermoid cyst. Portions of the cyst wall were removed at intervals, the patient being too weak to stand prolonged operations. As a result the cavity became smaller and suppuration diminished. Finally, the whole of the remaining cyst wall was dissected away from the lung above, from the diaphragm below, and from the pericardium internally, to which it was firmly adherent, a large opening being made in the lateral wall of the thorax to allow of the introduction of the hand. After prolonged convalescence the cavity closed with the exception of a small sinus which still remained. Mr. Silcock remarked upon the infrequency of the affection and upon the fact that many of the reported cases had been mistaken for empyema. The cyst was of about the size of a polo ball or larger. He had as yet been unable to find a case in which a cyst of this size had been extirpated and pointed out the difficulties of so doing, especially in separating it from the pericardium.—Dr. Lees considered the case unique. When admitted he thought it to be a pleuritis. There was slight pain in the side, with cough; the heart was pushed far into the left axilla—a point against pleurisy but which might be present in hydatid of the lung or the liver. The case was difficult to examine. The house surgeon opened the pleura and sebum appeared. Dr. Lees remarked upon the wisdom of surgeons performing extensive operations in segments rather than trying to do too much at once. This case was so treated and was a veritable triumph of surgery.—Dr. Theodore Williams thought that the lung bore a great deal of knocking about but the heart seemed even more tolerant as shown by this case and the vagaries of foreign bodies lodged in the heart.—Dr. R. Boxall referred to an interesting case of the heart being dislocated from the pericardium through a congenital opening into the left pleura in a woman a few days after delivery.—Mr. W. H. Clayton-Greene showed a case of Hernia Cerebri following a compound depressed fracture of the skull. The patient, a girl, aged ten years, fell out of a window into an area and was admitted to St. Mary's Hospital under the care of Mr. Silcock. A wound in the frontal region was opened, two depressed fragments of bone were removed, the wound was irrigated, and a dressing was applied. Three days later the wound was found to be suppurating and the brain was protruding. The stitches were removed and the wound was thoroughly opened up and irrigated with saline solution. In spite of local treatment the brain protrusion increased. About a month after admission a mass of hernia cerebri of the size of an orange was excised; free hæmorrhage resulted which adrenalin failed to check. The patient suffered great pain for 24 hours after the operation and on the next morning showed a slight amount of facial paralysis. The hernia gradually re-formed and surpassed its original size. A second removal by means of an electric snare was followed by little bleeding and no shock. Extensive œdema of the eyelid, the face, and the neck appeared but gradually subsided Three points of interest were remarked upon 1 The hernia consisted largely of brain matter, not granulation tissue 2 All treatment short of removing the protrusion was ineffectual. 3 In spite of abscission of a large portion of the frontal lobe there was no loss of intelligence or moral perversion so far as could be judged The facial paralysis was rapidly improving —Mr P L Daniel showed a *young woman, 24 years of age, who* immediately after delivery of a second child 19 months previously was seized with small pox Seven weeks later when she returned from hospital she noticed in the right side at the margin of the thorax a small "knot" This had gradually increased in superficial extent and now presented as an oval patch three by two and a half inches, of faint red colour, paler in the centre, slightly raised, doughy in consistence, with definite softening in the centre where it was slightly tender, but without loss of surface epithelium The right thorax was slightly deformed She had slight scoliosis Examination of the chest on this side elicited dulness, loss of breath sounds, and impaired vocal fremitus She had slight and obstinate cough and brought up yellowish phlegm A blood count showed 16 000 leucocytes per cubic millimetre Mr Daniel considered the case to be one of cutaneous actinomycosis associated with visceral involvement, a condition which in recent years was shown to be not uncommon and was considered to be syphilitic because it cleared up under potassium iodide —Mr F Jaffrey referred to two cases of a somewhat similar nature which did not break down but cleared up *under potassium iodide One patient received as* much as 200 grains per diem of the drug, the other from 40 to 50 grains He considered the administration of from one to two pints of water to be essential for success in giving large doses of iodide One patient had actinomycosis of the liver and the other of the cæcum —The President agreed with the condition of the chest as described but could not agree that the condition of the skin was typical of actinomycosis —Dr. E G Graham Little showed an interesting case of Lupus associated with Lichen Scrofulosorum An injection of tuberculin (No 1) resulted in a typical reaction, in which the lichen scrofulosorum participated, becoming vividly red —Dr Nicholson (for Dr W B Cheadle) showed a case of Supposed Primary Malignant Disease of the Liver, with microscopical specimens The patient, aged 35 years, had a very large liver which was punctured by a needle and at the point of exploration a secondary deposit occurred in the skin, which on examination proved to be a typical columnar celled car*cinoma with well marked alveoli* No primary focus was found in the intestine but the patient had melæna He also showed a patient, aged 35 years, suffering from Syphilitic Endarteritis Obliterans who had had syphilis 13 years previously Great improvement took place under iodide of potassium

EPIDEMIOLOGICAL SOCIETY —At a meeting of this society held on Feb 19th, Dr B A Whitelegge the President, being in the chair, Dr Myer Coplans, late civil surgeon attached to the Royal Army Medical Corps in South Africa, read a paper on the Etiology of Scurvy based on his observations in South Africa towards the close of the Boer war *when the entire population, military and civil, British, Dutch, and native, was maintained at the cost of the Govern*ment on rations of good and known quality, uniform in each class, the chief of these being (1) burghers in concentration camps, (2) European soldiers, and (3) natives attached (*a*) to the British army and (*b*) to the civilian repatriation department Each concentration camp contained about 5000 persons, 48 per cent. being children under 12 years of age, and among adults the women were to the men as 3 to 1 Inclosed by barbed wire the camps, though open and airy, were securely isolated The conditions being identical the varying incidence of scurvy was remarkable Between March, 1901 and January, 1903, with no cases at Standerton or Volksrust, there were 100 Europeans and one native attacked Among the soldiers at Standerton and the 22 000 European patients admitted to the hospital there was but one, among the natives in the service of the troops there were attacked 32 per cent of 400 muleteers, 22 per cent of those attached to the Hussars and the Royal Artillery, 87 per cent of the scavengers *engaged in removing carcasses of* animals, 17 per cent of the porters, and about 50 per cent of the muleteers in the employ of the repatriation department The *heaviest* incidence of scurvy was after the close of the war and when all *restrictions on food* had been removed *In fact,* it had no relation whatever to the food but was almost everywhere directly in proportion to the neglect of cleanliness, of which the natives had not the most rudimentary notions, especially as regards the hygiene of the mouth Even the outbreak among the burghers at Middleburg followed overcrowding and neglect of sanitation As to treatment, *the food, though mostly* preserved and tinned, was good but many refused the harsh, sour lime juice Dietetic treatment was very successful rapidly so if accompanied by mechanical cleaning of the teeth and gums with continued use of antiseptic washes, though more slowly without.—Dr A E Wright considered it a great mistake on the part of Dr Coplans to confine his study to South Africa, for filthy habits *were not peculiar to the Kaffirs* and were unaccompanied by scurvy which he had seen in the nurseries of the rich and in a lady in a nursing home Would Dr Coplans assert that the food was all good or that all partook of it? Scurvy was essentially an acid intoxication, a reduction in the alkalinity of the blood which could be observed long before the grosser manifestations alike in the adult and infantile forms A large proportion of the troops returning from South Africa were scorbutic in the latent stage All that was essential in treatment was to render the blood as alkaline as possible Meat and cereals were deficient in alkali and in salting meat lost what little it had Citric acid was useless Fresh vegetables and potatoes with fresh fruits were all useful but the specific was lactate of *sodium —Lieutenant Colonel* R H Firth R.A M C, noticed the low values of the dietaries as given by Dr Coplans, few exceeding 2000 kilocalories, or barely enough for the body work The ash of tinned milk was often acid instead of alkaline In one expedition he had had to condemn 30 per cent and a large proportion of our troops on their return from our "little wars" were more or less scorbutic —Colonel J Lane Notter, R A M C, had left South Africa before Dr Coplans's statistics commenced but he could fully bear out his description of the filthy habits of the Kaffirs who, though supplied with good food, preferred putrid meat or the *entrails of dead animals*—Mr K W Goadby had not seen any cases of scurvy at the *Dreadnought* Hospital but had met with several of pyorrhœa alveolaris, a disease endemic and occasionally epidemic in West and Central Africa, the Transkei, Philippines, and other places, in which the condition of the gums and their rapid recovery under antiseptic measures resembled that in scurvy —Dr H T Bulstrode referred to a paper read in the society 20 years ago by Sir W Smart, who quoted from Lind a passage showing that that great naval surgeon had already 150 years ago rejected the belief in the specific action of lime juice —Dr E F Willoughby was surprised that no one had made any reference to the theory of Dr Tonk of Christiania which had been accepted *implicitly* by all medical authorities in the Scandinavian marine While fully satisfied that the essential cause pathologically was as Dr Wright had *shown, an* excess of acid or want of alkalinity of the blood they could not ignore the practical etiology or the preventable conditions under which this pathological phenomenon was brought about and Dr Tonk's view that scurvy was no more or less than a chronic ptomaine poisoning was the only one that explained or agreed with all the phenomena, positive and negative of its history The field of the late war was too wide for accurate observations but in the last six or eight Polar expeditions they had a series of carefully conducted experiments leading to the conclusions that without a single exception (1) a diet of fresh, even raw meat, *without* any fr [illegible] with hardship, dirt [illegible] entirely of tinned, [illegible] highest quality, but with no fresh food, animal or vegetable, did not produce any of the symptoms of scurvy, while scurvy appeared when along with potatoes, &c., and daily doses of lime juice, the bulk of the food consisted of ordinary salt beef or pork Until the recent Antarctic expedition no Polar expedition from that of Nordenskjold in the *Vega* had been attacked by scurvy except those of Jackson's men who *remained on board the ship, where they* had lime juice, *potatoes, &c, but refused the coarse bears'* flesh on which alone the exploring party subsisted, they often remarked the "high gamy" flavour of their meat and all were attacked with scurvy, two indeed dying The Lapps of Finland bartered for farinacea &c, but ate their fish putrid by preference and suffered much from scurvy.

—Dr. Kenwood, Lieutenant-Colonel A. M. Davies, R.A.M.C., Dr. Newton Pitt, and others having spoken, Dr. Coplans replied, chiefly dealing with Dr. Wright's statements. The disease did not appear while the natives had only their own mouldy mealies but when supplied with sound South American maize and more wholesome Government stores than they could eat. It required, as Dr. Wright maintained, months for its development, for the members of the corps that suffered most were recruited in their own homes in October and the corps was dissolved in December, the disease breaking out soon after arrival in camp and recovery followed rapidly on purely local treatment in the way of buccal antisepsis without any attempt to influence the blood.

Chelsea Clinical Society.—A meeting of this society was held on Feb. 16th, Dr. T. Vincent Dickinson, the President, being in the chair.—Mr. L. A. Bidwell read a paper on Some Cases of Subacute Pancreatitis and after briefly referring to the etiology and symptoms of acute hæmorrhagic pancreatitis he described four cases of a subacute form of the disease in which he had operated. He was inclined to think that these subacute cases were pathologically the same as the acute cases and that the difference depended on a less virulent type of micro-organism or on the greater resisting power of the patient. The diagnosis of subacute pancreatic disease was very difficult but he pointed out that the following symptoms should lead the surgeon to suspect its nature: the intensely acute character of the pain situated above the umbilicus in a patient who had had a history of gastric or gastro-duodenal catarrh, vomiting which was often very profuse, great collapse, and irregular temperature, and later the occurrence of resistance, dulness, and a swelling in the epigastric region. This was accompanied by extreme emaciation. In some cases glycosuria might be present and in others free fat might be found in the motions, which also might be colourless although no symptoms of obstructive jaundice were present. In his first patient the diagnosis made was that of empyema of the gall-bladder and it was not until the abdomen had been opened and the gall duct found to be healthy that the true nature of the case was recognised. A large collection of turbid, dirty-brown fluid was present in the lesser peritoneal cavity and the pancreas was found to be much enlarged. The patient recovered from the operation and his wound healed but he died some six weeks later with symptoms suggesting the formation of a secondary abscess. In another case the symptoms rather suggested that the kidney was the seat of the trouble and this was explored without any benefit. At the necropsy an abscess involving the tail of the pancreas was found. In the last case there was remarkable absence of the characteristic pain but a tumour appeared above, and to the left of, the umbilicus and the patient was emaciated. The tumour was explored and found to be an abscess in the tail of the pancreas. This was drained and the patient made a perfect recovery. It was noted that neither of these cases of abscess of the tail of the pancreas suffered from glycosuria. He was sorry to have to admit that none of these cases had been diagnosed before operation but he thought that the conditions found afforded another argument in favour of abdominal exploration in obscure cases.—Dr. R. T. Hewlett read a paper on Pyrexia in the Course of Late Syphilides. He pointed out that while fever was common in the secondary stage of syphilis it was not frequent in the tertiary stage because the inflammation was of such a chronic nature. In periostitis a slight degree of fever was often observed but in visceral lesions it was usually absent. Dr. Hewlett then detailed the histories of four cases of tertiary syphilides in which fever was present. The first presented no difficulty, being a case of syphilitic periostitis of the calvarium. The second was a case of syphilitic arthritis of the knee presenting a remarkable temperature curve, the temperature having a diurnal range of from about 99° F. in the morning to 101–104° in the afternoon between 2 and 6 P.M. On being put on iodide the temperature fell abruptly to normal and continued so. The third case was also one of syphilitic arthritis affecting the shoulder and elbow, with a temperature ranging between 99° and 100°. At first the case looked like one of subacute osteo-arthritis but the effect of iodide and mercury was instantaneous. The fourth case was that of a thin, delicate man, with pleuritic-like pain and rub at the right base, some cough and expectoration, slight signs of mischief at the right apex, and a temperature ranging usually between 99° and 100° but occasionally rising to 101°. The case was regarded as tuberculous but the sputum was repeatedly searched for tubercle bacilli without result. One day the liver was noticed to be enlarged and on iodide being given the temperature fell abruptly to normal and the symptoms disappeared. The case was evidently one of syphilitic perihepatitis.—Dr. C. O. Hawthorne gave an interesting lantern demonstration entitled "The Field of Vision in Health and Disease."

Bradford Medico-Chirurgical Society.—A meeting of this society was held on Feb. 17th, Dr. Henry Angus, the President, being in the chair.—Mr. C. F. M. Althorp read notes on a case of Sarcoma of the Jaw upon which he had successfully operated and showed specimens.—Dr. H. J. Campbell read a paper on the Causation of Cancer. He enumerated a number of the various theories which have been propounded on the subject and among the conditions which have been assigned as causes of the disease he directed attention to: (1) embryonic cell rests taking on growth and forming tumours; (2) irritation by vegetable micro-organisms; (3) irritation by animal micro-organisms analogous to coccidia in rabbits; (4) the association of yeast growths with tumours; and (5) the displacement of portions of epithelium which subsequently take on growth. He also discussed (1) various dietetic theories; (2) the suggestions of Professor J. B. Farmer, Mr. J. E. S. Moore, and Mr. C. E. Walker that existing cells might take on the function of germinal cells and form tumours; and (3) the work of Dr. E. F. Bashford and Dr. J. A. Murray concerning the formation of new growths in different animals. The question why the cells of any part should take on reversion to a germinal type was considered. It was suggested that chronic irritation might often determine the site of a tumour, and also that the involution going on in certain organs (such as the breast and uterus) at the cancer age might have some influence in this direction.—The President suggested that as cancer usually came on at the end of sexual life, the cells of other parts of the body might seem to attempt to take on the function of sexual cells.—Dr. A. C. F. Rabagliati said that in his opinion the question of the division of cells was of little practical interest; cancer was a disorder due to the ingestion of excessive amounts of nutrient material. It was useless to discuss the question of "cancer houses" unless the habits of the people who lived in the houses were also studied.—Dr. F. W. Eurich said that it seemed to him that all the circumstances attending the growth of a malignant tumour tended to point to a parasitic origin. He remarked that animals in menageries, although they were certainly not overfed, often developed malignant tumours.

Therapeutical Society.—A meeting of this society was held at the Apothecaries' Hall on Feb. 23rd, Dr. J. Rose Bradford being in the chair.—Dr. James Burnet (Edinburgh) read a paper on the Therapeutics of the Ichthyol Compounds, with special reference to Ichthoform and Ichthargan. This paper will appear in an early number of The Lancet.—Mr. W. McAdam Eccles read a paper on Inguinal Trusses. Alluding to the history of the subject he said that inguinal trusses were represented on the statuettes of Egyptian gods but were not mentioned by Hippocrates. He then entered into a number of constructional details, pointing out both the characteristics of suitable and well-designed trusses and the defects in shape and materials which were occasionally met with.—A short discussion followed the reading of the paper.

Newport (Mon.) Medical Society.—A meeting of this society was held at the Newport and County Hospital on Feb. 24th, Dr. J. Howard-Jones, the President, being in the chair.—Mr. C. S. Vines showed a case of Enlarged Testis (? Tuberculous).—Dr. T. Morrell Thomas exhibited a case of Molluscum Contagiosum.—Mr. O. E. B. Marsh read notes on a case of a Calculus removed by Suprapubic Cystotomy from a pouch near the prostatic end of the urethra and showed the specimen and patient.—Mr. Vines read a paper on Ectopia Testis.—Mr. W. J. Greer exhibited Professor Jaboulay's Button for Gastro-duodenostomy and illustrated the method of using it, pointing out the respects in which he considered that it was superior to Murphy's button.—The various papers and exhibits were fully discussed by the members present.

Reviews and Notices of Books.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. New Series, No. 6. Calcutta: Office of the Superintendent of Government Printing, India. 1903. Pp. 53. Price 12 annas, or 1*s.* 2*d.*

THIS issue, which is the first report of the anti-malarial operations at Mian Mir, 1901-03, is by Captain S. P. James, M.B. Lond., I.M.S. The operations were initiated by the members of the Royal Society's Malaria Commission with the object of demonstrating that malarial fever can be prevented by practical measures based on the discovery that a particular kind of mosquito is the definitive host of the malaria parasite. The original object of the commissioners was to test the efficacy of the destruction of mosquitoes in the prevention of malaria and Mian Mir was chosen as being a very malarious station and as one in which it seemed probable that a marked reduction in the number of mosquitoes could be effected. The report is divided into three parts.

Part I. gives a brief description of the conditions under which malarial fever spreads in Mian Mir. The season of new infection in this station begins in July or early in August and the number of new infections increases steadily until it reaches a maximum in October. It is evident that anopheles culicifacies is the chief, if not the only, carrier of malaria in Mian Mir, a species which breeds chiefly in the irrigation watercourses which are running more or less throughout the year. Only two forms of the malarial parasite have been met with in Mian Mir—viz., the benign tertian and the malignant tertian forms. It has been shown by Captain James in No. 2 of the new series of the same "Scientific Memoirs" that a high percentage of the young children in the various bazaars and followers' lines are infected with malarial parasites and as the children receive no treatment whatever it may be assumed with certainty that they form the chief source from which anopheletes become infected. The prevalence of malaria is least in the lines that are furthest from a breeding place, and where consequently fewer of these mosquitoes can be found, and greatest in the lines that are nearest a breeding place.

Part II. details the operations which were commenced on April 2nd, 1902, (1) towards the destruction of the anopheletes; (2) the removal of a number of infected people to a distance from the breeding places of all mosquitoes and away from the vicinity of the barracks; (3) operations directed towards the destruction of the malarial parasites in infected individuals by subjecting such individuals to continuous treatment with quinine (especially the children in the different followers' lines); and (4) the administration of prophylactic doses of quinine to the troops. The methods employed with a view to the destruction of mosquitoes were principally confined to operations against larvæ: they consisted in keeping the sides of the watercourses smooth and free from grass for many months; in having one of the watercourses lined with brick and smoothly plastered with cement; in drying out and cleansing each branch watercourse every ten days; in pouring oil on the watercourses; and in filling in pools and emptying out water from the surface drains. Experience showed that bricking in of the old watercourses was not a success from the point of view of the destruction of the breeding grounds but that in order to secure this a very narrow channel should be built in the bed of the old one to insure a swift running stream. On account of the fact that special precautions are necessary when kerosene oil is used as a larvicide this method can only be carried out under careful supervision. In the really hot season it was found necessary to repeat the oiling of pools at least every three days as the larvæ develop rapidly and under the great heat the oil quickly evaporates. Operations appeared to show that anopheles culicifacies is able to survive the Punjab winter solely by means of "hibernating" larvæ and it was Captain James's object during the winter months to kill off all such larvæ within a wide area. By the end of February, 1903, all larvæ had been killed off within a radius of nearly two miles and he had convinced himself that no adult insects were present in the houses. But as anopheletes can be introduced into any district cleared of larvæ by flight over a comparatively long distance, by conveyance in vehicles from without the district, and in other ways, it is apparent that the destruction of these mosquitoes must be repeated every year. In order to insure that the prophylactic doses of quinine were taken by the soldiers they were paraded twice a week at the hospital and the doses were given under the supervision of a medical officer.

Part III. deals with the results. In spite of the operations for the destruction of the larvæ the number of adult anopheletes present in the houses and the number of larvæ found in the breeding-places gradually increased month by month to a maximum in September and October and then quickly decreased during November and December, although the operations were discontinued during the latter month. A similar disappearance was also noted in places where no operations were carried on. It seems doubtful whether any operations short of permanent extermination of all possible breeding-places will produce a marked reduction in the number of the anopheletes. However, the experiments in the bazaars and lines proved that even a slight reduction affects the amount of malaria to an extent which is quite measurable. As a result of the treatment with quinine no parasites were present in the children examined in October, 1902. It is generally agreed that the year 1902 was an exceptionally healthy one for all the troops in the Punjab and for this reason it was an unfavourable one for testing the efficacy of prophylactic measures by means of hospital statistics. The number of admissions for ague among the British troops throughout the cantonment of Mian Mir during 1902 was the lowest ever recorded. A large proportion of the immunity enjoyed by the British infantry must be attributed to the prophylactic issue of quinine. The changes in the troops which happened in 1902 render it very difficult to form a correct estimate of the efficacy of the operations for the destruction of mosquitoes and of the measures carried out in the artillery lines. The author regrets that from want of time he has been unable to examine films of blood from a large number of men in the British infantry and artillery respectively in order to ascertain whether a reduction in the percentage of infection of the troops themselves had taken place.

The report is an interesting one and is well worth studying in its entirety. The deductions are clearly these: (1) that the destruction of mosquitoes is difficult and expensive, though it is efficacious; (2) that the attempt to lessen the obvious sources of infection of anopheletes such as the method of treating large numbers of native children regularly with quinine, is of importance; and (3) that the use of quinine for the troops as a prophylactic (under strict supervision) is of the greatest value.

The Medical Annals of Maryland, 1799-1899: Prepared for the Centennial of the Medical and Chirurgical Faculty. By EUGENE FAUNTLEROY CORDELL, M.D. Baltimore. Published for the Society. 1903. Pp. 888.

THIS large volume was printed to commemorate the hundredth anniversary of the foundation of the Medical and Chirurgical Faculty of Maryland and was undertaken by a committee consisting of five members, Dr. William Osler, Dr. T. A. Ashby, Dr. H. Friedenwald, Dr. H. M. Hurd, and Dr. G. J. Preston. It consists of a history of the society, biographical notes on the members, and an account of the chief events of medical interest which took place in the State of Maryland from its earliest times to the end of the period under review. To the English reader the part last referred to, which is arranged under the heading Chronology (pp. 639–732), is decidedly the most interesting part of the volume. It is stated that Europeans first visited the Chesapeake in the year 1608 and sailed up the Potomac. The history of this voyage was written by "Walter Russell, Gentleman, doctor of physicke," and later in the year a second voyage was undertaken and of this an account was written by Anthony Bagnall, chirurgeon. The earliest obtainable record of a necropsy in Maryland is of one made in 1637 by a surgeon named Henry Hooper on the body of a man "killed by a tree," but in what manner we are not told. The jury of 12 found the deceased's "bloud bulke broken," and the offending tree was forfeited to the Lord Proprietor. Payments for medical services were made in tobacco and some of the earliest records relate to suing for fees and to malpraxis. It may perhaps not be generally known that Maryland was named after Henrietta Maria, Queen of Charles I., and that on the arrival of the news of the execution of that monarch Charles II. was proclaimed king by the governor of the province.

Inoculation for small-pox, which was of course introduced into England at a much earlier date, was carried on by Dr. Adam Thompson in 1738 "by a new method, the American," of the peculiarities of which we are not told. In 1765 Dr. Henry Stevenson, "the most successful inoculator in America," opened an "inoculating hospital" in Baltimore. It is interesting to note that in 1766 Dr. Stevenson collected £400 towards purchasing a "genteel statue" for William Pitt.

The first part of the volume, which deals fully with the history of the Medical and Chirurgical Faculty, appears to be a very thorough and painstaking piece of work and will doubtless prove of use to those for whom it is written but with the exception of a few scattered facts it is of purely local interest. The book contains a large number of illustrations, chiefly portraits of defunct members of the society. The reproductions appear to have been made faithfully, but taking them altogether a worse lot of portraits it has never been our lot to see; whether this is due to the fault of the artists or to a lack of comeliness in the sitters, or to both these causes, we cannot pretend to determine. The literary part of the book is distinctly above the usual standard of American medical writing.

A Text-book of Obstetrics. By J. CLARENCE WEBSTER, M.D., F.R.C P. Edin., F.R.S. Edin., Professor of Obstetrics and Gynæcology in Rush Medical College, University of Chicago, &c. With 383 illustrations. London and Philadelphia: W. B. Saunders and Co. 1903. Demy 8vo, pp. 767. Price 21*s*.

Professor J. Clarence Webster is already well known by his writings on human placentation, ectopic gestation, and the anatomy of the puerperium. It is not surprising, therefore, to find that he has written a text-book on obstetrics. The work is one of great merit, and for that part of it devoted to the science of obstetrics we have nothing but praise. Great prominence has been given to the various embryological, physiological, and pathological data of importance in connexion with obstetric medicine. In this branch of the subject it will certainly fulfil, as the author hopes, all the needs of the scientific student. The practical part of the book, however, hardly reaches the same high standard and we must confess to being somewhat disappointed with it.

The account of the development and structure of the placenta is one of the best that we have read and is most admirably illustrated. The changes which occur in the size and position of the uterus during pregnancy are well described and both in this section and in that on the changes occurring during the puerperium and in discussing the mechanism of labour the author has made great use of his own anatomical studies and of those of others. The description of the mechanism of labour, based as it is on facts and not on theories, is of great value. When the mass of speculative theories as to the causation of the different movements is swept away it is surprising how clearly and shortly the whole matter can be put.

As is usual in American text-books, the directions given for the carrying out of antiseptic details in the management of a normal case of labour strike us as unnecessarily complicated. The author does not believe that any chemical antiseptic is capable of rendering the skin sterile and he therefore advocates the wearing of rubber gloves not only by the medical attendant but also by the nurses and the assistants in all cases of labour. Elaborate instructions are given as to the sterilisation of towels, sheets, and dressings. It would be interesting in this connexion to know what results are obtained by American and Canadian practitioners in their private practice and by how many men the elaborate details described in the text-books are actually practised.

In discussing the indications for the application of forceps the author is somewhat vague and indefinite and no proper distinction is made between the use of the forceps in cases of primary uterine inertia and in cases of secondary uterine inertia. As might be expected in the writings of a graduate of the Edinburgh school of medicine, the axis-traction forceps is very strongly recommended. It is astonishing to find how much misconception still exists in the minds of many obstetric teachers with regard to this forceps. The old erroneous objection that the axis-traction forceps must produce injurious compression of the child's head is brought forward time after time, although a study of the writings of any of the men who have done so much to bring this type of forceps into general use would show that this is an entire misconception. No one who has ever had any real experience with the axis-traction forceps would willingly return to the use of the long forceps without axis-traction rods. It is surprising how little effect the writings and example of the Edinburgh school in this matter have had upon many of the teachers of obstetrics, at any rate in London. Our own experience amply bears out the statement of Professor A. R. Simpson: "If a practitioner accustomed only to the use of the old forceps will use the axis-traction forceps in one or two difficult cases he will find that it works with so much safety to the mother and child and with so much ease to himself that he will use it in every case. There is no case high or low, with presentation and position normal or abnormal, demanding forceps delivery where the axis-traction forceps may not be applied."

It is always particularly interesting in reading a work upon midwifery to see what are the author's views as to the treatment of so important and difficult a subject as that of concealed accidental hæmorrhage. With Professor Webster's account we must confess we are disappointed. We doubt if a student on reading this description would have a really clear idea with regard to the principles of the treatment and the result which the various measures recommended are intended to bring about. In cases where the cervix is rigid the author apparently is in favour of vaginal Cæsarean section. No mention is made of the use of Bossi's dilator, although this is precisely the class of case in which it is clearly indicated.

In very severe cases we are told that in most circumstances the best course is to rupture the membranes immediately with a finger or a bougie, and yet a little further down the same page is the statement: "Early rupture of the membranes is widely employed in the treatment of ablatio placentæ, but there is little doubt that the results following its application are not such as to justify its routine use." Abdominal Cæsarean section is mentioned but not the performance of Porro's operation, a much more suitable procedure in such cases of emergency.

The book is well illustrated and bound but the index is by no means so complete as it should be in a work of this size. There is much in the volume which will be read with profit by both student and teacher, but we doubt if the former will find it as useful as it might be as a work of reference when he is confronted with a difficult case in actual practice. Although he will have no reason to complain of the number of different plans of treatment referred to he will not receive as much assistance from the author in enabling him to form a definite choice between them as he might well expect, and it must be remembered that this is one of the main objects with which a young practitioner consults a text-book.

A Manual of Operative Surgery. By Sir FREDERICK TREVES, Bart., K.C.V.O., C.B., LL.D. Aberd., F.R.C.S. Eng.; Sergeant Surgeon-in-Ordinary to H.M. the King; Surgeon-in-Ordinary to H.R.H. the Prince of Wales; Consulting Surgeon to the London Hospital. New edition, revised by the Author and JONATHAN HUTCHINSON, Jun., F.R.C.S. Eng.; Surgeon to the London Hospital; Examiner in Surgery, Royal Army Medical Department. With upwards of 470 Illustrations. In two volumes. London, Paris, New York, and Melbourne: Cassell and Company, Limited. 1903. Pp. 750 and 824. Price 42s.

THE first edition of this well-known work was published in 1891 and three issues have appeared since then, but the very considerable changes that have been made in operative surgery required that the book should be entirely revised. This has been done and judging by the result we consider that Sir Frederick Treves has been wise in selecting as his coadjutor for this arduous duty Mr. Jonathan Hutchinson, jun. The distinguishing characteristic of the first edition of this "Operative Surgery" was the limitation of the modes of operation presented to the reader to those which in the author's opinion were the most valuable. In many ways this is an excellent method, for so far as the student is concerned his memory is not overweighted with a variety of different modes of attaining the same result, and so far as the surgeon is concerned the burden of choice is laid on the author of the volume and not on the reader. This is as it should be for a work intended chiefly to be used by surgeons who have not had a very extended experience and yet have to act on their own responsibility, perhaps in out of the way parts of the world. We consider that the book will be found useful by surgeons of cottage hospitals and medical officers of the navy and army who have to depend on themselves in carrying out operative procedures. Just that form and amount of assistance which they need will be given them by this work and to this end we commend it.

The very essence of the book is its practical nature. It is hardly possible to open it at random and to read a page without recognising that the author is describing a subject with which he himself is thoroughly acquainted and that he has an exceptional power of imparting to others the knowledge which he possesses. Very pertinent are the remarks in the chapter on the operator, from which we may quote: "A shakiness of the hand may be some bar to the success of an operation, but he of a shaky mind is hopeless. In the handling of a sharp instrument in connexion with the human body a confusion of the intellect is worse than chorea."

Sections are devoted to the preparation of the patient for operation and there is a useful discussion on instruments and operating tables. Mention is made of a case in a private house where four boxes and a small chest of drawers had been provided to serve as an operating table for excision of a part of the lower jaw in a heavy man.

The work is well illustrated; in this edition some of the older illustrations have been replaced by new ones.

Travaux de Chirurgie Anatomo-Clinique: Voies Urinaires, Estomac. (Clinical and Pathological Observations on Surgical Cases: Urinary System and Stomach.) By HENRI HARTMANN, Professeur Agrégé at the Faculty of Medicine, Surgeon to the Hôpital Lariboisière, Member of the Société de Chirurgie, Paris. With 113 figures in the text. Paris: Georges Steinheil. 1903 Pp. xiii.-360. Price 15 francs.

THIS volume contains a number of articles emanating from the Lariboisière Hospital of Paris and dealing chiefly with the urinary system and the stomach. Some of the articles are based on clinical observations and some are devoted to the recital of the results of pathological investigations. M. Hartmann has taken the chief part in the preparation of the book but many others connected with the hospital have assisted.

The first paper contains a description, with numerous illustrations, of the "service Civiale" at the Lariboisière Hospital. It was opened in 1901 and treats diseases of the urinary tract; it contains an out-patient department and also wards and an operating theatre. It appears to be fitted very completely for the work that has to be done there. Other articles deal with Direct Cystoscopy in the Female, Tumours of the Fatty Capsule of the Kidney, Indications, Methods, and Results of Internal Urethrotomy, Perineal Prostatectomy, the Bacteriology of Cystitis, Intravesical Separation of the Urine from the Two Kidneys, the Surgical Treatment of Lesions of the Stomach other than New Growths, the Pathological Anatomy of Cancer of the Stomach, and Duodenostomy.

The volume has in it much that is interesting and will well repay perusal by those who devote their attention to these special branches of surgery.

LIBRARY TABLE.

Annual Report of the Imperial Bacteriologist for the Year 1902-1903. Calcutta: Office of the Superintendent of Government Printing, India. 1903. Pp. 23 + 12.—This report is divided into three sections. The first deals with research work on the question of rinderpest. During the year experiments were continued and concluded for the present with a view to determine the best method of producing serum possessed of the highest protective value and in the shortest possible time. In addition to the preparation of different kinds of sera, including those for rinderpest, anthrax, and hæmorrhagic septicæmia, together with the routine work of the laboratory, the imperial bacteriologist has utilised his spare time during the last three or four years in the elucidation of certain problems such as "Whether it could be determined what are the constituents of the fifth or sixth day rinderpest bile which conferred immunity"; "Whether, if determined, they could be so collected and separately utilised as to *per se* confer immunity," and kindred questions. Section II. deals with the Applications of the Result of Research and Section III. with Administration. Under this latter heading it is stated that the major part of the officers' time was occupied in preparing rinderpest and anthrax sera, while exhaustive investigations were carried on into the etiology of barbone, a disease of buffaloes clinically known as hæmorrhagic septicæmia, with a view to discover the best method of preparing a protective serum and other methods of conferring immunity against this disease for buffaloes and cattle generally. Test experiments were continued throughout the year to determine the protective power of all sera prepared at the laboratory. With the report is issued a "Note on the different degrees of susceptibility to rinderpest exhibited by the various pure and mixed breeds of bovines and buffaloes, &c., submitted to serum testing, by the 'serum alone' and the 'simultaneous methods' during the years 1899-1903." The important question as to whether anti-rinderpest serum should be used indiscriminately or only in outbreaks of the disease is discussed. Dr. A. Lingard, the imperial bacteriologist, is of opinion that the time has arrived when the injection of serum should only be practised at, and around, the centres of outbreaks of rinderpest. He writes: "In the future let the aims of the authorities interested be to attack each centre of rinderpest as it is reported and endeavour to draw a cordon of protected cattle around each infected area." He considers that if this mode of procedure were followed the majority of outbreaks could be stamped out with a minimum mortality and the least possible expenditure of serum.

The Annual Report of the Pasteur Institute of India, Kasauli. August, 1902, to August, 1903. By Lieutenant-Colonel D. Semple, R.A.M.C., Director of the Institute. Pp. 23.—During the year under review 584 patients underwent antirabic treatment, of whom 269 were Europeans and 315 were natives. For statistical purposes these are divided into three classes: (*a*) those bitten by animals proved to have had rabies; (*b*) those bitten by animals certified by veterinary surgeons to have had rabies; and (*c*) those bitten by animals suspected of rabies. Each of these classes is again subdivided into (1) those bitten on the head and face; (2) those bitten through the exposed skin on any part other than the head or face; and (3) those bitten through the clothing. The statistical table shows that amongst the 584 patients treated there were six failures, which gives a percentage of 1·02. All the failures recorded belonged to Class (*c*). In addition to the six cases in which treatment failed four other patients (severely bitten) went too late to the institute and developed the disease during treatment and two patients succumbed after the completion of the treatment. These six cases cannot be reckoned as failures because the nerve centres were invaded by the virus of the animals which inflicted the bites before it was possible to render them immune against the disease. When the virus reaches the nerve centres it is not possible to stave off the subsequent onset by any known treatment. In a case of this kind hydrophobia sets in with certainty within a period of 14 days; not a single symptom need necessarily be present during the incubation period which follows the invasion of the nerve centres by the virus; the only index as to when invasion took place is the time when symptoms first set in. These statements are based on the information derived from experimental rabies in animals. Lieutenant-Colonel Semple points out that the only trustworthy test of a rabid brain or cord consists in inoculating an animal and waiting for the result (which generally takes 14 days) and that for diagnostic purposes it is only necessary to send a small portion of the brain, the spinal cord, or the medulla in a small bottle of sterile neutral glycerine. An antirabic serum has been prepared with a view to improve the treatment in badly bitten and late cases, by diminishing the time required to produce immunity. The serum is derived from young healthy ponies which have been highly immunised with the virus of rabies. The experiments with this strong serum gave most satisfactory results and seeing that it has the property of destroying the virus of rabies in a mixture it is reasonable to suppose that it might be valuable as a first dressing to apply to the wounds and for inoculation into the tissues around the seat of a bite; these points are under investigation. When given hypodermically to animals it has no effect in warding off rabies when the virus has been inoculated subdurally. In badly bitten and late cases the object is to confer a high degree of immunity as soon as possible. By this treatment the benefits are given of a passive immunity conveyed by using the serum of another animal which has been highly immunised, while the patient is trained to acquire the more durable active immunity which can only be attained by undergoing a series of inoculations with the virus of rabies. The principle involved in the preparation of anthrax vaccine is to obtain cultivations of anthrax bacilli attenuated to such an extent as not to convey the disease to the animals for which their use is intended but at the same time strong enough to confer an active immunity against an attack of anthrax. 560 doses of this vaccine have been sent out to applicants where outbreaks of anthrax had taken place, but particulars as to the results have not yet been collected. The information goes to show that none of the animals inoculated contracted anthrax. The anti-venomous serum is now being sent out for use throughout India. The horses used in its preparation have been immunised with cobra venom; others are now being immunised with viper venom and mixed venoms. Following up the line of Lieutenant-Colonel Semple's reasoning it is evident that children and people of feeble physique require large doses of antivenene to save them. In a case of cobra bite, when the patient is seen early and before symptoms have set in, the antivenene may be injected hypodermically in the loins. It is possible to save a patient at a much later stage by giving the antivenene intravenously. A considerable amount of ordinary bacteriological work has been carried out at the institute during the year. The report is well worthy of close study.

Cookery for Invalids and the Convalescent. Compiled by C. Herman Senn, G.C.A. Third edition. Revised and enlarged. London: The Food and Cookery Publishing Agency. Pp. 101. Price 1*s.*—This little book contains some good recipes for the preparation of food for invalids and for convalescents. Much of the teaching which it contains is quite sound—for example, the advantages of grilling are duly set forth on p. 36. The directions given for the preparation of beef-tea will be found generally useful. Exception must be taken to cheese as a suitable diet for the gouty. In the matter of jellies more information is desirable. The reader is told "to take some jelly" but not how to make it. The work does not profess to be more than a compilation and must be judged as such.

New Inventions.

IMPROVED LIGATURE.

I desire to bring before the notice of surgeons a ligature which has for some considerable time given me great satisfaction. It is made by a special process, from numerous single cocoon fibres, which produces a ligature equal in every respect to silk twist and one which has the following advantages. 1. Greater strength than other ligatures have. 2. Simplicity and ease of sterilisation; a few minutes' boiling renders it perfectly aseptic. 3. Good keeping properties; it will keep indefinitely unimpaired in the wet or dry state. 4. Absence of any tendency to slip; when tied on a vessel or a pedicle owing to the flat form the ligature assumes it has no tendency to slip off. 5. Ready temporary encapsulisation and perfect after-absorption; the process of manufacture, whilst resulting in one thread of any desired thickness which retains its entirety, does not compress the component fibres together, so that the plastic lymph thrown out around the seat of application is able to penetrate between and around each strand composing the ligature, and to this is due, I believe, the absence of those annoyances so common with ordinary forms of ligature—namely, stitch abscess and the extrusion, perhaps weeks or months after an operation, of the deep ligatures. The use of split-eyed needles with this as with other forms of ligature saves both time and trouble.

The ligature can be obtained from Messrs. Maw, Son, and Sons, Aldersgate-street, E.C., who have provided a neat metal case containing varying sizes of the ligature together with split-eyed needles adapted for each size, the whole being so constructed that without disturbing the contents perfect sterilisation can be effected by a few minutes' boiling.

Leek, Staffs. PERCY H. V. HAMMERSLEY.

AURAL SUPPOSITORIES.

IN common with other aurists I have experienced considerable difficulty in obtaining a satisfactory medium for the preparation of suppositories suitable for use in the ear. The usual cocoa-butter or glyco-gelatin bases, although fusible at the internal temperature of the body, do not readily melt when inserted into the external meatus, the temperature there being considerably lower than that of the blood. Recently I called the attention of Messrs. Savory and Moore of New Bond-street to the matter and they soon succeeded in producing a thoroughly satisfactory suppository having a fatty basis melting quite readily in the ear and yet firm in consistence. These suppositories, which I understand they have named "aurules," are furnished with silken threads to facilitate handling. Any suitable medicament can be prescribed with the basis. Those I have used are the aurulæ morphinæ compositæ. Each of these contains one-eighth of a grain of morphine and $\frac{1}{150}$th of a grain of atropine. FREDERICK SPICER, M.D. Durh.

Wimpole-street, W.

A NEW STEEL MAT.

WE have received from the "American Industries in Europe," Cromwell House, Surrey-street, Strand, a steel mat. Mats made of steel are by no means new, but the one before us presents one new feature in that it will very easily roll up and also that, contrary to the custom of the ordinary wire mats, it remains perfectly flat when spread out. The steel is said to be treated in a special manner so that it will not rust. The mats are made in various sizes and seem well adapted for the purposes for which they are intended.

CHLORAL POISONING AT PORTSMOUTH LUNATIC ASYLUM.

AT an adjourned inquiry held in Portsmouth on Feb. 25th into the cause of death of four inmates of the Portsmouth Lunatic Asylum the results of the examination of the contents of the bottles from the dispensary were given. Amongst these bottles was the residue of the medicine which had been taken by the four deceased persons, medical evidence having indicated that death was due to chloral poisoning.

Five bottles in all were submitted to analysis by the public analyst for the borough and in two of these the amount of chloral was determined by the county analyst also. The bottles were as follows. Two bottles contained chloral hydrate, one a large Winchester quart bottle and another a small glass bottle said to have been used for dispensing purposes. Both of these bottles contained 100 per cent. chloral hydrate or 437·5 grains per fluid ounce. The contents of another Winchester bottle, a bottle similar in size to the pure chloral bottle, and bearing a label which at a glance was not dissimilar, known as the stock "chloral bromide" bottle, gave on analysis: 6·3 per cent. chloral hydrate and 7·2 per cent. potassium bromide, or 27·4 grains of chloral hydrate per fluid ounce and 31·5 grains of potassium bromide. The above analytical result shows that these bottles contained the drugs as indicated by the label and as stated by the various witnesses in examination. The point to be noticed here is that a solution of pure chloral of specific gravity 1·45 (100 grammes chloral hydrate per 100 cubic centimetres of liquid) was kept in a Winchester quart bottle of exactly the same size, shape, and colour as that containing the stock solution of chloral and bromide for dispensing purposes. The contents of the two remaining bottles were submitted for analysis by both the analysts: the large white dispensing bottle, said to have contained a mixture of equal parts of the stock chloral and bromide solution and of water, contained 2·88 per cent. chloral hydrate or 12·7 grains per fluid ounce, and 4·5 grains of potassium bromide per fluid ounce; and the last bottle—a two-ounce bottle containing a fluid coloured pink and evidently slightly viscid, said to have been prepared by diluting the mixture in the dispensing bottle with half its amount of water and thus supposed to contain about 15 grains of chloral—contained on analysis 44·1 per cent. chloral hydrate or 193 grains per fluid ounce. The total amount in the bottle would thus be 386 grains of chloral hydrate if it contained exactly two fluid ounces, but as 40 cubic centimetres were given to one analyst and 23 cubic centimetres to another the total amount of liquid in the bottle amounted to 63 cubic centimetres (two and a quarter fluid ounces) and this would contain 428 grains of chloral hydrate. This bottle was shown and admitted by the witnesses to contain a mixture of the same composition as the dose given to each of the four deceased persons. It is thus evident that each person taking a dose of two fluid ounces would receive 428 grains of chloral hydrate, or about four times the fatal dose. The method of analysis used by both observers was that of decomposing a given volume of the chloral solution with an excess of caustic soda of known strength and estimating the amount of soda remaining by titrating with sulphuric acid of known strength, using litmus solution as indicator. This method gave very accurate and excellent results when practised on a solution of known strength. An attempt was made to estimate further the amount of chloral hydrate in the pink solution by a reduction method. A known quantity of the solution was placed in a flask with zinc and acetic acid. When the reaction was considered at an end a faint excess of sodium carbonate was added, then silver nitrate and nitric acid, and the precipitated silver chloride weighed. It was, however, found that after 36 hours the reduction was not complete, so that beyond proving the presence of a very large amount of chloral in the pink solution the experiment was of no quantitative value. The process, however, gave fairly concordant results using a weak solution of chloral. The question as to how the pink solution came to contain the fatal dose of chloral was not decided by the jury, but it was decided that the dispensing bottle had been tampered with, as this bottle only contained 4·5 grains of potassium bromide instead of about 15 grains. If this bottle had originally contained pure chloral and the draught bottle had been half filled from it and then filled up with water and coloured this would give a solution of the composition disclosed by analysis, as the pink solution only contained a trace of potassium bromide probably due to the bottle being used again without rinsing. What is very evident from the inquiry is that a very serious mistake has arisen probably through the circumstance that pure chloral hydrate was kept in a bottle in every way resembling (except for the slight dissimilarity in label) that in which the stock solution of chloral and bromide was kept and that this bottle was accidentally used when the other was intended to be taken. The jury returned a verdict that death was due to poisoning by chloral by misadventure, adding that the evidence had failed to show who was the person who had actually committed the mistake.

THE LANCET.

LONDON: SATURDAY, MARCH 5, 1904.

The Progress of the University of Cambridge.

ON Tuesday last His Majesty the KING, who was accompanied by the QUEEN and Princess VICTORIA, visited and declared open the new buildings which have been recently erected at Cambridge for the better accommodation and further development of the faculties of medicine, botany, geology, and law in the University. These buildings, a detailed and illustrated account of which we were able to place before our readers last week, may be regarded as the practical outcome of a movement which first took a definite shape six years ago in the form of a public communication from the Duke of DEVONSHIRE, the Chancellor of the University, in respect of the pecuniary condition and requirements of the famous seat of learning of which he is the official head. This communication must, we think, have caused a shock to the mind of a large section of our population, inasmuch as it made clear by the help of a close financial statement the deplorable fact that the University, instead of possessing the wealth indicated by its history, possessions, and associations, was sorely in need of money. The Duke of DEVONSHIRE said to the world, as resident workers at the University had been saying to each other for ten years in the various common rooms, that the resources of Cambridge were scanty and that there was no immediate prospect of their increase, while the work before it, if it was to be discharged in the future in the spirit and manner of a glorious past, must of necessity entail enormous expenditure. The revenues were falling as the expenses were rising. The financial statement showed that the endowments of the University were small and that the payments due to "The Chest" from the different colleges had been sadly lowered owing to the falling off through agricultural depression of the incomes of the colleges, so that at a time when the advance of knowledge, especially the advance of scientific knowledge, formed a conspicuous feature of the age, the University was left without any money to provide proper equipment and teaching facilities for scientific study. Buildings were needed of all sorts—laboratories, lecture rooms, examination rooms, libraries, museums, and offices. Teaching—and splendid teaching, too—as will be admitted by all who remember the work done by Cambridge physiologists, for example—was provided, but an amount of gratuitous work was being done by the lecturers that the University ought not to have expected from them. Endowment was wanted for professorships, lectureships, and readerships a fact which had indeed been admitted 15 years previously by a Royal Commission. All these things appeared plainly from the Duke of DEVONSHIRE'S communication and its accompanying financial statement, and the immediate and practical outcome was the formation of the Cambridge University Association, with the design to carry out by corporate action on the part of Cambridge graduates the objects indicated by the Chancellor as being more immediately urgent. The association met with fair support. It has collected over £70,000, which is a large sum of money even though the constituency to which appeal was made comprises a good proportion of the upper classes of the nation. If not a large yet a substantial fraction of the sum of money urgently needed has been subscribed. A few donors have been very generous, some money has been obtained, much credit has probably been given, and the four beautiful buildings, with their complete equipments for the scientific and technical work of their respective departments, have risen in the centre of the university town. This brief history of previous events explains the true significance of the visit of the KING and QUEEN to Cambridge this week. We have not here merely the monarch graciously opening new premises for worthy objects. The inauguration of the new Cambridge schools means more. It is the public sign that a practical re-endowment of the University of Cambridge, such as the Chancellor of the University showed to be inevitable six years ago, has commenced. His Majesty, in declaring these buildings open for their work, does so not only as the KING assisting in a movement of educational importance to the country but as a Trinity man, the father of a Trinity man, and the son of Queen VICTORIA, herself the first patron of the Cambridge University Association, and of Prince ALBERT, a late Chancellor of the University.

The depressing situation in the University of Cambridge, as revealed to light by the candid revelations of its Chancellor, appears to indicate considerable material neglect of the University when we remember the victorious progress of American institutions and the development of certain of our own provincial centres of education. Let us take, for example, the University of Liverpool. University College, Liverpool, has received from Liverpool £400,000, or thereabouts, during its comparatively short life, while only a fortnight ago we chronicled an event that appears to point to a promise of annual municipal support. At a monthly meeting of the Liverpool city council held on Feb. 3rd it was unanimously agreed to place £10,000 at the disposal of University College, Liverpool, as a contribution towards the expenses of the year, and there is little doubt that the precedent of assistance thus created will be followed. This is the gratifying kind of event that may be expected to happen at Manchester, Leeds, or Birmingham and the reason for such civic generosity leaps to the eyes. The people of England are now awake to the paramount necessity of good technical education if this country is to hold its own, especially against American and German competition; they can appreciate at last the benefits of a university rising in their midst. Germany and to some extent Scotland have long known the value of the local university where prohibitive prices for residental accommodation do not preclude the average citizen from obtaining the educational benefits which all allow are now his due. But there is some danger lest in the recognition of the good to be obtained from a multiplication of well-endowed universities we should become blind to the splendid services rendered to this country by Oxford and by Cambridge We must not be taken in anything that follows as belittling the newer institutions in order to exalt the older, for to do so would be a patent error, inasmuch as a large percentage of the distinguished professors, teachers, lecturers, and readers at the younger seats obtained their training and their degrees at Oxford or Cambridge. Much that is good in the local universities springs from the fact that they are local and are able to draw their revenue from the neighbourhood by proving that their work is essential to the well-being of the neighbourhood. But the very best features that they display are animated by the all-permeating spirit of Oxford and Cambridge. This is the point that seems to us to have escaped the public ken, otherwise we do not know how to explain the fact that the University of Cambridge stands in need of money. To some extent the late CECIL RHODES by his magnificent bequests to Oxford has placed the sister university in a better pecuniary position to carry on the historic work, but even CECIL RHODES by the terms of his will showed his belief that the University was in danger of senility. And now we have come to the real point. What has militated against Oxford and Cambridge in the public mind is the belief that they are mediæval survivals, supplying upon an obsolete model education which, for all purposes in future life, makes a man gracefully unfit to earn his bread and butter. How this idea arose is another story and we are not prepared to say that there has never been a time when it could not be justified in part, but it is an extraordinary fact that the idea is held now by people who, if they would stop to think, would find that not only their bishop, their banker, and the Member of Parliament who represents them are from Oxford or from Cambridge, but that their medical officer of health, their solicitor, and the man who installed their electric light, possess the same hall-mark. Why in the face of these facts, and in view of the demands made upon Oxford and Cambridge for teachers the notion should exist that the elder universities provide only facilities for the cultivation of decorative ineptitude we cannot imagine; but we take it that the action of the Cambridge University Association, as endorsed on Tuesday last by the KING, will open the minds of the public to the truth. Oxford and Cambridge to-day are very much alive and discharge their natural functions with vigour and success despite adverse circumstances, while for the most part these adverse circumstances have not been of their creation.

Moreover, it must be remembered that at Cambridge, the university with which we are to-day immediately concerned, progress has come from within. The University has received almost no money from the public in order that it might better fit itself to meet the public needs. What the great manufacturing populations have done, and are doing, for their seats of learning has been done hardly at all for Cambridge, while the recent movement for re-endowment is entirely self-started. Spontaneously the heads of the Colleges and the influential professors met together some six years ago and came to certain conclusions with regard to the existing condition of affairs. These conclusions formed the gist of the statement which the Chancellor of the University gave to the public with his declaration of the poverty of the University. We have heard that when it was proposed that the famous Senate House at Cambridge should be lighted by means of electricity a newspaper declared that this could only be accomplished "by the hanging of 12 *pedants!*" Was the printer careless or did he share the warped view of the public with regard to the apathy of the Cambridge don? From beginning to end the great movement towards re-endowment in Cambridge has been due to the action of the University, of its leaders in thought who are in residence, and of its graduates who fill busy posts in many places and many countries. This seems to us to form an enormous argument in favour of the public coming to the aid of the University. Providence helps those who help themselves, says the proverb, and surely a millionaire can frame himself upon no better model than Providence. The bravery with which the University of Cambridge has faced serious financial problems and plunged into pecuniary debt that it might discharge its moral debt to the youth of the country seems to us to deserve immediate recognition. It cannot beg save from its alumni and it cannot advertise. We trust that the gracious act of the SOVEREIGN in making a personal visit to Cambridge will bring the needs of the University to the notice of some who can help in ministering to them.

Dispensing by Medical Men.

THE proposed addition to the suggested Medical Acts Amendment Bill of clauses to prohibit registered practitioners, with certain exceptions, from dispensing or supplying drugs or other medicaments has been discussed at a meeting of the Central Division of the Metropolitan Counties Branch of the British Medical Association and the proposal has been rejected. When the notice convening the meeting was first brought to our attention we ventured to point out that it was impossible to conceive that the General Medical Council could ever devote time to the investigation of the claims for exemption. It will be remembered that it was proposed that a practitioner, under heavy penalties, should have to satisfy the General Medical Council that he practised in a district unable to support both a medical man and a druggist. This consideration, among others, no doubt prevailed with the meeting in its refusal to adopt the prohibition clauses.

For the present the matter is at an end but it is impossible to withhold a certain degree of sympathy from the proposal, if it could have been put forward in a less uncompromising form. There can be little doubt that the present practice is irksome and that dispensing entails an unsatisfactory form of labour when the busy practitioner has come in from a long round. It is not possible in very many cases for the practice to support an assistant or dispenser and the result in such poor districts is that the medical man must himself stand about in his surgery dispensing medicines which have to be sent or called for, when, if only in the interests of his patients, he ought to be resting from his labours. While most of our correspondents fully concede this point, many have urged that they have purchased a dispensing practice, that their outlay has included the expense of the surgery, and that they are entitled to obtain some return upon the capital invested. Others have expressed a strong opinion that to interfere with dispensing would be to reduce their practice, that their patients cannot afford to pay separately for advice and for medicine, that it is doubtful whether they could afford the time for separate visits to the medical man and the druggist, that the possession of a prescription might involve the employment of the same medicine long after the conditions for which it had been originally given had completely changed, and that a prescription given to one person for one disease might in course of time be handed to another with ignorant good intent. Broadly, then, the feeling appears to coincide with that originally expressed in these columns—the conditions are not yet ripe for such an innovation, the proposed change would press too hardly upon the rank-and-file of the profession. In an ideal world each profession would keep rigidly to lines of demarcation and this principle would extend to every branch of every profession. According to this ideal consultants would never be reproached with the wrongful annexation of the patients of general practitioners. Physicians would never operate, even upon tonsils or adenoids. Surgeons would not prescribe, unless for the relief of symptoms immediately following upon their operations. Obstetricians would occupy a well-defined position with no uncertainty as to whether they were physicians or surgeons and they would never undertake the general care of a case of infectious fever, even though it should arise in a child whose entrance into the world they may have superintended some years earlier. General practitioners, accepting with pleasure the cares and responsibilities assigned to them, would receive adequate remuneration to enable them to live without struggling continually to meet necessary expenses by the profits obtained from dispensing. Further, in this ideal world druggists would confine themselves to dispensing and would never, even when asked to do so, take the responsibility of prescribing or, shall we say, of advising what drugs might be taken in certain circumstances. All these conditions might conceivably obtain in an ideal world and might satisfy the public if the conditions were generally understood. Certainly every class above mentioned would benefit from the limitations suggested, since it is probable that greater concentration would lead to greater skill in every branch of work and clearly in this at least the public would benefit. But while it is pleasant to dream of Utopia it must be remembered that it is difficult to regulate human actions upon counsels of perfection suggested by dreams, and it is scarcely possible, when persuasion fails, to obtain consent to arbitrary measures. In the matter of dispensing by medical men it is unwise to forget that the public must be considered and that resentment might be aroused by sudden alterations of routine. The public may, perhaps, by degrees be educated into acquiescence, though public eduation is proverbially slow and requires reasons rather than regulations.

Further, it must not be forgotten that the suggested rules for the regulation of dispensing would have interfered by Act of Parliament with long-established custom and would have touched the interests of a large class of medical men who are already overburdened and oppressed by the necessity of heavy expenditure. This side of the question has appeared in many of the letters which we have received and it is one which cannot be ignored in any suggestions of change. While a cordial welcome should be extended to any movement which would improve the status of the medical profession as a whole, we are bound to look closely into any plan which would materially alter conditions of work. Many of our correspondents agree with our first contention that the plan would facilitate and extend the operations of the prescribing druggist. Sometimes it is urged that this is an imaginary evil, but the truth can readily be gathered by the fact that an enormous number of private formulæ employed by druggists has recently been collected and published by a contemporary to free them from the tax imposed upon patent medicines. For these formulæ to be worth protecting against taxation necessarily implies that they are frequently employed. Clearly they are not likely to be prescribed by medical men; if, therefore, they have any sale they can only be sold directly to the public by a druggist who assumes the responsibility of making a diagnosis or of treating a symptom without a diagnosis. Country practitioners have, unhappily, ample knowledge of the injury to their practices and, more important still, of the numerous risks which result from this unqualified treatment and we consider that they are right in their contention that counter prescribing should be rendered impossible before dispensing by medical men should be hampered by legislation. At present any druggist can sell anything he likes with the exception of scheduled poisons, and if a diarrhœa mixture happens to be given to a patient with typhoid fever the druggist is safe so long as he has not led the patient or his friends to believe that he possesses a medical qualification. This is the position of affairs which reformers, both within and without the ranks of the British Medical Association, should keep before them as wanting effective remedy.

The Study of Childhood.

At a time when a good deal of fermentation, real and simulated, has been excited in the public mind with regard to education it is gratifying to see that the related questions are receiving their due share of attention from the medical profession. We have before us a lecture on "Some Elementary Aims in Education" by Mr. HAMILTON HALL, delivered under the auspices of the Childhood Society in the library of the Sanitary Institute, and this will be followed by three others, respectively by Professor W. A. POTTS, Dr. D. SOMERVILLE, and Dr. H. R. JONES. It is worthy of remark that the two last-named gentlemen are diplomates in Public Health so that their selection as lecturers may be regarded as a recognition of the intimate relation which must exist between the proper upbringing of a generation and the immunity from preventable disease which it is likely to enjoy. The society to which we are indebted for the course is one of two which are, we believe, of American origin and which apply themselves respectively to the consideration of the mental and of the physical development of the young, subjects which must necessarily tend to overlap one another, although they are sufficiently distinct to be considered from different standpoints in many respects. The societies have hitherto chiefly appealed to teachers and have striven to produce a somewhat more intelligent examination of the conditions and opportunities of their calling than had previously been customary in their ranks. Endeavours have been made systematically to investigate the mental operations of childhood and their relations to growth and physical well-being, as the only safe foundations of successful teaching, whether intellectual or moral, and as the necessary bases of those habits of mind and body which it is the first object of a judicious parent or tutor to establish. There have from time immemorial been a few teachers whose insight into the minds of the children under their care has been instinctive and whose success has been proportionate to the resulting harmony; and it has been among the chief objects of the Childhood Society to confer a similar insight as a result of careful training. In this work Mr. EARL BARNES has been an eminent pioneer both in this country and in America, and there can be no doubt that a more intelligent appreciation of childhood has been among the consequences of his teaching. So far, however, it may be feared that the good results which he has obtained have been chiefly confined to teachers of the elementary or kindergarten class and that little or nothing has been done to invalidate Dr. DUKES's well-known statement that "the education of the youth of the upper and middle classes in England is the only business for which a man is not trained." An evening paper has lately contained a series of dismal complaints concerning the prospects of young university graduates who become assistant masters in private schools, and it can hardly be said that any one of the numerous correspondents upon the question has betrayed the slightest idea of the existence of any difference between teaching and education.

With the exceptions of ROGER ASCHAM'S "Scholemaster" and of MILTON'S letter to Master SAMUEL HARTLIB, the first attempt made in this country to lay down sound principles of education was that of the great philosopher, who was also a physician, JOHN LOCKE. LOCKE rightly maintained the primary importance of care of the bodily health of the young, although he was somewhat too Spartan in his notions of the means by which the desired end was to be attained. The physiology of his day, moreover, if indeed physiology could be said to exist, was too much occupied with hypotheses about animal and vital spirits, and such like, to have any clear notions of the absolute dependence of mental activity upon the welfare of a single material organ—the brain, while it is the daily increasing knowledge of brain structure and brain function which invites the physicians of our own day to carry on the work which LOCKE began, helping them to lay down principles by adherence to which the *mens sana in corpore sano* is most certain to be secured. Mr. HAMILTON HALL has kept this principle before his mind and his lecture was a most instructive one. Our only criticism upon it is that his admonitions on the subject are possibly somewhat wanting in definiteness; nor is there, perhaps, a sufficient recognition of the great differences which of necessity exist between the results which should be aimed at in the education of different classes of the community and between the methods by which these may respectively be attained. It will be conceded without difficulty by most of those who have any practical acquaintance with the subject that nine-tenths of the teaching of ordinary elementary schools—teaching which leads to progress from standard to standard and for which pecuniary grants are paid by a confiding public—is utterly useless to the enormous majority of those to whom it is imparted; even without reference to the pertinent question once printed in an official report by one of HIS MAJESTY'S inspectors, "To what purpose in after life is a boy taught if the intervention of a school vacation is to be a sufficient excuse for entirely forgetting his instructions?"

The subjects of the three remaining lectures of the present course, which also will be delivered in the library of the Sanitary Institute (the first before these lines reach the eye of the reader and the second and third on March 15th and 24th), are the Protection of Feeble-minded Children before and after School Age, Physiology in the Curricula of Primary and Secondary Schools, and Child Punishments. These subjects present many and obvious distinctively medical aspects. The teaching of physiology, in elementary schools at least, is more likely to be successful the more it avoids technicalities and is conducted by example, while it is not incapable of being so conducted as to do mischief. In America, for instance, it has been largely perverted into a vehicle for the inculcation of extreme teetotal doctrines, and the text-books in common use are of such a kind that physiologists of sound knowledge refuse to be concerned in communicating to the young the perversions of fact which they contain. As regards Child Punishments every family practitioner must have witnessed many examples of injudicious or excessive punishment and some at least of flagrant injustice. It has often been said that the average teacher is incapable of distinguishing the consequences of physical defects from those of idleness or stupidity, and that very few children with defective sight or hearing escape punishment for faults which they are wholly unable to avoid. Apart from this many parents have no reasoned convictions with regard either to the uses of punishment or to the methods by which it should be inflicted, and Dr. JONES, by whom the lecture upon this theme will be given, will render good service to many hapless children if he will condense the principles underlying the question into a form in which they may be made available by the family medical adviser who may thus be helped to rescue his younger patients from unmerited and oftentimes injurious suffering, as well as from penalties such as written impositions and the like which have certainly no tendency to the promotion either of mental development or of a love of learning.

Annotations.

"Ne quid nimis."

THE BRITISH MEDICAL ASSOCIATION AND MEDICAL DEFENCE.

AT a meeting of the council of the Medical Defence Union held at the offices on Feb. 18th the following motion was unanimously passed:—

> That this council resolves to do all in its power to maintain the integrity of the Medical Defence Union as at present existing.

The motion was obviously passed by the council of the Medical Defence Union with an eye upon the proposed scheme of the British Medical Association for medical defence. This scheme at present is merely hypothetical and, in the words of the *British Medical Journal*, "the council simply awaits a mandate, one way or the other, from its constituencies." The policy of the British Medical Association may require the organisation by the association of a scheme of medical defence, but we may remind our readers of the good work hitherto done in the way of medical defence by the societies existing for that purpose, prominent among which has always been the Medical Defence Union. As might be expected, the Medical Defence Union shows a strong disinclination to be merged in the proposed defence department of the British Medical Association and we cannot but think that if the two defence societies at present existing in London—namely, the Medical Defence Union and the London and Counties Medical Protection Society—together with the Medical and Dental Defence Union of Scotland, could arrive at some *modus vivendi* whereby they could work together as branches of one trunk all that is necessary would be done. The matter, however, as regards the British Medical Association is one purely to be decided by the members of the Association and it remains for them to signify their pleasure with regard to the scheme. Without doubt it would be a good thing for medical defence were the existing societies to amalgamate. The British Medical Association is the largest association of medical men in the three kingdoms, but it is highly improbable that it will ever include in its ranks the entire profession of Great Britain and if it were to absorb the existing defence societies what provision would there be for those practitioners who were not members of the Association?

AN EARLY PHARMACOPŒIA.

A VERY interesting old volume has been submitted to us for inspection by Messrs. Morgan, Marshal, and Co., of Queen Victoria-street. It is a quarto copy of the Pharmacopœia dated 1677. The name of the original owner is written on a blank page within the cover, "William Shaw, 1678," and below this appears the name of "Benjn. Blake Wills, 1866," with the note, "Saved from destruction." After the title-page, Pharmacopœia Collegii Regalis Londini, is a page of dedication to King Charles II., "Dei Gratia Angliæ, Scotiæ, Franciæ, et Hiberniæ Monarchæ." Then follow four pages of a dedicatory letter to James I., which is evidently a reprint from an earlier Pharmacopœia. The names of the President, Fellows, honorary Fellows, Candidates, and Licentiates are printed, the Christian names in most instances being Latinised, though some are left in familiar English form such as Thomas, Samuel, Daniel, Nathan, Elisha, and Nathanael (*sic*). Sir George Ent was the President when this Pharmacopœia was issued, but amongst the Fellows here enumerated are to be found the names of no less than 15 presidents of the Royal College of Physicians. Apart from this claim to distinction, many of the names are of individual interest; thus we find the Marquis of Dorchester, who presented his library to the Royal College of Physicians; Francis Glisson, whose name is perpetuated in Glisson's capsule; and Nathan Paget, who was an intimate friend of Milton and was intrusted with the responsible task of selecting a wife for the blind poet. William Sydenham is to be found amongst the Permissi or Licentiates, from which class he never emerged. It would be interesting to compare the list of simples included in this volume with that at present official but this would involve much labour and would not, perhaps, tend to edification. It would be easy to express surprise at the credulity displayed in the lengthy list of animals and substances of animal origin employed in the past but an uneasy doubt as to the opinion of posterity with regard to some modern articles leads to humility and charity. More interesting occupation might be found in noting the frequent mention of drugs which are still commonly prescribed and to which experimental work has been able to ascribe definite pharmacological actions. None will regret that the Pharmacopœia of modern times is constructed upon more simple lines. Polypharmacy was rampant in 1677, as may be seen in the formula for "Theriaca Andromachi," which contains between 60 and 70 different articles, with the direction, "Misce secundum artem." Several other copies of the Pharmacopœia of this date are known in libraries and in private collections but some differ in having a longer list of booksellers on the title-page and in the correction of a misprint on p. 207, here rendered 209. The copy before us is in good condition considering its age but it shows evidence of use in stains on its pages and in the detachment of a portion of its leather binding. We trust that it may find a resting-place in some library of similar works.

THE QUESTION OF VAGRANCY.

ON Feb. 23rd Mr. Walter Long, the President of the Local Government Board, on the occasion of a visit to the Guildhall in connexion with the thirty-second annual Central Poor-law Conference, received a deputation representing the conference and also the council of the Poor-Law Unions' Association in order that the question of the increase of vagrancy in this country might be discussed. The deputation had no very definite remedial measures to propose, but on its behalf Mr. J. W. Spear, M.P., Captain Griffith Boscawen, M.P., Mr. J. Brown, and others expressed the wish that a commission or departmental committee should be appointed to consider the whole subject and suggested the more general establishment of labour colonies and the desirability of taking steps to prohibit the association of children with the wanderings of habitual vagrants. In his reply Mr. Long spoke of the complexity of the issue which had been raised and said that he welcomed the deputation as a proof of the fact that those who gave especial consideration to this subject had come there in the hope that a way out of the difficulty might be found. He viewed, however, with some apprehension and misgiving the absence from the programme of the deputation of anything more than a rather vague hope that an inquiry might produce some possible remedy. He was not going to refuse an inquiry but he believed it would be best conducted conjointly by the Local Government Board and the Home Office and he promised at once to consult the Home Secretary in order that some definite course might be decided on. It may be worth while to consider briefly some of the points with which such an inquiry ought to deal. At the outset it must be recognised that tramps are not all of one kind and that while a few of them are engaged in a genuine search for work the remainder are animated only by a desire to live at the expense of someone else. It is impracticable to treat these two classes in the same way. For the former should be provided facilities in the way of labour bureaus which would enable employers to be brought into communication with those who desire to serve them and in special cases relief works might be necessary. For the latter only the most drastic treatment will suffice. Indiscriminate almsgiving by the general public should be discouraged as much as possible and, in particular, begging through the direct or indirect agency of children should be checked by removing such children from the control of those who thus abuse the parental relation. Vagrants who live, as so many do, by petty thieving or by terrorising women must be dealt with as the criminals they are and compelled to exchange the life of vice, dirt, and laziness of the common lodging house for one in a penal labour settlement. It is true that, as Mr. Long remarked, labour colonies in Germany, France, Belgium, and Holland have done little or nothing to reduce vagrancy and the same may be said of the attempts so far made in this country, as, for instance, by "General" Booth at Hadleigh. But the defect in these cases has been a want of thoroughness which can be overcome by means of suitable legislation and Mr. Long holds out some hope that this legislation may eventually be forthcoming.

DIPHTHERIA AND ANTITOXIN.

THE weekly bulletin of the health department of Chicago for the week ending Feb. 13th contains some interesting figures as to the death-rate of cases of diphtheria treated with and without antitoxin. The figures deal with two periods, the one before antitoxin was introduced—namely, from 1888 to 1895—and the other during the use of antitoxin—namely, from 1896 to 1903. The total number of deaths from diphtheria in the former period was 11,438, while in the latter period it was 6083, being a decrease of 47 per cent. The average annual population during the former period was 1,100,931, while during the latter period it was 1,672,042. The deaths from diphtheria per 10,000 of the population were in the former period 12·45, while during the latter period they were 4·55. Thus the latter period showed an increase of population of 52 per cent., while the deaths from diphtheria showed a decrease of 63·4 per cent. Between Oct. 5th, 1895, the date of the first case of diphtheria which was treated with antitoxin, and Dec. 31st, 1903, the health department treated 7435 cases of bacteriologically verified diphtheria, of which number 479 died, a mortality-rate of 6 44 per cent. The average mortality of diphtheria cases treated without antitoxin still remains at about 35 per cent. The bulletin goes on to give figures showing how much more satisfactory is the action of antitoxin when the case is treated early. Thus, of 586 cases treated on the first day of the disease there were only two deaths, a mortality-rate of 0 34 per cent., while of 936 cases treated later than the fourth day there were 216 deaths, a mortality-rate of 23·1 per cent. The bent of mind which, in the face of statistics such as these and similar ones which are reported from other countries, can argue against the value of antitoxin must indeed be strange.

"VINCENT'S ANGINA" WITH DESTRUCTION OF THE SOFT PALATE.

IT is not sufficiently known that besides diphtheria there is a number of membranous inflammations of the throat. One, due to the combined infection with a fusiform bacillus and a spirillum, was described by a French writer, Vincent, and is named after him. Many papers on it have been written in France, where it is well recognised. It consists of ulceration with the formation of membrane. In the *Gazette Hebdomadaire des Sciences Médicales de Bordeaux* Professor B. Auché states that during last year he saw several cases both in hospital and in private practice. He relates a remarkable case which appears to be unique in the occurrence of total destruction of the uvula. A boy, aged 12 years, was admitted to a children's hospital on Feb. 11th, 1903, with a membranous sore-throat of four or five days' duration. The temperature was 100·4° F. He was sent to the diphtheria wards and antitoxin was injected. On the following day, when he was first seen by Professor Auché, the face was slightly pale but the general state was good. Dysphagia, salivation, and slight fœtor of the breath were present. The right tonsil was covered with a downy membrane of a dirty yellowish-brown colour. The superficial part was friable and easily detached, leaving an adherent whitish coat. Beneath was an ulcer two or three millimetres deep with red, perpendicularly cut borders. The free margin of the palate on the right side and the right margin and anterior surface of the uvula were covered by a thin yellowish-white membrane resting on a superficial ulcer. The left tonsil was very red and swollen; its upper third was covered by a thin yellowish membrane which was difficult to detach. Beneath was a red, eroded surface which bled easily. The submaxillary glands, especially the right, were slightly enlarged. There was no coryza. On the 13th the whole uvula was covered by membrane resting on a superficial ulcer. The temperature was 99·5°. Bacteriological examination showed in parts of the membrane almost exclusively fusiform bacilli and spirilla; in other parts these microbes were mixed with staphylococci and streptococci. On the 16th the tonsillar ulcers were deeper and the summit of the uvula was destroyed. The general condition was good. On the 17th the bacilli and spirilla were still abundant but the diphtheria bacillus was found in small numbers. On the 20th the uvula was represented by a stump two millimetres long covered by membrane. On the 24th the uvula was completely destroyed and its base was covered by a thin opaline membrane. The tonsils were slowly becoming cleared. On the 28th the base of the uvula was completely, and the right tonsil was partly, cicatrised. On March 3rd the throat was completely healed. At the same time as the patient was taken into the hospital his brother, aged five years, was admitted with the disease in a milder form. Only the right tonsil was affected and by Feb. 28th he had recovered. In his case also the diphtheria bacillus was found in small numbers some days after the other organisms were discovered in abundance. Evidently both boys were infected with diphtheria in hospital in spite of the injection of antitoxin. But the diphtheria bacilli were never abundant and apparently did not modify the local or general condition. Vincent has observed the association of diphtheria with his angina in three forms: sometimes the diphtheria was the primary affection, sometimes the angina was, and sometimes both affections occurred simultaneously.

HANDWRITING AND PRESCRIPTIONS.

THE illegibility of many prescriptions cannot, we fear, even in the eyes of the unlearned, be attributed entirely to the unaccustomed symbols for drachms and ounces. Whether the handwriting of the medical profession as a body is worse than that of any other equally large body of men we do not know; certainly its official writings as evidenced by prescriptions cannot compare with the clerical productions of the sister profession of the law. In the latter case, of course, business documents are written largely by persons who have little other qualification than the possession of a clear handwriting. Obviously a medical man cannot carry his own clerk about with him to substitute a leisurely and legible writing for the hurried characters of the busy medical man, so that the performance of the lawyer's office will always outshine the scrawl from a patient's house. Yet the matter is really one admitting of such serious accidents that medical men should take special pains to write clearly. Some persons believe that prescriptions are badly written on purpose that they may convey no meaning to the patient; that his faith in the medicine, in fact, may not be interfered with by too close a knowledge of its constituents. Such an object, however, can be equally well achieved, if it is ever desirable, by substituting elaborate chemical denominations for simple and more commonly used names of drugs. As matters are at present we have a shrewd suspicion that it is often only the sagacity and carefulness of the druggist who dispenses a prescription which prevent the concoction of something far different from that which the hurried and illegible writing of the practitioner intended to convey. In an age of such utilitarian ingenuity as the present it is extraordinary that the inventor has not yet come forward whose device will make it impossible for medical men to write badly. The typewriter is a boon but it is not portable. A correspondent suggests that practitioners might keep printed a certain number of the prescriptions that they most frequently employ and these could easily be carried in the pocket-book. Unfortunately even this proceeding would have but limited scope, for many persons would refuse to believe that proper individual care had been given to their cases if the prescriptions with which they were presented were in anything but the illegible characters to which they are accustomed.

TRAUMATIC HÆMATORRHACHIS.

In the *Edinburgh Medical Journal* for February Dr. A. Miles and Dr. J. C. Carr have described a case of traumatic hæmatorrhachis which presents several points of interest. A dock labourer, aged 36 years, was admitted to hospital on Oct. 6th, 1900, at 10 A.M. On the previous day, at 4 P.M., while heaving a heavy sack over his shoulders, he felt a jerk as if something gave way between the shoulders. After this his back was painful but he worked until 5 o'clock. During the night he slept but in the morning he was prevented from going to work by pain and stiffness between the shoulders. When he coughed he felt a sensation "like the shock of a galvanic battery" from the place in the back where he was hurt down the spine and legs to the toes. He walked to the hospital, a distance of half a mile. On admission the dorsal and cervical spine was rigid. To turn the head he rotated the shoulders. The upper two or three dorsal spines were tender. He walked up two flights of stairs to the ward. About 5 P.M. he coughed and felt the same "galvanic" pain as before. Soon a feeling of numbness over the whole body followed. The upper limbs were moved with difficulty and the range of movement was much restricted. The attitude characteristic of lesions of the first dorsal segment was assumed: the upper arm was slightly abducted, the elbow-joint was acutely flexed, the forearm lay across the thorax semi-pronated, and the fingers were slightly flexed. The lower limbs were completely paralysed. Respiration was entirely diaphragmatic. Sensibility was lost below the third rib and partially on the inner sides of the arms. The knee-jerks were absent and there was retention of urine. The pulse was 60, full, and strong, the temperature was 102° F., and the respiration was from 16 to 20. On Oct. 7th the abdomen gradually became tumid and tympanitic, the respiration was 32 and laboured, the pulse was 96, and the temperature was 102·6°. There was mucus in the trachea which was expelled with difficulty. The spinal pain and tenderness persisted. He was most comfortable when his head was supported by pillows. On the 8th the pupils were contracted, the respiration was 46, the pulse was 110, and the temperature was 103·6°. As the paralysis appeared suddenly about 24 hours after the injury hæmorrhage at the level of the seventh cervical or first dorsal vertebra, extradural or into the substance of the cord, was diagnosed. To relieve the pressure on the cord an operation was performed. Chloroform was taken without difficulty. He was placed in the prone position and the seventh cervical and first dorsal vertebræ were exposed by a mesial incision and clipped off with bone forceps. The laminæ were partially sawn through and the division was completed with bone forceps. A clot of the shape and size of the bowl of a dessert-spoon was removed from between the dura mater and the bone. The cyanosis diminished. There was considerable venous hæmorrhage from vessels between the dura mater and the bone in front of the cord. After plugging with iodoform gauze the wound was partially sutured. On recovering from the chloroform the patient talked incoherently but never completely regained consciousness. Respiration became more and more difficult and death occurred at 8.25 P.M. At the necropsy the bodies of the fifth and sixth cervical vertebræ were found to be separated. Blood had passed down and between the dura mater and the bone and had collected opposite the arches of the first and second dorsal vertebræ. There was no fresh bleeding after the operation. The points of interest are: (1) the effort of heaving the sack caused partial separation of the bodies of the fifth and sixth cervical vertebræ with extradural hæmorrhage; (2) not until 24 hours later were there pressure symptoms; and (3) in spite of the relief of pressure the patient died.

THE MANAGERS OF THE METROPOLITAN ASYLUMS BOARD AND THE MEDICAL OFFICERS OF THE BOARD.

It seems to us that there may be friction between the medical officers of the Metropolitan Asylums Board and the managers of the Board if the attitude of the managers continues to grow in oppressiveness. We have lately chronicled the high-handed behaviour of the Board towards certain junior members of the medical staff; now the position of all the medical officers appears to be threatened. Lighting and coals are for the future to be supplied only upon an allowance and the allowance is, we are informed, inadequate for those who have houses to keep up, while certain minor services, such as inside window cleaning and charing, hitherto rendered by the porters in the pay of the Board, are now to be done by persons obtained from outside and to be paid for by the medical men. The limitations will fall hardly upon certain seniors among the medical staff of the Board and we recommend these gentlemen to make a clear presentment of the matter to the Local Government Board and to ask advice as to their proper procedure. If, and this we presume was the case, the medical men took service under the Board with a promise of gratuitous lighting, coals, and washing, it seems to us that an extreme, if not an illegal, step has been taken by the managers in allocating to the medical men supplies which will entail loss upon certain of them. We do not advocate waste but we are told that the supplies to be granted are insufficient. We all know that the Metropolitan Asylums Board must practise economy, want of business capacity having led it into mis-spending of money; but because the Board has overspent itself on building schemes there is no reason why it should fine its medical officers. If the medical profession gathers the idea from such occurrences as those we detail that the policy of the Board is to repudiate its contracts and "to go for the doctors"—these, we hear, were the words used by one manager—medical men of any standing or ambition will not compete for service with the Board. And when this position is reached and a time of serious epidemic arrives he public will let the Board know what they think of its policy.

A CASE OF OVARIAN HERNIA WITH TWISTED PEDICLE IN AN INFANT.

A case of some interest is recorded by Dr. Julius Schnitzler in the *Wiener Klinische Rundschau*, No. 44, 1903. In an infant a few days after birth a small swelling of the size of a bean appeared in the left inguinal region whenever the child cried but it could always be easily replaced. During six weeks compression was exercised by means of a band without result. On March 25th, 1903, the child, being then six months old, was attacked by gastro-enteritis and the swelling came down again on crying. In the afternoon of the same day the parents found that they could not replace it. On the next day a medical practitioner was called in and finding it impossible to reduce the tumour referred to Dr. Schnitzler who saw the child in the evening. He found an irreducible tumour of the size of a walnut in the left inguinal region extending into the labium majus on that side. This tumour was tender to pressure and the child was somewhat restless but otherwise quite healthy, symptoms of peritoneal irritation being entirely absent. Although the bowels were freely opened, taking into consideration that the tumour had been irreducible for 36 hours, and that it was increasing in size, Dr. Schnitzler decided to operate. On cutting into the hernial sac some blood-stained fluid escaped and the contents were found to consist of the left ovary and tube with part of the broad ligament, the ovary being larger than that of an adult and presenting some slight superficial patches of necrosis, the result of a torsion of the pedicle through 360°. The inguinal canal was so wide that no pressure was exerted on the pedicle, which was then drawn down and ligatured beyond the site of torsion and the ovary and tube were removed and radical cure was performed. Healing took place by first intention. Dr. Schnitzler was able to find two other recorded cases of hernia of the ovary with twisted pedicle. All these cases were in infants in the first few months of life. In none of them were there any signs of intestinal obstruction or of peritonitis and he suggests that an irreducible hernia in a female child without these symptoms indicates the probability of this condition and should be operated upon.

SUBSTITUTION IN THE SPIRIT TRADE.

WE note that in the House of Commons on Feb. 22nd Mr. Kilbride asked the Chancellor of the Exchequer whether he would appoint a committee of analytical experts to fix a legal standard in the case of whisky, such as is done in the case of other articles of consumption, in order to protect the public against spurious substitutions. To this the Chancellor of the Exchequer is reported to have replied that the Board of Inland Revenue did not think that it would be of any practical use to attempt to fix a legal standard for whisky. There was already, he added, a legal standard of strength below which whisky may not be sold without notice and other conditions must necessarily vary according to the taste of the consumer. We can only say that this reply recalls the remark of the late Archbishop of Canterbury that "this is not a very brave Government." We recognise that if a legal standard were adopted it would throw a considerable amount of work on the Government officials, but is that any reason why the public should continue to be deceived on the gigantic scale which the blending of foreign spirit with genuine grape spirit and genuine malt spirit respectively amounts to? Since at present there is no control directed with regard to the quality of foreign spirit so employed it is not surprising that maddening spirituous liquors are to be found upon the market. We long ago called attention to this matter and we do not agree with the Board of Inland Revenue authorities that it would not be of any practical use to attempt to fix a legal standard for potable spirits. We feel convinced that a committee of analytical experts would be able to give a valuable opinion upon this point which would reverse this extraordinary view. If this view be correct what remedy have we against the employment of pernicious spirit for blending purposes? If, as is stated, chemical analysis does not afford a trustworthy means of differentiating the genuine from the false let us at least demand honesty of description upon the label. As a matter of fact, we recorded last week a case in which a conviction was obtained against a firm of refreshment contractors for selling as brandy a spirit which proved on analysis to be not genuine brandy—that is to say, the spirit was "not of the nature, substance, and quality of the article demanded by the purchaser." What have the Government and the Inland Revenue authorities to say about this decision and about this successful action taken under the Sale of Food and Drugs Act? We should like to ask two more questions. If it were shown that a sample, say, of brandy taken under the provisions of the Sale of Food and Drugs Act was not genuine and the seller appealed on the question of the analysis to the Government referees, would they undertake the analysis of the third sample set apart for that purpose and give an opinion? If not, to whom should the appeal be directed?

A BILL FOR THE REGISTRATION OF NURSES.

A BILL has been introduced into the House of Commons by Dr. R Farquharson which proposes to regulate the qualification of trained nurses and to provide for their registration upon lines somewhat similar to those adopted in the case of midwives. The body, however, which it is suggested should assume in relation to nursing the position now filled with reference to midwives by the Central Midwives Board is to consist, according to the Bill, of no less than 31 members, of whom seven are to be medical men, 23 matrons or nurses, and one either a medical man or a nurse. The medical men, it is proposed, shall be appointed, one by the Privy Council, five by the General Medical Council, and one by the British Medical Association. The nurses, except one to be appointed by the Privy Council, are to represent various interests connected with nursing. There are more nurses than midwives, truly, but even then the reason for making the council so large is not apparent and the difficulty of securing the attendance and harmonious working of so large a number during the early years, when the bulk of the work has to be performed, would be very great. The representation of numerous, possibly conflicting or rival, interests by different persons may be sound in principle but it does not lead to the rapid despatch of business, even when there is power, as is proposed in the Bill, to delegate authority to an executive committee. It may be desirable that the public should be able to judge to some extent of the qualifications of women calling themselves nurses by the aid of a test easily applied. Whether the proposed Bill contains practical machinery for bringing this about is another matter. It is to be observed with regard to the attendance of members that the seventeenth section of the Bill provides that "There shall be paid to the members of the council such fees for attendance and such reasonable travelling expenses as shall from time to time be allowed by the council."

EPSOM COLLEGE.

WE have received from Dr. C. Holman, the treasurer of Epsom College, an abridged prospectus of the school, with a letter drawing attention to an epitome of successes during the past ten years. During this period no fewer than 24 open scholarships have been gained at the Universities of Oxford and Cambridge; 35 boys have passed the preliminary scientific examination for the degree of M.B. of the University of London, about half being in Division I.; 129 have passed the matriculation examination of the University of London, the majority in Division I. (one in honours); 81 higher certificates (with 22 distinctions) and 276 lower certificates have been gained at the examination conducted by the Oxford and Cambridge Schools Examination Board; five boys have passed the intermediate science examination and 73 have obtained South Kensington certificates in the art examination in drawing. As Dr. Holman observes, such a record out of a school of about 230 boys is a credit to the teaching staff and to the pupils themselves. The two illustrations of the old buildings and of the new lower school give a very fair idea of the college which stands in its own estate of over 80 acres, of which over 20 acres are devoted to grounds for recreation, cricket, and football. There are a detached infirmary containing about 40 beds, a laundry with a room for drying wet clothes and flannels, a swimming bath which has recently been reconstructed at a cost of over £1000, three (chemical, physical, and biological) laboratories, a gymnasium, and a carpenter's workshop. The college not only has the patronage of the King but members of the Royal Family have taken a personal interest in the school. His Majesty laid the foundation-stone of the lower school a few years ago and last year the Prince of Wales paid a visit to the college and expressed to Dr. Holman his satisfaction at all he saw. The very large number of scholarships and exhibitions open to boys leaving the school should be an attraction to persons with limited incomes. There are nine medical scholarships at the hospital schools in London, ranging in value from 120 guineas to £150, and nine scholarships ranging in value from £27 to £60. Some of the foregoing are restricted to foundation scholars. The school fee is 75 guineas a year but sons of medical men are charged only 65 guineas. The college is managed by a council of 30 governors, many of whom, as will be seen by a glance at the prospectus referred to, have risen to eminence in the medical and other professions, thus parents may safely leave the interests of their sons in the hands of this body. The prospectus has, we understand, been freely circulated amongst members of the medical profession and if anyone has consigned his copy to the waste-paper basket before reading these comments he can obtain another on application to the bursar at No. 3, the College, Epsom.

ANTI-MALARIA MEASURES AT ISMAILIA.

EARLY in the year 1902 the Suez Canal Company, through its chairman, Prince d'Arenberg, asked Sir Alfred Jones, chairman of the Liverpool School of Tropical Medicine, to allow Professor Ronald Ross to proceed to Ismailia, there to advise upon a method of ridding the town of mosquitoes. The school committee agreed and Professor Ross accordingly arrived at Ismailia on Sept. 17th, 1902. Two medical officers of the Canal Company, Dr. Pressat and Dr. Dampeirou, had already discovered the presence of the anopheles. Professor Ross confirmed their observations, made a careful investigation into the various breeding places of mosquitoes, and suggested a plan of campaign. His recommendations have been carried out with great success and from a report of the scheme and its results written by Professor Rubert W. Boyce, which is now before us, we learn that the number of cases of malaria has been reduced from 2284 in 1900 to 209 in 1903, while in this latter year, for the first time, no deaths from malaria are recorded among the European population. Professor Boyce compares the success thus achieved with that attained in Havana by the Government of the United States of America. Professor Boyce himself visited Ismailia this year and made a tour of inspection. Breeding places for mosquitoes were found to be more common in the better class quarters than in the poorer quarters, owing to the presence in the former of baths, fountains in the gardens, cesspools, and waste-water receptacles. Professor Ross had inaugurated two anti-mosquito brigades, one the drain brigade whose duty it is to keep all drains clear, and the other the petroleum brigade whose duty it is to add petroleum to all collections of water which could not be removed. The procedure is as follows, a typical house and garden being taken as an example. Once a week the petroleum brigade visits the house and pours a mixture of crude and ordinary petroleum into all collections of drain and waste water which do not soak away during the day. Petroleum is poured into the water-closets and into the pits which receive the bath and slop waste water. The garden fountain is emptied as far as possible and petroleum is poured into it, the basin being refilled after 12 hours. Stable drains, washing troughs, and all waste-water receptacles are flushed or emptied and petroleum is added. In addition to these measures a considerable strip of low-lying marshy land has been filled up with sand, thus preventing the formation of pools of stagnant water. As Professor Boyce points out, these measures are in reality only an extension of measures of sound sanitation. The report is of great interest and should stimulate the authorities of many of our colonial towns, especially in West Africa, to take similar steps to those recorded in it. If Ismailia and Havana, which latter was notoriously plagued with malaria and yellow fever, have been rendered so hygienic as is the case, there is surely no reason why other towns should not go and do likewise. In this connexion Dr. J. W. W. Stephens's article on anti-malarial operations at Mian Mir, which appears at p. 637, and the report by Captain S P. James, I.M.S., which is reviewed at p. 659, may be studied with advantage.

MEDICAL AND DENTAL DEFENCE IN SCOTLAND.

THE Medical and Dental Defence Union of Scotland, Limited, was formed in May, 1902, and the first annual general meeting was held in Glasgow on Dec. 18th, 1903, by which time there were more than 500 members. The registered office is at 108, West George-street, Glasgow, the secretary and treasurer being Mr. William Young of that address. The executive council has four presidents—namely, Professor A. R. Simpson (Edinburgh), Professor William Stephenson (Aberdeen), Dr. James Finlayson (Glasgow), and Professor J. A. C. Kynoch (St. Andrews). There are many names on the list of vice-presidents, central council, and committees. Four district councils have been formed—namely, for Edinburgh, Dundee, Aberdeen, and Inverness. The objects of the union are:—

(*a*) To protect, support, and safeguard the character and interests of legally qualified medical and dental practitioners and for that purpose to raise or defend actions in name either of any member or of the union. (*b*) To advise members in regard to questions which may arise in the practice of the medical or dental professions and to defend members when attacked. (*c*) To promote honourable practice. (*d*) To consider, originate, promote, and support legislative measures likely to benefit the medical and dental professions and to oppose all measures calculated to injure them, and for these purposes aforesaid to petition Parliament and take such other steps and proceedings as may be deemed expedient.

The subscription is 10*s*. per annum, payable each year on the anniversary of admission as a member and meantime there is no entrance fee. Members may resign at any time on giving two months' notice. Under the articles of association the utmost liability of any member for subscriptions, or in the event of winding up, is £1. The fundamental differences which exist between the laws of England and those of Scotland in many important respects, and the conviction that Scottish practitioners will be protected more adequately in a purely Scottish society, are held as justifying the existence of this union. At the general meeting reference was made to 21 cases in which the union had given advice or otherwise taken action; only one of these cases seems to have been brought into court and proceedings were at that date still going on.

THE INTERNATIONAL CONGRESS ON SCHOOL HYGIENE.

IN THE LANCET of Feb. 13th, p. 455, we announced that the First International Congress on School Hygiene would be held at Nuremberg from April 4th to 9th. Organising committees have been constituted in each of the European countries, in the United States of America, and in Japan. The offices of the English organising committee are at the Parkes Museum, Margaret-street, London, W., Sir Lauder Brunton being the president and Dr. James Kerr the honorary secretary; there are also numerous vice-presidents and members of committee. English, French, and German will be the official languages of the Congress. The

Transactions, which will be duly published, will no doubt be valuable to all who are interested in the subject of education. The work of the congress will be distributed between general meetings and meetings of sections devoted to the following ten subjects:—(1) The School Building and its Furnishings; (2) Hygiene of Residential Schools; (3) Methods of Hygienic Investigation and Research in School; (4) the Physiology and Psychology of Educational Methods and Work; (5) Instruction in Hygiene for Teachers and Scholars; (6) Physical Education and Training in Personal Hygiene; (7) Contagious Diseases, Ill-health, and Conditions affecting Attendance; (8) Special Schools, including those for Feeble-minded, Blind, Deaf, Dumb, Cripple, Invalid, and Exceptional Children; (9) Out of School Hygiene, Holiday Camps and Schools, the Relations of the Home and the School; and (10) the Hygiene of the Teaching Profession. At the general meetings of the whole congress there will be addresses on the following subjects: What has Ophthalmology accomplished for School Hygiene and what still remains to be done? by Professor Hermann Cohn (Breslau); the Present Position of School Hygiene in Norway, by Professor Axel Johannessen (Christiania); the Personal Health of the Teacher and its Influence on the Scholars, by Dr. Le Gendre (Paris); the Organisation of the Elementary School Population according to the natural working capabilities of the children, by Dr. Sickinger (Mannheim); the Duties and Preparation of the School Medical Officer, by Dr. Liebermann (Budapest); and the Prevention of Infectious Diseases in School, by Professor Hueppe (Prague). There will be an exhibition, including all that appertains to education work, school structures, and furnishing. The subscription fee for a card of membership entitling the subscriber to all the privileges of the congress is £1 1*s*. Subscriptions may be paid to the secretary of the English organising committee at the Parkes Museum.

THE annual dinner of the Medical Society of London will be held on Tuesday next, March 8th, at the Whitehall Rooms, Hotel Métropole, at 7.30 P.M. The President, Dr. F. de Havilland Hall, will be in the chair and will be supported by the President of the Royal College of Physicians of London, the President of the Royal College of Surgeons of England, the President of the Royal Medical and Chirurgical and other medical societies, the Directors-General of the Navy and Army Medical Services, the Principal of the University of London, the Regius Professor of Physic in the University of Cambridge, Sir Thomas Smith, Bart., Sir R. Douglas Powell, Bart., Sir G. Scott Robertson, K.C.S.I., and other distinguished guests.

THE annual clinical debate of the Chelsea Clinical Society will be held at the Chelsea Dispensary, Manor-street, King's-road, London, S.W., on Tuesday, March 8th, and Tuesday, March 15th at 8.30 P.M. The subject selected for debate is "Internal Secretion" in Disease and in Treatment. The following gentlemen will speak:—First night, March 8th: Sir Lauder Brunton, Sir Victor Horsley, Dr. H. D. Rolleston, and Dr. A. E. Wright. Second night, March 15th: Dr. A. Macfadyen, Dr. R. T. Hewlett, Dr. W. Hale White, and Dr. J. Rose Bradford. The meetings will be open to all members of the medical profession.

THE medical officer of health of the Cape Colony states that for the week ending Feb. 6th no case of plague was recorded throughout the Colony. Plague-infected rats were found at Port Elizabeth and Queenstown, but of 245 rats examined during the week in the Cape Town and Harbour Board area none was affected with plague. As regards the Mauritius a telegram from the Acting Governor received at the Colonial Office on Feb. 26th states that for the week ending Feb 25th there were three cases of plague and two deaths from the disease.

A MEETING will be held in the Mansion House on Friday, March 11th, at 3 P.M., in support of the appeal for funds for the removal of King's College Hospital to South London. The Right Hon. the Lord Mayor will preside and will be supported by, among others, the Archbishop of Canterbury, the Bishop of Rochester, Archbishop Bourne, Lord Methuen, Sir Savile Crossley, the Rev. A. C. Headlam, Principal of King's College, Dr. David Ferrier, senior physician to the hospital, and Mr. W. Watson Cheyne, senior surgeon to the hospital.

AMONG the 15 candidates selected by the Council for the Fellowship of the Royal Society are Dr. T. G. Brodie, professor of physiology at the Royal Veterinary College and professor-superintendent of the Brown Institute; Dr. G. H. F. Nuttall, university lecturer in bacteriology and preventive medicine at Cambridge; and Professor A. E. Shipley, the well known biologist, university lecturer at Cambridge upon invertebrate morphology.

THE annual meeting of the East London Nursing Society will be held at the Mansion House on Tuesday afternoon, March 15th. The chair will be taken at 3 o'clock by the Right Hon. the Lord Mayor. Motions will be proposed or supported by the Ven. the Archdeacon of London, Dr. Robert Hutchison, Mr. John Tennant (chairman of the society), and others.

THE annual general meeting of the London and Counties Medical Protection Society will be held at 31, Craven-street, Strand, London, W.C., on Friday, March 11th, at 4.30 P.M., when in view of the proposal that the British Medical Association shall undertake medical defence a large attendance may be expected.

THE Local Government Board for Scotland reports that during the period Feb. 16th to 29th inclusive 242 cases of small-pox were notified to it. The local incidence of the disease is heaviest in the borough of Greenock where the cases amount to 9·97 per 10,000 of the population.

A DECIDED change for the better has, we are glad to hear, taken place in the course of the illness of Sir Samuel Wilks, so that confident hopes are now entertained of his recovery. During the last few days his strength has increased and he has been able to take more nourishment.

MR. G. E. Richmond, M.D., B.S., B.A., B.Sc. Lond., D.P.H. Camb., has been appointed demonstrator of hygiene and public health at University College, London.

ROYAL MICROSCOPICAL SOCIETY.—At the meeting of the Royal Microscopical Society held on Feb. 17th, the secretary read for Mr. E. M. Nelson a paper on the Vertical Illuminator and the Influence of the Antipoint on the Microscopic Image. Various methods of obtaining vertical illumination were described, with especial reference to the portion of the optic axis at which the reflector was placed. Mr. Keith Lucas showed a microscope stand made by himself in which the various motions were produced by means of geometric slides. He said that the principle had been applied to reading microscopes but not to biological microscopes so far as he was aware. He claimed for the system the following advantages: (1) cheapness of manufacture; (2) impossibility of the movement becoming shaky from wear; and (3) optical alignment of the body tube with the substage fittings.

THE ROYAL VISIT TO CAMBRIDGE.

MARCH 1st, 1904, was an interesting and memorable day for the University of Cambridge when His Majesty King Edward VII., accompanied by Queen Alexandra, inspected and opened the new buildings recently erected for the instruction of students in medicine, botany, geology, and law. We described the medical school in detail last week and excellent photographs taken by Mr. Palmer Clark of Cambridge have enabled our readers to form a good idea of the buildings.

In the interesting ceremonies, which occupied the afternoon, as well as in the Congregation in the Senate House in the morning, a distinguished gathering of members of the medical profession, including the President of the Royal College of Physicians of London and the President of the Royal College of Surgeons of England, played a conspicuous part and in the mass of scarlet robes everywhere visible the gown of the Doctor of Medicine of Cambridge naturally predominated. That medicine should be largely represented upon such an occasion was to be expected, for not only did the opening of the new medical schools form the first item upon the programme of the afternoon, to be followed by similar ceremonies in the departments of the kindred sciences of botany and geology, but the geological museum, a vast building filled with cases of specimens too numerous for more than cursory inspection in the course of an afternoon, has as its nucleus two cabinets of fossils bequeathed by John Woodward who took his degree as a doctor of medicine at Cambridge in 1695 and whose somewhat vigorously conducted quarrels with Sir Hans Sloane and others earned him a character for eccentricity, as well as for prodigious and recondite learning, in the early part of the eighteenth century. It was as Woodwardian Professor that Adam Sedgwick began the work which had remained undone since Woodward's day, and in the same capacity Professor T. McK Hughes invited King Edward to unveil Sedgwick's statue by the late Onslow Ford. The organisation of all the ceremonial of the day was beyond praise and everything was conducted throughout with a complete absence of hitch or delay. In the Senate House the only pauses in the proceedings were due to the vociferous cheering with which the undergraduates in the galleries, well supported by those below them, greeted the arrival of the Royal party at the head of a long procession of doctors of the university, and punctuated the addresses read by the Vice Chancellor and His Majesty's reply. In his first address the Vice-Chancellor referred to the faculty of medicine as having had from the earliest days of the University an honoured place in it and expressed the hope that it would now have a home worthy of its splendid progress in recent days, and King Edward in his reply, expressed his confidence that at Cambridge the progress thus referred to would be continued, adding, "to the older universities must succeed new endowments for education if my realm is to be kept up to its proper standard of efficiency."

After the conclusion of this portion of the proceedings the royal party drove to the Fitzwilliam Museum for luncheon, the Queen pausing before leaving the Senate House to shake hands with Sir William Broadbent who had been seated on the left of the platform near the two presidents. The royal party, with a few of the distinguished visitors and heads of colleges, were entertained at the Fitzwilliam Museum in the central picture gallery, and a large gathering at the same time enjoyed the hospitality of the Chancellor in the hall of King's College. When the Royal party after luncheon had driven to the doors of the medical school they were there received by Dr. T. Clifford Allbutt, Regius professor of physic, and Dr. G. Sims Woodhead, professor of pathology; Dr. J. B. Bradbury, Downing professor of medicine, being prevented by regrettable indisposition from attending to represent pharmacology. Professor Clifford Allbutt conducted the King and Queen with H.R.H. Princess Victoria to the Humphry Museum which they examined with interest and where Lady Humphry, the widow of the late professor of surgery after whom the museum is named, was presented to their Majesties. From the Humphry Museum the Royal party proceeded to the library where Professor Sims Woodhead did the honours, exhibiting the working of the sliding bookcases which he had chosen for their purpose after seeing similar ones used in the United States of America. A very small boy was intrusted with the demonstration of the ease with which several hundredweights of books can be made available in a moment and returned to occupy a fourth part of the wall space which they would fill in normal shelves. Specimens and illustrations connected with pathology had been arranged upon a table in the library of which their Majesties and Princess Victoria made a close examination, evincing particular interest in the specimens of trypanosoma nagana which Professor Sims Woodhead placed before them under a microscope and explained. After this, on His Majesty inquiring what more there might be for him to see in the building, Dr. W. E. Dixon exhibited some physiological experiments in the small pharmacological museum. So great, indeed, was the interest shown by their Majesties in what they saw and so long did they remain in the medical schools, that the crowd awaiting them in the courtyard of the buildings on the other side of the road to which they then proceeded had begun to wonder what could be detaining them. They were, however, able to complete their inspection of all with equal thoroughness. In the Botanical School, where they were received by Professor Ward, and in the Sedgwick Museum of Geology they saw and examined collections which in their present state demonstrated to all the need for new and ample buildings to contain them, and which, no doubt, will in course of time be largely increased. In the latter building the ceremonies of the day were brought to a fitting conclusion by the unveiling of the memorial statue of Professor Sedgwick, to the memory of whose character and life's work Professor Hughes paid eloquent tribute in an admirably delivered speech.

To Professor Clifford Allbutt, Professor Sims Woodhead, Professor Hughes, Professor Ward, and to all their colleagues who have worked long and earnestly in order to bring about those conditions in the University of which the splendid buildings now inaugurated are the outward manifestation, warm congratulations are due, and Cambridge will ever hold their names in honoured remembrance. Upon the success of a brilliant day to which their courteous grace and keen interest in all that was shown to them contributed in no small degree, we venture to congratulate our King and Queen, as well as upon the health and strength which enabled them to fulfil no slight task without apparent symptoms of effort or fatigue.

WORKMEN'S COMPENSATION ACT, 1897.

Sharman v. *Holliday and Greenwood, Limited.*

IN the Court of Appeal on Dec. 18th, 1903, an important decision was arrived at in regard to an appeal from a decision of the judge of the Lambeth county-court on an application under the Workmen's Compensation Act, 1897. The applicant was a workman named William Sharman who while in the employ of Messrs. Holliday and Greenwood had met with an accident arising out of, and in the course of, his employment, by which his leg was broken and he was for the time totally incapacitated for work. A memorandum of agreement was filed in the county-court by which the respondents agreed to make to the applicant a weekly payment of 15*s*. during his incapacity for work. Some time after the respondents applied to the county-court judge for a review of the weekly payment on the ground that the applicant's incapacity for work had ceased. At the hearing of that application medical evidence was called for both sides on the question whether the injury had or had not resulted in such a condition of the bones of the man's leg as to incapacitate him for work in future, and the county-court judge ultimately reduced the weekly payment to a nominal amount in accordance with the practice adopted in Pomphrey *v.* Southwark Press. In so deciding, he said, in substance, that the case was a very serious one, the question being really whether the applicant's claim was fraudulent or not; that the case was a difficult one but he thought that he was bound to come to the conclusion on the weight of the medical evidence that he should reduce the amount to the nominal sum of 1*d*. per week; but that the door was still open for the applicant to come again. Subsequently the applicant applied for a further review of the weekly payment on the ground that he had since the previous hearing sought work from several employers and been refused on the ground that he was not able to do it on account of the state of his leg, and also that on one occasion on which he had been able to get work he was subsequently discharged as being incapable of doing it on account of his condition. It was arranged that to save the expense of bringing further evidence, which possibly might be thrown away, the counsel for both parties should attend before the county-court judge in order that the applicant might formulate the grounds on which a further review was asked for and the judge might decide whether *primâ facie* they afforded any sufficient ground for reopening the case. At this preliminary hearing the counsel for the applicant stated that his grounds for asking for a review were: (1) the fact that the applicant had been refused employment repeatedly, even by his former masters, on account of the condition of his foot; (2) the fact that the county-court judge did not decide the case at the hearing solely on the medical evidence but partly on his personal observation of the applicant's movements, and that the highest expert medical evidence, on new observation and tests of the condition of the applicant, was now tendered to show that the applicant was unfit to follow his usual employment; (3) the fact that the learned judge kept the arbitration alive by awarding 1*d.* weekly in view of a change in the circumstances and that, the arbitration being so kept alive, it could not be *res judicata;* (4) the fact that the applicant did not seek for a fresh award but for a review of the weekly payment. The county-court judge held that, as he had decided on the previous occasion that the applicant's earning powers were not at that time diminished and as the present application was again on the ground of total incapacity the matter was *res judicata*, and that there was no evidence tendered of any change of circumstances since the previous hearing. He therefore dismissed the application.

After the case had been argued the Court of Appeal held that the doctrine of *res judicata* did not apply to the decision of the county-court judge on the previous hearing and that there apparently being evidence of a change of circumstances he ought to entertain the application. In the course of stating his opinion Lord Justice Mathew said that the position taken up by the respondents' counsel was that, although symptoms might develop after the original inquiry, which were clearly traceable to the accident but which were not before observed, nevertheless the doctrine of *res judicata* applied and there could be no further inquiry. He could see nothing in the Act itself which forbade further inquiry if after the original inquiry fresh symptoms developed or further incapacity for work was shown to have arisen. The expert witnesses on the side of an employer might be of opinion that, having regard to the symptoms then appearing, the condition of the workman was not such as to incapacitate him in future for work and the county-court judge might decide accordingly; but if the workman afterwards solved the question by experiment and on his endeavouring to obtain employment the result proved clearly that he was incapacitated there seemed to him (Lord Justice Mathew) to be no good reason why the county-court judge should be prevented from going into the matter again and reviewing the award. It would, in his opinion, be most unjust if in such a case the doctrine of *res judicata* should prevent the injured workman from applying for adequate compensation.

In accordance with the result of the appeal the case was tried again before Judge Emden in the Lambeth county-court on Feb. 26th.

In opening the case Mr. A. H. RUEGG, K.C., explained that he applied to the court under Clause 12 of the first schedule of the Workmen's Compensation Act, which said: "Any weekly payment may be reviewed at the request either of the employer or of the workman and on such review may be ended, diminished, or increased subject to the maximum." In August, 1901, the man Sharman was working for Holliday and Greenwood when a stack of timber fell upon him, breaking his left leg. The man was taken to St. Thomas's Hospital and it was ultimately found that the case was one of a serious and permanent injury. The employers, Messrs. Holliday and Greenwood, were liable for the accident and they were insured in an insurance company which recognised that it was a case of liability. They paid the man 15*s.* a week from August, 1901, till Jan. 21st, 1903, when the company applied at the Lambeth county-court to stop paying the money because in their opinion the case was a fraud and the man was shamming. The insurance company called as witnesses on their side Mr. T. D. Patmore and two other medical men. On the man's side Mr. Bernard Pitts was called but as Mr. Ruegg reminded Judge Emden he (the judge) said at that time that he was obliged to find upon the balance of the medical evidence that the man was shamming and that the injury from which he was apparently suffering was not a true injury at that time. Mr. Ruegg then went on to say that when that judgment was delivered there seemed to be a common mistake with regard to the question of the injury to the man's leg and with regard to the electrical reactions of the muscles of the leg. A test was applied in court by electricity and it was found that the muscles reacted normally and that on behalf of the insurance company was said to be a very important fact and it was supposed had some effect on the judgment delivered by Judge Emden. Mr. Ruegg said that he now had got evidence to lay before the judge that would satisfy him beyond all doubt that the electrical testing proved absolutely nothing in respect to the injury sustained by the man. The injury received was a mechanical one and it would be proved by skiagrams that a serious fracture at the ankle was caused by the accident in addition to the fracture of the tibia and fibula higher up.

The patient, WILLIAM SHARMAN, then gave evidence that after Jan. 21st, 1903, when his weekly allowance was reduced to one penny per week, he had sought to get work. A builder to whom he applied refused to give him a job because he was a cripple, a plasterer at Stockwell tried him for five hours and then discharged him, and several other employers of labour first tried him and then dismissed him on account of his leg.

The next witness was Mr. BERNARD PITTS, surgeon to St. Thomas's Hospital, who said that the injury received by the man had involved the bones of the ankle-joint with the result that the man was lame and permanently disabled. In answer to Judge Emden, Mr. Pitts explained that there was a fracture in two places, a fracture at the shaft and a fracture at the ankle. The fracture involving the ankle was attended with a displacement which caused lameness and which would continue to cause lameness. He repeated that he had pointed out before that the results of electrically testing the condition of the muscles could have nothing at all to do with the case and could not throw any light on it. In his opinion the disability of the man would increase with time rather than improve.

Mr. W. WATSON CHEYNE, surgeon to King's College Hospital, said that he had examined the patient and that he had clearly had a fracture in the neighbourhood of the ankle of both bones and it was known that he had had a fracture of the tibia and fibula higher up. The fracture of the ankle had caused a displacement of the foot and it was impossible for the man voluntarily to put the foot in the position it was in. In his opinion the man was not shamming and the injury would incapacitate him from the work of a labouring man for life. In reply to a question as to what he thought about the medical men who had examined the man's ankle most carefully and were ready to stake their reputation that there was no injury to the ankle at all Mr. Watson Cheyne simply said, "I am very sorry for them." He added that he was quite prepared to stake his reputation on the opinion he had expressed and explained that the patient had been taken to the Examination Hall, Victoria Embankment, for examination purposes and all the examiners had agreed as to the injury in regard to the case.

Mr. A. PEARCE GOULD, surgeon to the Middlesex Hospital, said that he had examined the patient and had come to the conclusion that there had been a fracture at the ankle-joint with a displacement of the foot. The man was lame by reason of the injury which was certain to be permanent and he could not believe that the man was an impostor. The man would always walk very slowly and was capable of only doing work that did not involve a steady balance and it had to be remembered that he would always walk with pain.

Mr. C. A. BALLANCE, assistant surgeon to St. Thomas's Hospital, said that he had examined the man's ankle and found that there had been a fracture of both bones of the leg in the neighbourhood of the ankle so that the foot was distorted. The inner border of the foot in standing and walking touched the ground in an abnormal manner. Pain would be caused if standing and walking were persisted in for any length of time. The man in his opinion was not shamming and would never be able to work.

Mr. E. C. STABB, surgeon to the Great Northern Central [illegible] Paddington Green Children's Hospital, said [illegible] and found consider- [illegible] by a fracture; the foot was displaced so that the inner border of the foot was lower than the outer. The man was perfectly unable to stand on his left foot alone.

to compel such persons to subject themselves to examination in Lincoln's-inn-fields. This Bill was, on various grounds, however, rejected by Parliament, and as it tended rather to benefit the College than the Profession, its fate is little to be regretted.

On the part of the Association a new Bill was prepared, the College of Physicians agreeing no longer to oppose its introduction into Parliament, provided the power of examining candidates were vested in the Apothecaries' Society.

In the year 1815, it was therefore permitted to receive the sanction of the legislature, and assume the force of law; those who look carefully into the Act will, I think, be of opinion with me, that it bears the marks of having been grievously maimed in its progress into the world; certainly the great body of General Practitioners were justly dissatisfied with several of its provisions.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 8526 births and 5137 deaths were registered during the week ending Feb. 27th. The annual rate of mortality in these towns, which had been 17·2, 18·4, and 18·5 per 1000 in the three preceding weeks, declined again last week to 17·5 per 1000. In London the death-rate was 16·5 per 1000, while it averaged 18·0 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 6·4 in Hornsey, 8·5 in East Ham, 9 6 in Handsworth (Staffs.), 10·2 in King's Norton, 10·8 in Tynemouth, 10·9 in Northampton, 11·8 in Willesden, 12·1 in Derby, and 12·2 in Walthamstow; the highest rates were 23·2 in Wigan, 23·7 in Stockport, 24·0 in Great Yarmouth, 24·2 in Halifax, 24·4 in Norwich, 25·1 in Merthyr Tydfil, 27·1 in St. Helens and in Warrington, and 30·6 in Plymouth. The 5137 deaths in these towns last week included 420 which were referred to the principal infectious diseases, against 412, 449, and 493 in the three preceding weeks; of these 420 deaths 163 resulted from whooping-cough, 104 from measles, 58 from diphtheria, 54 from diarrhœa, 22 from scarlet fever, 17 from "fever" (principally enteric), and two from small-pox. In Hornsey, Walthamstow, Reading, Devonport, Leicester, Huddersfield, and in 11 other smaller towns no death from any of the principal infectious diseases was registered, while they caused the highest death-rates in Great Yarmouth, Norwich, Birmingham, Warrington, Bury, Burnley, Rochdale, and West Hartlepool. The greatest proportional mortality from measles occurred in Great Yarmouth, Norwich, Aston Manor, Stockport, Warrington, Bury, Cardiff, and Rhondda; from scarlet fever in Walsall; from diphtheria in Hanley, Bootle, and Oldham; and from whooping-cough in Wolverhampton, Wigan, Warrington, Bolton, Rochdale, Burnley, West Hartlepool, Gateshead, Newport (Mon.), and Swansea. The mortality from "fever" and from diarrhœa showed no marked excess in any of the large towns. Of the two fatal cases registered in these towns last week one belonged to London and one to Gateshead. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 25, 24, and 29 at the end of the three preceding weeks, had further risen to 31 at the end of last week; five new cases were admitted during the week, against eight, three, and nine in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital was 1587 on Saturday last, Feb. 27th, against 1657, 1644, and 1620 on the three preceding Saturdays; 150 new cases were admitted during the week, against 169, 162, and 143 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 347, 324, and 349 in the three preceding weeks, declined again to 322 last week, but were 51 above the number in the corresponding period of the preceding year. The causes of 78, or 1 5 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Leeds, Newcastle-on-Tyne, and in 40 other smaller towns; the largest proportions of uncertified deaths were registered in Portsmouth, Birmingham, Liverpool, St. Helens, Blackburn, Sheffield, Rotherham, Sunderland, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18·5, 19·2, and 22·2 per 1000 in the three preceding weeks, declined again to 21·8 per 1000 during the week ending Feb. 27th, but was 4·3 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 13·0 in Leith and 18·5 in Perth to 24·8 in Paisley and 26·2 in Greenock. The 720 deaths in these towns included 27 which were referred to measles, 21 to whooping-cough, 11 to diarrhœa, six to small-pox, six to "fever," five to diphtheria, and three to scarlet fever. In all, 79 deaths resulted from these principal infectious diseases last week, against 44, 72, and 75 in the three preceding weeks. These 79 deaths were equal to an annual rate of 2·4 per 1000, which was 1·0 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been seven, 21, and 19 in the three preceding weeks, rose again last week to 27, of which 19 occurred in Glasgow, four in Dundee, and four in Paisley. The deaths from whooping-cough, which had been 15, 24, and 26 in the three preceding weeks, declined again to 21 last week, and included six in Aberdeen, five in Glasgow, four in Leith, three in Edinburgh, and three in Dundee. The fatal cases of diarrhœa, which had been 11, 20, and 18 in the three preceding weeks, decreased again last week to 11, of which five were registered in Glasgow, two in Dundee, and two in Aberdeen. The deaths from small-pox, which had been three, one, and five in the three preceding weeks, further rose to six last week, and included four in Greenock and two in Glasgow. The fatal cases of "fever," which had been two, one, and one in the three preceding weeks, increased again last week to six, of which three occurred in Glasgow. The deaths from diphtheria, which had been three, three, and six in the three preceding weeks, declined again to five last week, and included two in Dundee. Of the three fatal cases of scarlet fever two were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 129, 126, and 167 in the three preceding weeks, declined again last week to 165, but were 73 in excess of the number in the corresponding period of last year. The causes of 33, or nearly 5 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 30·5, 27·2, and 29·7 per 1000 in the three preceding weeks, declined again to 27·2 per 1000 during the week ending Feb. 27th. During the past four weeks the death-rate has averaged 28·7 per 1000, the rates during the same period being 17·4 in London and 17·6 in Edinburgh. The 198 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 18 from the number in the preceding week and included 15 which were referred to the principal infectious diseases, against 12, ten, and 16 in the three preceding weeks; of these, 11 resulted from whooping-cough, two from measles, and two from "fever," but not any from small-pox, scarlet fever, diphtheria, or diarrhœa. These 15 deaths were equal to an annual rate of 2·1 per 1000, the death-rates last week from the principal infectious diseases being 1·5 in London and 0·8 in Edinburgh. The fatal cases of whooping-cough, which had been nine, six, and nine in the three preceding weeks, further rose last week to 11. The 198 deaths in Dublin last week included 38 of children under one year of age and 58 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons showed a slight decline from the respective numbers recorded in the preceding week. Four inquest cases and three deaths from violence were registered, and 65, or nearly a third, of the deaths occurred in public institutions. The causes of nine, or nearly 5 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon: E. R. D. Fasken to the *Æolus*. Staff Surgeon: E. Corcoran to be Staff Surgeon in charge of Royal Naval Hospital, Portsmouth. Surgeons: *W. L. Martin to the Moorhen* on recommissioning; G. O. Cross to the *Teale*; O. H Dawe to the *Snipe*; G. D. Bateman to the *Tamar*; and C. T. Baxter to the *Alert*.

Deputy Inspector-General of Hospitals and Fleets Herbert Mackay Ellis has been promoted to the rank of Inspector-General of Hospitals and Fleets in His Majesty's Fleet (dated Feb. 18th, 1904).

The undermentioned Surgeons have been promoted to the rank of Staff Surgeon in His Majesty's Fleet:—Thomas Dufour Halahan and Percy Hamilton Boyden (dated Nov. 14th, 1901); Norman Ireland Smith and Shirley Hall Birt (dated May 16th, 1902); and William Reynolds Trythall (dated Nov. 12th, 1903).

ROYAL ARMY MEDICAL CORPS.

The undermentioned Lieutenants are confirmed in that rank:—W. F. Ellis, F. W. W. Dawson, J. H. Duguid, G. W. G. Hughes, A. O. H. Gray, D. P. Watson, T. S. Dudding, J. E. Powell, F. M. M. Ommanney, O. Ievers, R. H. MacNicol, H. H. J. Fawcett, S. L. Pallant, N. DE. Harvey, C. R. Bradley, S. E. Lewis, G. A. Kempthorne, J. T. McEntire, F. M. G. Tulloch, P. J. Hanafin, J. D. Richmond, E. M. Glanvill, M. C. Wetherell, H. O. Hildreth, G. S. Mackay, W. MacD. MacDowall, and R. T. Collins.

Major H. S. Peeke has joined at Aldershot for duty and has taken over the medical charge of the Cavalry Brigade. Captain G. Dansey-Browning has joined the Aldershot Command and been posted to the Princess Louise Hospital at Alton for duty. Lieutenants R. L. V. Foster and G. W. Smith proceed for Bombay shortly. The following officers have been posted for duty: Lieutenant O. Ievers, Lieutenant R. H. MacNicol, Lieutenant J. T. McEntire, Lieutenant N. DE. Harvey, and Lieutenant P. J. Hanafin to the Curragh. Lieutenant A. O. Osburn and Lieutenant F. M. Tullock to join the Medical College, London. Lieutenant D. P. Watson, Lieutenant S. L. Pallant, Lieutenant M. C. Wetherell, Lieutenant T. S. Dudding, Lieutenant C. R Bradley, Lieutenant H. H. J. Fawcett, Lieutenant R. T. Collins, and Lieutenant G. S. Mackay at Netley.

INDIAN MEDICAL SERVICE.

The King has approved of the retirement from the service of the undermentioned officer: Lieutenant-Colonel Walter Peter Carson (dated Jan. 28th, 1904).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant A. A. MacKeith, 1st Hampshire Royal Garrison Artillery (Volunteers), to be Surgeon-Lieutenant (dated Feb. 27th, 1904).

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion the Buffs (East Kent Regiment: Surgeon-Captain A. E Larking resigns his commission (dated Feb. 27th, 1904). 4th (Hunts) Volunteer Battalion the Bedfordshire Regiment: The undermentioned Surgeon-Lieutenants to be Surgeon Captains: E. J. Cross (dated Feb. 27th, 1904) and W. F. Fisher (dated Feb. 27th, 1904). 1st Volunteer Battalion the Lancashire Fusiliers: The undermentioned Surgeon-Captains to be borne as Supernumerary whilst doing duty with the Lancashire Fusiliers Volunteer Infantry Brigade Bearer Company: R. Mitchell (dated Feb. 27th, 1904); A. P. Nuttall (dated Feb. 27th, 1904); and J. W. Cook (dated Feb. 27th, 1904).

THE REMOVAL OF WOUNDED SOLDIERS FROM THE FIELD OF BATTLE.

In the land battles of the future it is unfortunately only too probable that the tale of wounded men will be enormous. The cases requiring medical assistance will be so numerous that the means of transport ordinarily at the disposal of the medical authorities will prove to be totally insufficient. So much depends on the precautional measures adopted when a wounded man is lifted from the spot where he has fallen in order to be conveyed to a place where his injuries can be investigated and adequately attended to that every effort should be made in time of peace to organise a system whereby a sufficiency of trained men may become available without any delay when emergencies arise. Four bearers are required to carry a wounded soldier off the field of battle if the distance is considerable and of these one at least should be a trained man. It is not at all likely, however, that during and after a severe engagement there would be a sufficient number of trained men on the spot and the possibility must also be contemplated that the number of stretchers may also be deficient. *Cases of this description can be treated in three* ways: (1) the wounded men may be left unattended for a time—a most undesirable thing; (2) they may be removed

late number of the *Deutsche Militarärztliche Zeitschrift* Dr. Jerzabek strongly advocates the last named view, which he maintains is by no means so unreasonable as might at first sight be supposed. The expenditure of time would be inconsiderable because stretcher instruction could be combined with that at present given in the application of the dressing material which all soldiers carry. Every recruit could be taught the manipulation of the regulation stretcher, but this is not absolutely essential because wherever trained bearers were insufficient there would probably be a deficiency of regulation stretchers also. If time were an object this portion of the course could be dispensed with and it would not be necessary to burden the recruit's memory with details of the various methods for improvising stretchers out of sacks, tentcloth, overcoats, &c., with which many manuals are overloaded. One particular form of appliance for use in an emergency should be selected and every man should be thoroughly taught how to manipulate it. The appliance which Dr. Jerzabek considers most suitable for the purpose is one which has been employed, he says, with great success by French, Dutch, and English colonial forces. It consists of a rod (bamboo for choice) from ten to 12 feet long and capable of supporting in the horizontal position a weight of 330 pounds, a piece of light canvas ten feet by four, and some fine but strong cord. The canvas rolled from each end till the rolls almost meet should be turned upside down and slipped sideways beneath the wounded man's buttocks. The rolls should then be gently unrolled under him, leaving something more than two feet free at his head and his feet respectively. These projecting portions should be re-rolled inversely as far as may be convenient and then bent upwards till their ends overlap each other. In this position they should be firmly tied, forming a ring through which the rod is to be passed. Should an injured limb require support a sling can be passed under it and the ends made fast to the pole. On arrival at the dressing station the canvas freed from its cords can be made to serve as a sheet if necessary. The appliance is most portable and very light. A great number of them could be carried up to the fighting line in an empty regulation stretcher.

ARMY REFORM: SECOND REPORT OF LORD ESHER'S COMMITTEE.

The War Office Reconstruction Committee has issued the second part of its report; the third is shortly to follow and the scheme will then be complete, when it can be fully *considered* with a view to a more satisfactory and definite judgment being given in regard to it as a whole. Meanwhile there are certain points which cannot escape attention. To begin with, the enormous amount of labour involved in designing and drawing up a scheme of this kind and the rapidity with which the work is being done are something remarkable. The task which the committee—composed of Lord Esher, Admiral Sir J. Fisher, and Lieutenant-Colonel Sir G. Clarke—had to undertake was of the most difficult and intricate kind, demanding power of organisation and constructive ability as well as directness of aim and intellectual courage for its solution. The reforms proposed in Part II. are as drastic as those previously set forth. The newly issued report is prefaced by a letter addressed to the Prime Minister by the committee in which it is stated that "His Majesty's Government have already approved of the whole of Part I., and we strongly urge the acceptance of the proposals now laid before you in Part II. in order that they may forthwith be put

Part III of our report, which deals with

es of the War Office other

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other matters of importance,

ission. We desire it to be

clearly understood that our scheme of reform has been conceived and elaborated as a whole and that any interference with the principles on which it is based would necessarily destroy its benefits. With the completion of Part III. our mission will have been fulfilled." In Section IV. of Part II. dealing with "the chief of the general staff" we find the following remarks: "There is at the present time a great lack of information as regards technical military progress in other countries. An officer of Royal Artillery and of the Royal Army Medical Corps should therefore be attached to the section of the director of military operations which deals with intelligence. It should be the duty of these officers to supply the branch of the master-general of the Ordnance and the director-general of the Army Medical Services with information in regard to new developments of armaments or of military hygiene and these officers should be enabled to travel for this purpose when necessary." If the boldest course in certain circumstances is the best no fault can be found with the committee's reports in this respect. We may assume that in a general way our readers are acquainted with the sweeping and wholesale changes proposed by the committee which, if carried out, will be almost tantamount to having a new army, a new War Office, and a new army system. As regards the Army Medical Service, we shall be better able to speak after the House of Commons has had an opportunity of expressing an opinion on the new army scheme and when the third and last part of the committee's report has been published.

THE ARMY ESTIMATES.

We gather from the Army Estimates for 1904-05 that the total number of men to be voted is 227,000 and shows a decrease of 8761, as compared with the numbers voted for 1903-04 Of this decrease 4200 are due to the increased garrison of South Africa being found in 1904-05 within the ordinary establishments, instead of being provided for by a vote of temporary additional numbers, as in 1903-04. The balance of 4561 is due to decreases in other corps. On the other hand, there are small increases in the Royal Army Medical Corps and the Army Pay Corps. The estimate for the Royal Army Medical Corps is for a strength of 4648 for the coming and present financial year as compared with 4154 in 1903-04. The figures for the Army Medical Staff (including Headquarters Staff) and medical officers not included under the Royal Army Medical Corps remain the same. The estimated cost of the medical establishment for pay, &c., for the present financial year is £484,000, as against £530,000 for the past year—a decrease of £46,000. The establishment of British regiments of all ranks serving in India gives an estimated total of 74,657, which includes 337 Royal Army Medical Corps.

THE HEALTH OF THE ROYAL NAVY.

The statistical report of the health of the Royal Navy for the year 1902 has just been issued in the form of a blue-book. The returns for the total force serving afloat in the year under notice, the report states, may be considered satisfactory. With a *personnel* increased by 1190 as compared with the previous year there is an increase in cases and deaths but a decrease in invalidings. The numbers are respectively 85,769, 590, and 2985, in comparison with 84,026, 526, and 3108 in 1901. The aggregate number of cases of disease and injury recorded during the year furnishes a ratio of 861·13 per 1000, which shows an increase of 7·3 per 1000 as compared with the ratio for 1901, but a decrease of 22·2 when contrasted with the average of the last five years. The prevalence of, and mortality from, enteric fever show a slight decrease; one case of plague is recorded and there were five cases of cholera, with four deaths. A decline in the ratio of cases of primary syphilis is shown but increases are shown as regards constitutional syphilis and gonorrhœa. Two cases of wounds in action are recorded, with one death.

THE NEW INSPECTOR-GENERAL.

It is officially announced that with the approval of the King H R H. the Duke of Connaught and Strathearn has been appointed as the new Inspector-General of the Forces and President of the Selection Board.

We understand that arrangements are in progress for extending in the Army a system of training for increasing the visual powers of soldiers and developing their powers of observation in the field.

Brevet Colonel D. Bruce, R.A.M.C., has been specially selected for increased pay under Art. 365 of the Pay Warrant.

Obituary.

SIR EDWARD HENRY SIEVEKING, M.D. EDIN., F.R.C.P. LOND.,

PHYSICIAN-IN-ORDINARY TO THE LATE QUEEN VICTORIA; PHYSICIAN EXTRAORDINARY TO THE KING; PHYSICIAN TO THE LATE DUKE OF CAMBRIDGE; CONSULTING PHYSICIAN TO ST. MARY'S HOSPITAL AND TO THE LOCK HOSPITAL.

As we briefly announced last week Sir Edward Henry Sieveking died on Feb. 24th at his house in Manchester-square. The medical profession of this country has thereby lost one of its best known members who for more than 50 years enjoyed a distinguished position not only as a physician in the scientific sense but as the trusted medical adviser of the highest personages of the State.

Sir Edward Sieveking, who at the time of his death had attained the advanced age of 87 years, was born in St. Helen's-place, Bishopsgate, in the City of London, on August 24th, 1816. For an outline of his lineage and youthful journeyings on the continent we are indebted to some autobiographical memoranda which have been intrusted to us by his youngest son Mr. A. Forbes Sieveking, and which we hope may eventually be given to the public in an extended form. Sieveking was descended from an ancient Westphalian or North German Lutheran family. It is suggested that the original spelling of the name was Sieviking, a name which marked descent from the Vikings, the Scandinavian adventurers who settled in Westphalia in the eleventh century. Anyhow, the family dates back to the sixteenth century and subsequently became prominent in the intellectual, political, and mercantile circles of Hamburg. In the early part of last century, for instance, an uncle was known among European statesmen in connexion with the negotiation of commercial treaties. Sieveking's parents came from Hamburg and settled in London in 1809, his father becoming a merchant in Fenchurch-street. His mother was a daughter of Senator J. V. Meyer of Hamburg. His education was commenced in England and continued on the continent, first at the Gymnasium of Ratzeburg (about the time when Samuel Taylor Coleridge was writing some of his best known letters from the lake-girt island near Lübeck in Mecklenburg-Strelitz) and then at the Gymnasium of Berlin. Of his stay at the latter school and his subsequent movements he has left a record as follows: "I passed the *Abiturienten-Examen*, obtained a certificate of 'maturity,' and transferred my allegiance to the Berlin University, where I dissected under Schiemann, attended the lectures on physiology by Johannes Müller and those on chemistry under Mitscherlich, and then went to Bonn for a year where I attended lectures on surgery and made myself well acquainted with the Rhine and its lovely tributaries. ...... For two years I studied medicine at University College, London, and then went to Edinburgh University where I graduated as M.D. in 1841, my thesis on 'Erysipelas' receiving a star of distinction. In the latter part of 1841 I went to Paris for the winter and studied at the Hôtel Dieu under Andral, at the Hôpital St. Louis (for skin diseases), and the Hôpital du Midi, where I followed the practice and teaching of Ricord, ... travelled through France and North Italy to Vienna, where Jager especially attracted me, and I attended a private course of ophthalmic surgery under his assistant Rigl, when I travelled with my parents through Hungary, Tyrol, and South Germany." After his *wanderjahre* he practised for a short time, about four years, amongst the English colony in Hamburg, where he delivered a course of lectures and founded a children's hospital in conjunction with his aunt, Miss Amalia Sieveking, a philanthropist and pioneer of nursing, whose biography, translated by Miss Caroline Winkworth, is still known in England. He also published in German a treatise on Ventilation and started the Alster Rowing Club, which athletic association delighted later in honouring their founder.

It will be seen that his early education was calculated to give him self-reliance and a sound introduction to medicine as well as to make it unlikely for him to take narrow or prejudiced views. Returning to London in 1846 he commenced medical practice in Bentinck-street, Manchester-square, where he resided until 1857, when he removed to Manchester-square, living there until the day of his

SIR EDWARD H. SIEVEKING, M.D. EDIN., F.R.C.P. LOND.,
PHYSICIAN EXTRAORDINARY TO HIS MAJESTY THE KING.

death. He was admitted a Member of the Royal College of Physicians of London in 1847 and soon engaged actively in literary work. In 1849 he published a small treatise with the title, "The Training Institutions for Nurses and the Workhouses," a question in which he felt much interest and which also formed the subject of a paper read by him before the Epidemiological Society in 1854. In the same year he translated for the Sydenham Society Vol. II. of Rokitansky's "Pathological Anatomy." After holding the post of physician to the Northern Dispensary he was appointed in 1851 assistant physician to St. Mary's Hospital, an institution with which he maintained a life long connexion. At an early period he became lecturer on materia medica and for 37 years in the wards, the class-room, and the out-patient department he was a prominent figure in the school. He became full physician to the hospital in 1860, only retiring from this position in 1888, when he was placed on the consulting staff. He was also one of the first physicians appointed to the staff. In 1852 he was elected a Fellow of the Royal College of Physicians of London and afterwards filled various offices in the College, including those of examiner, Harveian orator, senior censor, and vice-president. As vice president under Sir William Jenner his claim to the presidency was held by many to be stronger than that of Sir Andrew Clark, but Sir Edward Sieveking himself, after experience of Clark's strenuous ways, allowed that he had been superseded by a man with peculiar aptitude for the post. In 1866 he delivered the Croonian lectures in the College, the subject of them being the Localisation of Disease. In 1877 he delivered the Harveian oration, with the result that the College, together with the Royal College of Surgeons of England, aided him in producing an autotype publication of the MS. of Harvey's original physiological lecture delivered in 1616.

At an early stage of his career he contributed to the *British and Foreign Medico Chirurgical Review*, then edited by its founder, Sir John Forbes, who became his firm friend and whose name was given to Sieveking's youngest son in 1857, the year in which Sieveking succeeded to the editorship of the *Review*. In addition to Sir John Forbes and his colleagues at the hospital and the Royal College of Physicians of London, he was on terms of intimate friendship with many men eminent in medicine and literature, including Sir David Brewster, Charles Kingsley, F. D. Maurice, and Henry Crabb Robinson, who knew his parents and in whose reminiscences will be found a eulogistic allusion to the son. Sir Edward Sieveking's first contribution to THE LANCET appeared in the issue of Sept. 10th, 1853, and was entitled "A Case in which Hydatids were Discharged from the Kidney during Life" In 1854 with the collaboration of Dr. Handfield Jones (also of St. Mary's Hospital), he published a "Manual of Pathological Anatomy." In 1858 there appeared the first edition of his important work on "Epilepsy and Epileptiform Seizures, [illegible] ent," which was reviewed [illegible] that year. In 1861 he [illegible]. Remarks on Neuralgia in a series of five articles and also became president of the Harveian Society. Many years previously he had been appointed physician-in-ordinary to the late Duke of Cambridge, the father of the present Duke. In 1863, on the recommendation of Sir James Clark, he was appointed physician-in ordinary to the Prince of Wales, now the King. In 1873 he was made physician extraordinary and in 1888 physician-in-ordinary to her late Majesty Queen Victoria, having been knighted two years earlier.

In 1849 he married Miss Jane Ray who survives him. By her he had five sons, one of whom is in the medical profession, and three daughters, one of whom is now the wife of Professor Starling, having previously been married to the late D·. L. Woolridge.

The following appreciation of Sir Edward Sieveking's work as a colleague comes from a member of the staff of St. Mary's Hospital, and shows well the esteem which he enjoyed among his colleagues as physician, teacher, and friend: "It is some years since Sir Edward Sieveking took an active part in the practice of medicine, but those who had the pleasure of his intimate acquaintance will remember him as one who, if still imbued with many of the traditions of an earlier school of thought and action, was keenly impressionable to the influence of more recent methods. He was in the exact sense of the term a general physician and considered specialism in its narrower interpretation with little tolerance. A survey of his professional career reveals the wide range of his intellectual activity. Whatever subject he touched—e g., pathology, neurology, climatology—he left the record richer by his work and pen. He possessed much of the courtly grace exemplified by many of his contemporaries and successfully strove to maintain the lofty ideal he had always in view. Whilst appreciative of the claims of others he knew how to assert his settled convictions. What Lord Granville was in politics Sieveking was in medical polemics. If he excelled in one thing more than another it was in the rational treatment of disease, and whilst paying primary attention to the special nature of an ailment he never neglected the claims of the body corporate. He made humanity his study and the amelioration of its ills his constant care. 'He had a tear for pity and a heart open as day for melting charity.' As a colleague he was loyal and devoted. To his equals in station he was deferential; to his subordinates he was encouraging, helpful, and considerate. His methods of teaching were not, perhaps, quite in accordance with the present trend of directive as opposed to descriptive inculcation of knowledge, but he was clear in diction, impressive in manner, and conclusive in argument. The medical profession has lost one of its most honoured lights and St. Mary's Hospital, the home of his life-work, a guide, counsellor, and friend"

This brief appreciation of his work at St. Mary's Hospital depicts Sir Edward Sieveking graphically. We see how the liberal education and varied opportunities of his youth gave flexibility to his views and breadth to his sympathies and we can understand that when once he was interested in a subject he spared no pains in promoting the views upon it which he thought sound. To questions of nursing, education, and hygiene he paid the close attention which he considered such matters should exact from the general physician with the result that he was able to give well-reasoned advice in directions where many medical men would have considered ignorance excusable. And with all his wide range of accomplishments a high ideal of conduct kept him courteous, generous, and kind. Though in a sense Sir Edward Sieveking belonged to a day that is past his death is deeply felt by the medical profession.

The funeral took place on Feb. 27th at Abney Park Cemetery, the memorial service being held in St. Thomas's Church, Orchard-street, Portman-square.

A. A. LIEBEAULT, M.D.

Dr. Liébeault, who died at Nancy on Feb. 18th, was the *doyen* of the Nancy School of Hypnotism. Born in 1823 he studied medicine at the University of Strasburg where he took his M.D degree. After a few years spent in general practice in the country he settled in Nancy, where he established a clinique for the free treatment of the poor by a system which came to be known as treatment by suggestion. In 1866 he published his first book on the subject, "Sommeil et les États Analogues," which, however, met with a very poor reception. Nevertheless, Dr. Liébeault continued to work with enthusiasm and success and in 1881 he obtained the support of three eminent professors in the university—Bernheim, Beaunis, and Liégeois. Thus arose the Nancy school which has done so much to establish the practice of hypnotism on a scientific basis. Dr. Liébeault when he retired on a modest competence in 1890 was the recipient of a testimonial of remarkably cosmopolitan character from about 60 medical friends and pupils, referred to in THE LANCET of that year. His kindly and unassuming disposition endeared him to all who met him, and the widespread influence of his teaching is a pleasing testimony to the success of perseverance and singleness of purpose.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. José Calvo y Martin, formerly professor of anatomy in Madrid and Senator of Spain.—Dr. Juan J. Flores, formerly Minister of the Interior in the Republic of Costa Rica and at one time Dean of the Faculty of Medicine, San José.—Dr. Alexander Spiess of Frankfort, editor of the *Deutsche Vierteljahrsschrift für offentliche Gesundheitspflege.* His son, Dr. Gustav Spiess, has been in attendance on the German Emperor during his laryngeal trouble.

Correspondence.

"Audi alteram partem."

DR. SCHMIDT'S TREATMENT OF CANCER.

To the Editors of The Lancet.

Sirs,—We beg to forward you a copy of a letter that we have received from Dr. H. Jossé Johnson who has been afforded facilities since Nov. 26th, 1903, of trying Dr. Otto Schmidt's treatment upon cancer patients in the Middlesex Hospital. The treatment was tried upon the following nine cases.

Case 1.—A female, aged 56 years; cancer of the cervical glands; ten injections; maximum dose 2 centigrammes; death.

Case 2.—A female, aged 50 years; mammary cancer; ten injections; maximum dose 1·5 centigrammes; death.

Case 3.—A female, aged 71 years; mammary cancer; 11 injections; maximum dose 2·5 centigrammes. Alive at the present time.

Case 4.—A female, aged 73 years; mammary cancer; 11 injections; maximum dose 3 centigrammes. Alive at the present date.

Case 5.—A female, aged 56 years; double mammary cancer; ten injections; maximum dose 3 centigrammes. Alive at the present date.

Case 6.—A male, aged 60 years; cancer of the rectum; 35 injections; maximum dose 2 centigrammes. Alive at the present date.

Case 7.—A male, aged 51 years; sarcoma of the neck; nine injections; maximum dose 9 5 milligrammes; injections discontinued on account of illness of the patient; death.

Case 8.—A female, aged 43 years; mammary cancer, recurrent; six injections; maximum dose 2 centigrammes. Alive at the present date.

Case 9.—A female, aged 37 years; operable supraclavicular gland; infected from a cancer of the breast that had previously been removed. The gland was subsequently removed. Seven injections; maximum dose 2 centigrammes. Alive at the present date.

(Cases 8 and 9 underwent a rapid exaltation of dose in order to test the alleged diagnostic value of the injections.)

On Nov. 28th Dr. Schmidt visited the hospital and saw all the patients except Nos. 6 8, and 9, who were not then under treatment. He expressed himself as satisfied with all the cases (except No. 7) as being suitable for test purposes.

We have failed to observe any trace of a specific local or general reaction to the injections and we are therefore convinced that the material is entirely without diagnostic value. We have equally failed to see any local or general improvement in the condition of a patient. The injections in no wise alter the course of the disease. In the case of those patients who died microscopical examination of the tissues failed to reveal any differences in appearance from those usually met with in cases that have not undergone the special treatment. The material used was sent direct from Dr. Schmidt's laboratory to Dr. Johnson and Dr. Johnson made all the injections himself except on two occasions. The material used was Dr. Schmidt's "killed culture" A full account of the research will be published later in the Archives of the Middlesex Hospital.

We are, Sirs, yours faithfully,
Henry Morris,
Chairman of the Cancer Investigation Committee;
Andrew Clark,
A Pearce Gould,
W. Pasteur,
Members of the Cancer Investigation Committee;
W. S. Lazarus Barlow,
Director of the Cancer Research Laboratories.
Middlesex Hospital, Feb. 24th, 1904.

[Inclosure]

Copy of Dr. Jossé Johnson's letter.

29, Gracechurch-street, E C.
Feb 4th, 1904.

To the Cancer Committee,
Middlesex Hospital.

Gentlemen,—I beg to thank you sincerely for granting me opportunity to test the value of Dr. Otto Schmidt's treatment of cancer in your hospital.

That the experiments carried out by me under Dr. Barlow's kind and courteous supervision have failed to demonstrate the results I had described does not in any way lessen my obligation and thanks.

Believe me, Gentlemen, yours faithfully,
(Signed) H. Jossé Johnson.

CONTINUOUS CLINICAL TEMPERATURE CHARTS.

To the Editors of The Lancet.

Sirs,—I have read with much interest in The Lancet of Feb. 27th, p. 585, the account given by Professor Ronald Ross of continuous clinical temperature charts. Shortly before his death the late Professor Roy was exercising his mind in this same direction and I, who was then working as a student in the Pathological Laboratory at Cambridge, was very kindly taken into his confidence in the matter and had the advantage of considerable conversation with him on the subject. I believe I am right in saying that at this time the Callendar electric recorder was a recent invention and the views alluded to below were in connexion with the capabilities liberated by it. Professor Roy's opinion was that the result to be aimed at was the obtaining of a record of the amount of heat given out by the body rather than a mere record of the temperature of any particular part. And he even then was suggesting a clinical application and sketched out the abolition of bedclothes and the substitution of a cage-rigged covering, through which the variations of loss, as effected by changes of room temperature or other causes, could be approximately ascertained.

Professor Roy thought that a continuous record of the air temperature underneath the covering might be a useful practical index to the amount of heat being given out by the body. He said that the ascertaining of the temperature of any particular part would be of much value when considered in connexion with the amount of heat being given out by the whole body at the time. The shortcomings and imperfections of even well-kept temperature charts as they are now compiled are many and serious. I have on several occasions sketched out what from time to time suggested itself to my mind as a worthy experimental apparatus but have never as yet had the courage to face practical trial.

I am, Sirs, yours faithfully,
Cheltenham, Feb 29th, 1904. Edgar G. Trevithick.

NELSON AS A PATIENT.

To the Editors of The Lancet.

Sirs,—To The Lancet of July 24th, 1897, p. 195, Mr. Edmund Owen communicated an interesting article entitled "Nelson as a Patient," and referring to the alleged "clumsiness" of the surgeon on board the *Theseus* in including the median nerve in the ligature on the brachial artery he speaks sympathetically of the difficulty of attaining surgical accuracy in the performance of operations between-decks 100 years ago. It is clear that Mr. Owen adopts the generally accepted belief in the inclusion of the nerve but the question may well be asked as to the grounds for this belief. The arm was amputated on July 25th, 1797, the day after the unsuccessful attack on Santa Cruz de Teneriffe, Nelson landed in England on Sept. 1st, proceeded to Bath, and thence to lodgings in Bond-street, London, where a consultation was held as to whether anything could be done for the relief of severe neuralgic pain connected with the stump. Nothing operative was attempted and the ligature came away in the latter part of November. On Oct. 2nd Nelson wrote from his Bond-street lodgings the letter of which Mr. Owen gave a facsimile copy, in which reference is made (for the first time so far as I can gather) to the "unlucky circumstance" of the inclusion of the nerve in the ligature. "My arm from the unlucky circumstance of a nerve being taken up with the artery is not yet healed nor do I see any prospect of the ligatures soon coming away." Two years later he wrote of it to Clarke and McArthur as "an unlucky mismanagement." The obvious conclusion to be drawn is that the inclusion of the nerve was suggested to Nelson by the London surgeons as a possible, if not probable, cause of the neuralgic pain from which he suffered.

Surely no such explanation was necessary. Every surgeon must be aware of the frequent occurrence of neuralgic pains referred to the extremities of a limb amputated weeks or months previously when there has been no possibility of the inclusion of a large nerve in a ligature. The advancement of this theory made the work of the literary man easy.

"His sufferings from the lost limb were long and painful. A nerve had been taken up in one of the ligatures at the time of the operation and the ligature, according to the practice of the French surgeons, was of silk instead of waxed thread; this produced a constant irritation and discharge and the ends of the ligature being pulled every day in hopes of bringing it away occasioned fresh agony. He had scarcely any intermission of pain, day or night, for three months after his return to England. Lady Nelson at his earnest request attended the dressing of his arm till she had acquired sufficient resolution and skill to dress it herself. About the end of November, after a night of sound sleep, he found the arm nearly free from pain. The surgeon was immediately sent for to examine it and the ligature came away with the slightest touch; from this time it began to heal."

to the lay mind, that the alleged would have become gangrenous at the point of constriction a few hours after its application four months previously, would be followed by the immediate relief of pain On such insufficient evidence was the poor surgeon of the *Theseus* publicly, if not privately, condemned, his career probably blighted, and his surgery stigmatised as clumsy and awkward by every biographer of Nelson from Clarke and McArthur down to Captain Mahan. Is it not possible to explain Nelson's condition during these four months without blaming the surgeon for an error which has never been proved against him? Nelson's nervous system was always highly strung and over-sensitive. Two days after he lost his arm he wrote to Sir John Jervis saying that he was become a burden to his friends and useless to his country—"I become dead to the world and am no more seen"—and asking the Admiral for a frigate to convey "the remains of my carcass to England." This extreme mental depression would without doubt intensify the neuralgia of the stump so frequently experienced after amputation and he would also suffer, as Mr. Owen pointed out, from the absorption of small doses of septic discharge from the walls of the sinus which would naturally make him ill and irritable. By the end of August, moreover, the knotted loop of the ligature would be lying loose in the cul-de-sac at the bottom of the sinus imbedded in a mass of granulation tissue, the artery would be well retracted up amongst the muscles, and its lumen obliterated by organised clot up to the collateral circulation. The cut median nerve, on the other hand, being non retractile, would still have its cicatrising, bulbous end in close proximity to the knotted loop which might possibly be a source of irritation to it. Be that as it may, the removal of the ligature would put an end to his ill-health and the bad effects produced by restless chafing against the delay of convalescence. Life would become bearable again—any remaining neuralgia of the stump could be borne with equanimity. "Richard was himself again" and fit for duty, so we find him on Dec 8th sending the following form of thanksgiving to the minister of St. George's, Hanover square: "An officer desires to return thanks to Almighty God for his perfect recovery from a severe wound and also for the many mercies bestowed on him." On Dec 19th he was appointed to the command of the *Vanguard*.—I am, Sirs, yours faithfully,

Epworth, Feb. 24th, 1904. A. F. MESSITER.

RAYS PROCEEDING FROM ACTIVE MUSCLES AND NERVES.

To the Editors of THE LANCET.

SIRS,—With reference to the communication on this subject from Dr. Hugh Walsham and Mr Leslie Miller, which appears in THE LANCET of Feb. 27th, p. 610, and with reference also to your editorial notes thereon, I should like to be allowed to say that during the past few weeks I have spent much time in endeavouring to confirm the experiments of M. Blondlot and also of M Charpentier, and have published the results of my investigations in the columns of *Nature* and of the *Electrician*. It is by no means difficult to get some of the effects that M Blondlot and M Charpentier and also your correspondents describe, but so far as my observations go, these effects. when obtained, are in every case due simply to heat and require no new description of rays for their explanation. The luminosity of calcium sulphide, as also of most other phosphorescent substances, is considerably affected by minute differences of temperature; for instance, a coin taken from one's pocket and held at the back of a calcium sulphide screen will, by reason of its warmth, show through the screen as a disc of increased luminosity in a few seconds. Again, if two small screens covered with this material are placed upon two similar bodies, differing in temperature by only 2° F., it is easy to discover which of the two bodies is the warmer by the superior luminosity of the screen placed upon it. Again, the mere warmth of the breath is quite sufficient materially to increase the brightness of a suitable phosphorescent screen.

Difference of temperature is, I believe, the explanation of the "foot" experiment described by your correspondents. I have repeated this experiment with entire success and I must confess that at first sight it seems most convincing. My method is to use two very small calcium sulphide screens each about 16 millimetres by two millimetres in size and of normally equal brightness. Both are placed upon the floor and give an equal amount of luminosity; then one is placed on the foot and is found to brighten up considerably as compared with the other. Unfortunately, however, for the "n" ray theory I find no necessity for the presence of the foot at all, nor do we require active muscles or nerves to produce the effect. A boot newly taken off and still retaining some warmth, or any other warm object, acts equally well, while if one screen be placed on the foot and the other upon a can of water heated to the same temperature as the foot no difference can be detected between the luminosity of the two screens. Again, the "foot" experiment does not succeed if a good thickness of paper or cardboard is placed between the foot and the screen so as to prevent the transference of warmth to the latter.

I have described my observations with regard to this "foot" experiment at some length as your correspondents describe it as "one of the most convincing tests," but my conclusions are similar—i e, that the effects are simply due to heat, with regard to other parts of the body. I am quite ready to believe that certain parts of the body and certain muscles and nerves in a state of activity may possibly be more efficient than others in producing extra luminosity in the screen. I have not been able to observe this myself, but assuming that it is so I would suggest that local differences of temperature and of heat radiation will account for these effects without having recourse to recondite theories and to new descriptions of rays.

I note that your correspondents think it necessary to give a word of caution as to the effects of heat and state that they have confirmed some of M. Charpentier's experiments whereby he claims to have proved that the effects he has noted are not due to heat only. It would be interesting to learn exactly what these experiments that your correspondents have confirmed actually are. I have not personally tried M Charpentier's "frog" experiment and can therefore give no opinion in regard to it. As mentioned above, however, I have found, contrary to his observations, that layers of cardboard forming a heat screen do interfere with the effect. Again it does not seem to me that M. Charpentier's experiment wherein he raised the screen to a greater temperature than the animal experimented with is in any way conclusive as the proximity of any body, the temperature of which exceeded that of the air to the screen would obviously tend to decrease the heat radiation from the latter and might therefore have the effect of retaining its temperature and of increasing its luminosity in comparison with another screen not so acted upon.

I should like to add that personally I have been investigating the "n" rays not so much from a physiological as from a physical standpoint and the greater part of my experiments have so far been directed to ascertain the existence of these rays as given off, according to M Blondlot, by Auer incandescent gas mantles and by Nernst electric lamps. So far I have been quite unsuccessful in convincing myself that these "n" rays have any real objective existence at all, but without definitely concluding that the effects observed are subjective I am quite ready to admit that there may be effects visible to some persons to which I myself and my assistants and others who have also obtained negative results are blind It may, in fact be a matter similar to "colour blindness" only in another form. In any case, however, I would warn experimenters in this most interesting field that the subject is full of pitfalls The accurate observation of these dim phosphorescent objects is really very difficult owing to the fact that different parts of the human retina are very unequally sensitive to faint lights, while optical fatigue and other phenomena are apt to obscure the results.

I am, Sirs, yours faithfully,
A. A. CAMPBELL SWINTON.
Westminster, S.W., Feb. 29th, 1904.

HUMAN AND PLANT RAYS.

To the Editors of THE LANCET.

SIRS,—Having recently been in Paris I had whilst there an opportunity of an interview with Dr. Baraduc who was kind enough to give me a prepared screen by which to demonstrate the "n" rays The other night Dr. Hugh Walsham and I were experimenting with this screen. We first of all excited it by means of an ultra-violet lamp after which we easily obtained luminosity when it was in contact with any part of the surface of the body, but, as I told Dr. Walsham, its excitation by the lamp was by no means necessary after each test. This was proved by first allowing all prior emanations to pass off, then, when no glimmer of fluorescence was perceptible, we placed the screen on the floor at a distance of three feet from where we stood. All was total darkness, but after placing my finger under the screen for a minute the glow was quite apparent.

To show that these emanations were not due to heat rays, we filled a hollow metal lens (made for the purpose) with very hot water and held the screen quite close to this lens; there was absolutely no brightening, in fact the illumination caused by the previous contact with my temple gradually dulled down while the screen was still in the path of the caloric rays. I also lodged the screen, after allowing a sufficient interval of time for previous emanations to pass off, amongst the branches of a mimosa plant; the luminosity appeared in a few minutes and in this case apparently could not be due to heat rays. Personally I have known for some years, and have satisfied myself on the point scores of times, that rays (vibrations) are given off from all organic beings and inorganic substances; those emanating from ourselves I have usually designated "human rays." It is common knowledge among all who have dipped into occult matters that these "etheric vibrations" have been demonstrated by Reichenbach 50 or more years ago. "Emanations" from human beings are referred to by learned Indian writers as far back as 2000 B.C.—and before that for all I know to the contrary.

I am, Sirs, yours faithfully,
J. STENSON HOOKER, M.D. Durh.
Gloucester place, W., Feb. 22nd, 1904.

THE CAUSES OF HIGH INFANTILE MORTALITY.

To the Editors of THE LANCET.

SIRS,—I cordially welcome your remark (p 452) that "the children of the poor are a national asset" and ask permission to say a few more words on this subject. Dr. J. M. Rhodes's figures (p. 462) show, what no one doubts—viz., that density of population is a cause of high infantile mortality They do not show that restriction of medical relief is not also one of the causes; hospitals and dispensaries will not make up for the medical man's visits and advice at the home Sometimes the baby is taken back from the hospital to die; it ought not to have been brought out into the cold. Dr. Rhodes's figures as to the counties are not of much use as the counties comprise unions which vary as to relief and also as to density. They do, however, suggest (what, indeed, we know) that ignorance of mothers is one of the causes. I quite agree with Dr. Rhodes that the custom of the mothers of infants working in factories is another cause. In both these cases the advice of the medical adviser would be most useful and, if followed, might save many lives I think the guardians, also, should, in the case of children for whom they give out-relief, allow milk instead of the usual loaf And in the case of nursing mothers it might often be well to allow milk for the mothers.

As to my London figures I think a glance down them will show that, though they do not actually prove that restriction of medical relief is one of the causes of infantile mortality, they do make it worth while for a medical officer of health, where high infantile mortality exists, to inquire into the matter.

Let me add a few words from Mr. Charles Booth's final volume on "Life and Labour of the People of London." He gives at p. 17 a valuable list of districts in order of death-rate, poverty, &c. He says (p 18):—

> In St. George's-in-the-East and Shadwell the death-rate is at its highest, although this district stands only fourth in crowding, sixth in poverty, and eighth in its birth rate. For this discrepancy there is no very obvious explanation. It is, however, probable that the high death-rate has been connected with the intermittent and exposed character of much riverside labour. ...... Bethnal Green stands about fourth in everything except death-rate, which is as unaccountedly low as that of St. George's-in-the East is high.

It will be seen that the infantile mortality of St. George's-in-the-East is also far above that of Bethnal Green; and I would suggest that the different action of the guardians may possibly account for a part of the difference. I think also that the death-rate among the non-Jewish portion of the population of Whitechapel requires attention but cannot venture to take up more space in this letter. I should add that St. George's-in-the-East guardians have practically abolished ordinary out-relief but do give some medical relief.

I am, Sirs, yours faithfully,
Feb. 25th, 1904. J. THEODORE DODD.

THE PROPOSAL TO PROHIBIT MEDICAL PRACTITIONERS FROM DISPENSING.

To the Editors of THE LANCET.

SIRS,—Those who have followed the recent discussion in THE LANCET on dispensing by medical men will have noted that the question of prohibition has been treated by its opponents almost exclusively from a commercial point of view. They trouble themselves but little to reflect whether the interests of the medical profession as a whole are better promoted by prescribing or by dispensing, which of the two systems is more just in its relation to the public or which tends more to efficiency in practice. Yet these are considerations of the highest significance which must in the end govern and include the commercial. Let it not be thought that I undervalue the latter. I fully admit its importance, but it is clear that the foundation upon which it rests, the character and quality of work done, is more important still. The reform of a system which entails upon practitioners the discharge of services tedious in themselves and not essential since they are proper to the druggist, cannot but tend to increase their professional usefulness. The assumption that his drugs are superior to those of the chemist is a pure invention. What, after all, do the arguments against the supersession of dispensing amount to? It is asserted that patients will not consent to pay both doctor and chemist, that they will prefer to be treated by the latter, and that they will be "driven" to dispensaries and hospitals. No proof is adduced in support of these assertions. We are asked to accept as virtual certainties what are at best merely suggested probabilities. I have found that in my mixed practice patients do pay both me and the druggist and, as a rule, without demur. I doubt if even in club attendance an adjustment equitable to the members and satisfactory to both practitioner and chemist would prove impossible if only medical men were united in trying to bring it about. One of your correspondents, writing with evident knowledge of the subject, assures us that the prescribing chemist is practically non-existent, and it would be difficult to conceive a system better calculated than the present to encourage retaliation by the chemist upon the practitioner. As to dispensaries, the worst offender of them all, the cheap private dispensary, would be suppressed by prohibition and the medical profession generally would rejoice in its overthrow. Hospital abuse is so prevalent already that if dispensing practice is to be considered an antidote to this disease it is surely one of the mildest. It is improbable that any remedy for it will be obtainable until we discover a hospital conscience of reliable strength. The real crux of the difficulty which stands in the way of prescribing, however, is not to be looked for in any of these objections. It consists in the disinclination of many medical men to part with what they regard as their vested interest in a prescription. In other words, the remedies dispensed for or by them are considered to be proprietary and a patient every time that he has to renew his bottle of physic must be credited with a fresh consultation. This may be a profitable transaction so far as the practitioner is concerned, but I do not think it should be regarded as professional. Treatment only, not the sale of drugs, is the true function of a medical man. If he requires to supervise his patient's condition he ought to instruct the latter to this effect, and he is not likely in that case to see him less frequently than he is entitled and required to see him. If he fails to advise his patient so, he has only himself to blame. I am aware that investments in practice grounded on existing conditions cannot be lightly set aside, and for this reason I would not, in the interest of practitioners who may be pledged to the present order, support the immediate prohibition of dispensing. At the same time I regard the system as a bad one at best and as meriting the expressed disapproval of the General Medical Council. Later, after due notice and the lapse of a compensatory period of grace, with possible exemptions in the case of senior men and outlying districts, prohibition might well follow with advantage to all concerned. Let it be remembered that the abolition of dispensing would bring with it obvious benefits in return for losses sustained. In a letter to the *British Medical Journal* of last week I drew attention to the reduction of working expenses which must result from it and I suggested that an inquiry into the comparative profit or loss by dispensing or prescribing should be instituted. If this were done we should at all events learn something of definite use for our guidance on the commercial aspect of this question. No one, I am sure, would wish to bear hardly upon honest practitioners who are doing their best under an arrangement for which they are not primarily responsible or to force upon them a change of method which they might find to be injurious. Any reform of the kind contemplated must be gradual, but it can hardly fail to come, and I trust it will receive an increasing measure of support from all medical men who have the best interests of their profession at heart. I am, Sirs, yours faithfully,

Highbury, N., Feb. 23rd, 1904. B. G. MORISON.

To the Editors of THE LANCET

SIRS,—I am one of the now almost obsolete class who entered the profession by the apprentice's door and there learned something of, and handled, the weapons with which I was to fight disease before meeting the enemy. In my case familiarity has not engendered contempt. History repeats itself and 100 years hence may see a return to the good old system of beginning at the ladder's foot. Among some of the traditions of those days was to consider nothing for the relief of humanity derogatory, to spare no expense in procuring the best of drugs, and to secure a fitting remuneration for all professional services. Now this is to be reversed, the touching of drugs defiles, yet the sum of 1*s.* may be pocketed for valuable advice without dishonour or lowering the standard of the profession. How and when did this change come? Is it but a fashion? Are we who for 50 years have been dispensing our own medicines and keeping up reasonable charges to be accused of infamy? If so, there will be a large secession from the ranks, but piracy means independence and an easier mode of living than under grandmotherly laws.

Dispensing is no doubt both troublesome and expensive, but it benefits both patient and doctor. In the vast proportion of cases drugs are quite secondary to the advice, encouragement, or correction of habits, and reformation can seldom be maintained but by steady and frequent watching and interviews. The drugs, too, may need changing. Yet how often do we meet a man perseveringly for months hoping for benefit from a prescription because it was ordered (often with a single interview) by some great celebrity. His faith is in the drug; he is too busy or idle—often too stingy—to meet his doctor regularly.

Then, how much easier is it to help the hypochondriac or neurotic without showing him a prescription, each drug of which he may despise from long use, or consider poisonous or objectionable in his case. If we thought less of ourselves and our dignity and more of how best to benefit those who seek our help the large proportion of practitioners would admit that home dispensing gave the better results to both doctor and patient. These are the views of

Yours faithfully,

Feb. 27th, 1904. AN ANTEDILUVIAN.

THE ADULTERATION OF COD-LIVER OIL.

To the Editors of THE LANCET.

SIRS,—I have read with much interest the communication from Dr. L. A. Parry referring to the views I have expressed in regard to cod-liver oil. I should like to point out, however, that I do not for a moment suggest that cod-liver oil is not an excellent remedy for certain diseases—what I suggest is that its effect has been ascribed to so many different "active principles" none of which appear to have any reference to its real value that one can scarcely help being convinced that it owes its efficacy to its fatty nature and easy digestibility and not to traces of iodine, nor to "gaduine," nor to Marpmann's ferment, &c. If this is so my use of the word "traditional" was not meant to suggest that cod-liver oil had no value, but that it had been used for generations on the assumption of its possessing some virtues foreign to its fatty nature which have never been shown to exist, with the results that many other fats have never been taken into serious consideration as medicaments. I know that marrow fat (in the form of Virol, a preparation which contains no fish oil, but marrow fat) has been employed in the hospital which Dr. Parry refers to and I believe that, for example, marrow fat is one of those forms of administering a remedy of this kind with great efficacy, and all that my contention amounted to is that the easy digestibility of a given fat will largely determine its medicinal value. At all events, proof to the contrary has never been adduced. I am, Sirs, yours faithfully,

ERNEST J. PARRY.

High-street, Borough, S.E., Feb. 25th, 1904.

BILHARZIA HÆMATOBIA.

To the Editors of THE LANCET.

SIRS,—In answer to Mr. E. H. Worth's query in THE LANCET of Feb. 27th, p. 611, urotropine should be tried in cases of cystitis and hæmaturia caused by the bilharzia hæmatobia. This drug sometimes clears up the cystitis and kills the ova of the parasite. It seems to have no effect, however, on the adult worms, for in these cases, on discontinuing the drug, ova are again passed in the urine from which living embryos can be hatched. Some cases, however, prove most intractable and the disease may last for years. For instance, a soldier who was invalided from the Cape in 1901 still suffers from hæmaturia in 1903, ova still being present in the urine. Methylene blue may also be tried with advantage in some cases. I am, Sirs, yours faithfully,

E. H. ROSS,

H.M.S. *Anson*, Home Fleet, Feb. 28th, 1904. Surgeon, R.N.

A REPUDIATION.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to a circular (a copy of which I inclose) in which my name appears prominently in connexion with the advertisement of a proprietary medicine. I desire to state that I know nothing of the preparation in question, that my name has been made use of in a way which I consider wholly unwarranted and without my knowledge or consent, and that I have written to the proprietors of the preparation requesting them to discontinue the issue of the circular at once.

I am, Sirs, yours faithfully,

Queen Anne-street, W., Feb. 24th, 1904. ROBERT HUTCHISON.

⁂ Every medical man receiving the circular must have sympathised with Dr. Hutchison in the abuse of his name.—ED. L.

PORTUGAL AS A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—During the last few years there has been a constantly increasing stream of English tourists and invalids visiting Portugal and the stream has decidedly increased since the visit of King Edward to Lisbon in the spring of last year. It is not my intention to guide the tourists as to what they should do, but I wish to put in a *caveat* regarding the invalids. I have noticed with regret that some of the medical men in Great Britain have not yet accurate ideas regarding the climatic capabilities of Portugal. In their view Portugal means Cintra, Bussaco, or Lisbon, and consequently when an invalid comes here he goes to one of these places. Each of them is no doubt excellent in proper seasons and in proper diseases, but to send an invalid recovering, say, from a lung complaint or rheumatism to winter in any of them when there are far better other places within easy reach is, to say the least, extremely injudicious. Cintra, which is situated on the northern side of the Cintra range, is an excellent health accommodation, although the question has been frequently pressed upon the board for some years by the inspector of the Local Government Board. At a meeting of the guardians held on Feb. 26th a lady member said that it was quite time that the board as a whole should know how matters stood with regard to the sick wards and infirmaries of the workhouses. Children, she declared, were put in the same wards as consumptive patients, there was no classification of diseases, the patients being indiscriminately mixed up, and not only the wards but the beds were overcrowded for there were 89 patients in 80 beds.

Merthyr General Hospital.

Sir William Thomas Lewis, the president of the Merthyr Hospital, offered last year to bear the cost of extending the women's ward to accommodate eight more patients provided that public subscriptions were forthcoming to insure the addition of a similar extension on the men's side of the hospital. The high constable of the town, Mr. C. Biddle, M.R.C.S. Eng., L.R.C.P. Lond., collected through a shilling fund nearly £700 for this purpose and as about the same amount has been subscribed in addition the extensions to the institution are insured. The question of providing the necessary income for the support of these 16 extra beds is now being discussed by the hospital board and the workmen of the district. The latter ask that there shall be an addition made to the present staff of four surgeons in the event of increased contributions by the men.

Treatment of Vagrancy.

At the conference of the Somersetshire Poor-law guardians and rural district councillors recently held at Highbridge a motion was passed expressing the opinion that the question of the treatment of vagrants is one that deserves serious attention and suggesting that the Local Government Board should appoint a departmental committee on the subject. The members of the conference also expressed approval of Sir John Gorst's Bill which provides for the better protection of vagrant children but it was considered that the cost of enforcing the measure should be borne by the Imperial Exchequer.

The Midwives Act in Glamorgan.

At a meeting of the sanitary committee of the Glamorgan county council held on Feb. 26th it was decided to recommend the appointment of a female inspector in connexion with the administration of the Midwives Act. A proposal to include two or three women in the committee appointed to administer the Act was not adopted. There are said to be about 700 midwives in the administrative county.

March 1st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

A Degree in Dentistry at Trinity College, Dublin.

THE annual meeting of the Incorporated Dental Hospital of Ireland took place on Feb. 18th in Dublin, Mr. William C. S. Stubbs occupying the chair. The report of the Dental School stated that its labours in the cause of dental education had met with the approval of the University of Dublin which had decided to grant a degree in dentistry. Sir Christopher J. Nixon proposed the adoption of the report and Sir John W. Moore moved "that the Incorporated Dental Hospital of Ireland is worthy of support."

The Samaritan Hospital, Belfast.

At the annual meeting of the supporters of this charity held on Feb. 24th it was stated that during the past year 636 patients were treated in the extern department and 172 in the wards. Of the latter 113 required surgical operations Mr. J. M. Finnegan has placed a quantity of radium at the disposal of the medical staff of the hospital for use in cases of cancer. Electric light, the Roentgen rays, and electric heat and light baths were much needed in the hospital. The debt of the institution has by an effort been reduced to £230 2*s.* 10*d.* As the annual subscriptions amount only to £151 the committee wisely considers that an effort should be made to widen the basis of these subscriptions and by increasing the income under that head to obviate the necessity for frequent special appeals for money to discharge debts.

The Belfast Maternity Hospital.

At the 110th annual meeting of the supporters of this institution held on Feb. 25th it was reported that during the year 326 intern patients had been admitted into hospital with only one death; there had been 304 extern midwifery cases and 458 gynæcological cases. The new building for the hospital has been begun in Townsend-street (a very populous part of the city). In addition to £2751 already in hand £6000 are needed for the building and furnishing of the new maternity, and of this sum £4100 have already been promised or paid since Nov. 20th, 1903. Reference was made at the meeting to the new regulations of the Central Midwives Board and it was hoped that the endeavours of the medical staff of the Belfast Maternity Hospital to have the slight thrown on the hospital removed would be successful.

March 1st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Disturbances at the Faculty of Medicine.

FOR a week or two past the medical students of the Faculty of Paris have been in a state of lively effervescence which has manifested itself by rows which have been of almost daily occurrence. Bands of students have invaded the lecture rooms uttering songs and shouts which have only ceased on the professor leaving off his lecture and going away. On Feb. 19th the students went so far as to break the windows in the practical school and to carry away the doors, which they took into the street and broke up to make a bonfire, round which they danced. These demonstrations, which have already cost some thousands of francs and which the university authorities regard with inexplicable calm, are organised, according to their originators, to a double end. On the one hand they wish to protest against the recent law which allows retirement in the case of professors at a later age than formerly, and on the other hand against the appointment of M. Chantemesse to the chair of hygiene in exchange for that of pathology which he formerly occupied. In so far as regards the new law which has just been passed by the Senate it is quite certain that instead of the age limit being 65 years for ordinary professors, 70 years for professors of a clinic, and 75 years for these last-mentioned when they happen to be members of the institute, the new law will permit the holder of a chair to keep it for much longer than formerly and that the infusion of new blood into the general body of professors will take place exceedingly slowly, a fact which will seriously affect the promotion of the younger class of *agrégés*. The new law, however, which has in view all State officials, was not passed specially with regard to professors, but at the instance of the Finance Minister who complained of the waste of public moneys caused by the necessity for giving retiring pensions to office-holders who were dismissed by the various Ministries in order to find places for their political protégés. This necessitated a double impost on the taxpayer, for he had to find the salary of the newly-appointed official and a pension for him who was retired. In the magistracy and in the administration, for instance, it was quite usual for a Minister to allow an official to retire who was still quite capable of good work in order to find the sooner a place for an applicant who might be backed by some influential deputy. The double expense mentioned above decided the Minister of Finance to alter the age limit so that in certain directions at least some economies should ensue. It must be allowed that the law is badly drafted, for it prevents the infusion of new blood into scientific circles which are just those where the above-mentioned governmental manœuvres have hitherto had least influence. No Government can with ease make a political creature a professor of the Faculty of Medicine any more than it can make him a judge or a prefect. The law also puts an end to the prospects of many hard workers whose hopes of advancement are postponed to an indefinite date, for many professors will live to 80 years of age. On the other hand, whatever may be the value of a scientific man there inevitably comes a time when his views cease to be in touch with modern progress and when instead of making for improvement he contents himself with repeating and defending his own personal opinions which represent his past period of activity. As for the economies which the new law is intended to bring about they may be neglected, for there will continue to be wastage in all the administrative posts so long as the Government continues to dispose of these as mere monetary payments. The protest against the appointment of M. Chantemesse has its origin from quite a different source. The chair of hygiene, which was vacant by the death of Professor Proust, was canvassed for by the *agrégés* who were specialists in hygiene. M. Chantemesse, by taking this chair in exchange for that which he already filled, ruined their expectations, for he is one of the youngest of the professors and may be reasonably expected to hold his post for 20 or 25 years. M. Chantemesse's apparent object in asking to be allowed to exchange was a wish to obtain the post of inspector-general of the sanitary service which Professor Proust held together with his chair of hygiene. As a matter of fact he has obtained the post, for it is almost invariably an appanage of the chair of hygiene and the holder of the two posts enjoys a magnificent salary. This fact aggravates the despair of the disappointed *agrégés* and it is strongly suspected that they have egged on the students to provoke the disturbances. The protests, however, have been of no avail, for they deal with two accomplished facts—one due to a law passed by the Senate and the other to an exchange brought about in a perfectly orthodox manner by M. Chantemesse after formal authorisation by the council of the faculty which was ratified by the council of the University, although not unanimously, it is true The Dean, M. Lebove, has refused to punish the rioters, declaring that the matter is one which concerns the internal affairs of the university and that he does not wish to call in the police Nevertheless, something will have to be done, for several courses of lectures, notably those delivered by M. Blanchard and M. Poirrier, have been suspended and such a situation will compel the dean to interfere.

French Ambulances for the Russo-Japanese War.

The central council of the Society for the Relief of the Wounded in War has just held a meeting in Paris under the presidency of the Marquis de Vogüé. The council has ratified the decision of its finance committee to allot a credit of 250,000 francs for the installation of four field hospitals to be sent to the Far East. Two of these hospitals will accompany the Russian army and the other two will go with the Japanese. Each hospital will be made up of 100 beds, 22 cases containing drugs, instruments, and dressings, and six bales containing various articles of bedding. The staff of the hospitals to accompany the Russian forces will include a number of medical officers, hospital orderlies and nurses, and a finance officer (*comptable économe*) who will be responsible for expenditure and the like At its next meeting the council of the society will proceed to decide upon the details of the expedition. It is hoped that at this meeting the answers of the Russian and Japanese Governments will be received. These two Governments have been officially advised of the intentions of the society and their favourable response to the scheme is necessary before the hospitals can be dispatched.

March 1st.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

International Agreement on Measures for the Prevention of the Spread of Yellow Fever.

THE United States and the Mexican public health authorities have, for the first time, come to a mutual agreement as to the measures which each will adopt and enforce to prevent the spread of yellow fever. This convention will undoubtedly prove of the utmost importance to both countries in the prevention of the pestilence which annually appears in the seaports near the border lines of the two nationalities. The first requirement is the prompt report of all cases of suspicious fever to the local health authorities where they occur, the immediate screening of the patient, and the destruction of mosquitoes on the premises, pending the making of the diagnosis. The occurrence of the first authentic cases of yellow fever in either republic will be immediately reported by wire to the other republic Secondly, vigorous methods of post-epidemic fumigation with sulphur will be inaugurated without delay in both republics in places where infection has existed during the latter part of the past year. Thirdly, there will be efficient sanitary measures in towns and places which have been infected with yellow fever during the past year as follows: burning of brush; drainage of all stagnant water; oiling of all stagnant water the drainage of which is impracticable; all water containers to be treated at least once, and oftener if necessary, with a thin film of refined oil deposited upon their surfaces and to be screened tightly and to be covered constantly to prevent access of mosquitoes, a penalty to be imposed for the absence of the said screens and covers. The convention also provided that the agents of the Superior Board of Health of Mexico will be received in any town or place in the United States where yellow fever has prevailed to note the enforcement of the above provisions and to invite the attention of sanitary authorities to any lapse in the same. In like manner officers of the United States Public Health and Marine Hospital Service, detailed for duty in the offices of the United States Consulates in any Mexican city, will be granted every facility for observation as to the enforcement of the same measures in the cities and towns of Mexico that have been infected with yellow fever.

The Tuberculosis Exposition at Baltimore.

This exposition proved to be one of the most important movements yet made to enlighten the public in regard to the nature and prevention of tuberculosis. The formal opening took place on Jan 25th and was largely attended by the public. Addresses were given by the Governor of the State, the Mayor of the city of Baltimore, and Professor W. Osler of Johns Hopkins University. On the following days addresses were made by men prominently identified with the movement to suppress tuberculosis and large numbers of people were attracted to the exposition. The exhibit consisted of a variety of objects which illustrated the nature of tuberculosis, its prevalence, and the measures employed against it. There was a pathological department containing specimens of tuberculous tissues and organs in man and animals, wax casts, and the like, from the Army Medical Museum and from the museums of the University of Maryland, the Johns Hopkins Hospital, the Baltimore College of Physicians and Surgeons, and the city and State health departments. The exhibit of prophylactic measures employed by State and municipal boards of health attracted deserved attention and were exceedingly instructive to the public. This exhibit included a variety of tents for sufferers from tuberculosis, spitting-cups, sleeping cots, and so on.

The Dangers of Football.

The statistics of the fatalities and injuries in the game of football have been collected by the *Journal of the American Medical Association* and present a surprising record of severe casualties. The number of deaths occurring in this game during the year 1903 was 35 and there were over 500 severe accidents. Besides these 35 deaths there were 11 cases of spinal injuries followed by paralysis, which seem in most instances to have proved permanent and consequently were worse than death. Sprains, contusions, and scalp wounds are not included in the list, although reports show that many of these injuries, which at first were considered trivial, finally resulted seriously. There were 343 fractures, most of them of the bones of the leg and the forearm There were 91 cases of fracture of the clavicle, 19 fractures of the femur, and four fractures of the skull. While it is impossible to estimate accurately the number of permanent injuries caused by these accidents it is evident that they could not be very low when it is considered that many of the fractures were compound and 19 were of the femur. It may be stated without exaggeration that at least 60 deaths or permanent total disabilities resulted from the game of football in 1903.

Civil Service Examinations for Medical Clerks.

The United States Civil Service Commission is about to [illegible] different large cities of the [illegible] s of the [illegible] from 25 [illegible] schools [illegible] citizens [illegible] is The course of examination will be: (1) letter writing, the candidate being allowed to select one of two subjects which are of popular interest; (2) penmanship, as regards legibility, rapidity, neatness, and general appearance; (3) copying, a test of two exercises, the first being an exact copy of the text given and the second the writing of a rough draft manuscript, including correction of all errors; (4) anatomy and physiology; (5) diagnosis; (6) general and special pathology; and (7) surgery and surgical pathology. These examinations are a great advance in the qualifications of persons entering the civil service of the country and will tend to the elevation of the character of the service.

Tuberculosis in Prisons.

During the last two or three years the medical profession has directed attention with striking results to the importance of protecting prisoners from the contagion of tuberculosis. The report of the physician of one of the first to take action—viz., the prison of the State of Minnesota—states that the segregation of prisoners suffering from tuberculosis was begun in 1894. A set of cells was devoted especially to inmates who proved on careful examination and proper tests to be affected with tuberculosis. These cells also received scrupulous sanitary care as to ventilation, cleansing, and disinfection. The prisoners occupying these cells were kept much in the open air at work. The result has been remarkable; in three years the number of tuberculous inmates had been reduced by 52 per cent. At present there are 630 inmates with but six tuberculous cases and these came in with the disease but are all improving. Many other States are segregating the tuberculous inmates in properly prepared quarters.

Feb. 19th.

Medical News.

University of Cambridge.—On Feb. 25th the following medical and surgical degrees were conferred:—

Doctor of Medicine.—R. N. Salaman, Trinity Hall.

Bachelor of Medicine.—G. E. St.C. Stockwell, King's; F. A. Hepworth, St John's; H. J Robinson, St. John's; G. P. D. Hawker, Gonville and Caius; P. K. Muspratt, Christ's; and S. J. Steward, Downing.

Bachelor of Surgery.—F. A. Hepworth, St. John's; H. J. Robinson, St. John's; W. B. Swete-Evans, Clare; and W. Hyde Hills, Pembroke.

The Medical College, Lahore, has been recognised as a medical school and the City Hospital for Infectious Diseases, Newcastle-on-Tyne, as a fever hospital by the special board for medicine.

Subsidences of Land at Bardsley.—Some little time ago the dangers arising from old disused pit shafts were brought prominently into notice by the tragedy at Hanley, where a man was swallowed up when walking along the open street; and recently a family at Bardsley, near Manchester, had a somewhat similar though happily a less tragical experience. A gentleman built a house there not knowing that it was on the brink of a disused colliery shaft; hearing a rumbling sound one night he got up and, with his son, went into the back yard. Fortunately they did not open the gate leading to the garden, for a footpath and part of the garden had disappeared, leaving a great chasm into which they would have stepped. The whole family sat up through the night fearing that the house would go. Next day they quitted it. The hole is increasing in size and the surroundings of the shaft are giving way. The covering of the shaft seems to have been about six feet of clay and soil. The people about are naturally anxious, for they fear there may be many such death-traps, as within the memory of people living several pits have ceased working within the last 50 years. It is said that the pit shafts in the neighbourhood are very deep and that probably the depth of the one that has collapsed is between 500 and 600 yards. Very possibly the great amount of rain during the last year or two may have had a share in causing these subsidences, but however that may be it must be a horrible idea that you may suddenly go down into the pit. Surely there is sufficient cause for a very careful inquiry as to the exact position of these disused pits not only in this but in all mining districts.

The Middlesex Hospital.—The annual court of governors, at which the Earl of Lathom presided, was recently held at the hospital. The court had before it two separate reports, the one dealing with the work of the hospital and its convalescent home branch at Clacton-on-Sea, and the other with that of the Cancer Charity. From the former is gleaned the fact that all the various building improvements which have been in course of construction during the last five years are now complete and the hospital may be said to be equipped with every known appliance for the treatment of its patients. These various alterations during the last decade have comprised *inter alia* the enlargement of some of the wards for females, the building and equipment of a separate department (with a special operating theatre) for the treatment of diseases of women, the erection of a new home for the nursing staff, the removal of the hospital kitchens from the basement to the top floor, the removal of the laundry from the hospital to a site in the country, the installation of a new boiler-house, and the erection of a cold storage plant and disinfecting apparatus. The cost of all these alterations has been considerable, so that the hospital now finds itself, after having realised a considerable amount of its capital, still in debt to the bankers to the extent of £20,000. With the object of repaying this debt a festival dinner is to be held in May next. With regard to the work of last year the statistics show that 4095 in-patients and 48,744 out-patients, as well as 272 patients who attended for the "light" cure, were treated at the hospital, and 979 patients were sent to the hospital's home at Clacton on-Sea. The second report submitted—that of the Cancer Charity—is the first of its kind and after dealing with the financial affairs of the charity gives the statistics of the patients treated. It mentions the fact that the charity is now regarded as a separate institution by both the Hospital Sunday and Saturday Funds, which make awards accordingly. Dealing with the treatment of the patients, mention is made that 100 cases of carcinoma were treated with 3040 applications of the x rays with distinctly encouraging results; that in the laboratories much time had been devoted to the testing of alleged "cancer cures"; and that no so called cure submitted had been neglected but all had as yet proved fruitless. The director of the laboratories, Dr. W. S. Lazarus-Barlow, has been appointed a member of the German Cancer Investigation Committee, so that the two bodies are able to work together

The Central Midwives Board.—At a meeting of the Central Midwives Board held at the office in Suffolk-street, London, S.W., on Feb 25th a communication was read from the Royal Academy of Medicine in Ireland pointing out that the pupil midwives of the Irish Chartered Maternity Hospitals could not personally deliver 20 women as required by the rules of the Board. A resolution was inclosed stating that the Obstetrical Section of the Royal Academy of Medicine in Ireland was of opinion that any woman holding the certificate of the Irish Chartered Maternity Hospitals should be deemed to have complied with the rules of the Central Midwives Board regulating the course of training of pupil midwives. The Central Midwives Board replied to this communication, as it had replied previously to similar communications from the Master of the Rotunda Hospital and to Professor J. W. Byers of Belfast, that the Board cannot alter the rules now that they have been approved by the Privy Council. After consideration of applications for certificates the names of 917 women were passed under Section 2 of the Act and ordered for entry on the Roll. Of this total one claimed as holding the certificate of the Royal College of Physicians of Ireland, 291 that of the Obstetrical Society of London, nine that of the Rotunda Hospital, four that of the Coombe Hospital, 14 that of Queen Charlotte's Hospital, nine that of the Liverpool Lying-in Hospital, two that of the British Lying-in Hospital, three that of the Glasgow Maternity Hospital, 11 that of St. Mary's Hospital (Manchester), three that of the City of London Hospital, one that of the Salvation Army Hospital, and 569 were admitted as having been in *bonâ fide* practice for one year prior to July 31st, 1902. The question of the payment of a registered medical practitioner sent for on the advice of a midwife in compliance with Section E, Rule 17, of the rules of the Board was considered. After discussion it was resolved unanimously:—

> That inasmuch as no provision is made in the Midwives Act, 1902, for the payment of legally qualified medical practitioners, the Government be requested to take the necessary steps for amending the Act by introducing a section or otherwise to provide for the payment of legally qualified medical practitioners when called in by midwives in difficult cases.

Literary Intelligence.—The following new books and new editions are to be published in the spring by Messrs. J. and A. Churchill: "The Examination of Water and Water-supplies," by Dr. J. C. Thresh, lecturer on Public Health at the London Hospital Medical College. The work will be freely illustrated. "A Handbook of Surgical Diagnosis," by Mr. James Berry, surgeon to the Royal Free Hospital. An illustrated work entitled "The Elements of Chemistry," by Mr. M. M. Pattison Muir, Fellow and Prælector of Chemistry at Gonville and Caius College, Cambridge. "Unconscious Therapeutics, or the Personality of the Physician" by Dr. A. T. Schofield. The sixth edition of "Clinical Lectures on Mental Diseases," by Dr. T. S. Clouston, physician superintendent of the Royal Asylum, Edinburgh. In addition to the text being revised there will be some additional plates. The sixth revised edition of "A Manual of Anatomy, Dental and Comparative," by Mr. C. S. Tomes, F.R S.

AN ASYLUM "SCANDAL."—An unfortunate occurrence at the Tooting Bec Asylum of the Metropolitan Asylums Board has recently been the subject of comment in the public press and as the matter is one which may appeal to those concerned with the management of institutions for the care of the insane it may be advisable to put on record what, so far as we can learn, actually took place. Early in [illegible] who was for some [illegible] gged by a party of [illegible] nd there liberally [illegible] uring her struggles [illegible] injured nurse was [illegible] ssailants two of [illegible] ded from duty by [illegible] en admitted complicity and were also suspended and at the next meeting of the asylum committee the whole eight were dismissed. Possibly if the committee had been a court-martial the ebullition of animal spirits above described would have been regarded merely as an exhibition of playfulness in no way unworthy of nurses and ladies and rather to be encouraged than otherwise. It consisted, however, of plain men of business apparently unenlightened as to the higher ethics of "ragging" and they unanimously decided that the conduct of the attendants unfitted them for holding responsible posts in connexion with the nursing of the insane sick. Civilians generally will probably agree with this view. The asylum at Tooting Bec is a new one and the establishment of a precedent of leniency in regard to such a grave breach of discipline as undoubtedly occurred might have disastrous consequences in the future. Poor-law officials are peculiarly open to criticism on the part of the public and it is greatly to be regretted that the eight offenders in this case did not pause to consider the amount of discredit which their behaviour would be likely to entail upon both themselves and the institution with which they were connected. We trust that the incident will not be further endowed with fictitious importance by the garbled and exaggerated accounts of sensation-mongers.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Another Nursing Bill.

A SECOND Bill dealing with nurses has been brought before the House of Commons. Its object is "to provide for the better training and registration of nurses and for the voluntary registration of private nursing homes." Mr. Claude Hay has made himself responsible for the measure.

The Revaccination Bill.

The opposition to the Revaccination Bill has now taken the definite form of a motion for its rejection which has been placed on the paper by Mr. Logan.

The Metric System.

[illegible] the [illegible] was [illegible] consented to act as a member.

The Sale of Poisons.

Mr. Lough has presented a Bill for the further regulation of the sale of poisons and the compounding of medical prescriptions and to amend the Pharmacy Acts, 1852 and 1868. A somewhat similar measure was brought before the House last session. The alterations made are chiefly in the direction of adding strength to the provisions. It is proposed, amongst other things, that every shop where poisons are sold should be under the conduct of a duly qualified person; that there should be a register of all shops where poisons are retailed and also of the chemists conducting the business, that "company" shops in which poisons are sold should be managed by duly qualified men; that the examination of persons desiring to qualify as chemists and druggists should be facilitated; and that the Pharmaceutical Society should be enabled to accept certain certificates of kindred bodies in lieu of examination.

HOUSE OF COMMONS.

WEDNESDAY, FEB. 24TH.

Metropolitan Asylums Board and Treatment of Ringworm.

Sir WALTER FOSTER asked [illegible] Board whether any hospital [illegible] Asylums Board for the treat[illegible] ringworm and, if so, whethe[illegible] present in the hospital and [illegible] each year, the cost of the [illegible] for the maintenance of the institution.—Mr. LONG answered as follows. The Metropolitan Asylums Board has two establishments for the reception and treatment of Poor-law children suffering from ringworm—one at Sutton, Surrey, and the other at [illegible] 1903 (the date of opening) to the end of that year was 618. In the case of the other school, which was opened on Feb 12th, 1901, 316 [illegible]

Interpretation of the Vaccination Act.

Mr. RUNCIMAN asked the Home Secretary whether, in view of the diverse action of different magistrates throughout the country in the treatment of applications under Section 2 of the Vaccination Act, 1898, it is the intention of the Home Office to issue to magistrates [illegible] the issue of a circular such as the hon. Member suggests, which would, in the circumstances, serve no useful purpose.

The Purity of Milk.

Mr. CHAPMAN asked the President of the Local Government Board [illegible] Member.

MONDAY, FEB. 29TH.

Adulterated Whisky.

Mr. FLAVIN asked the Chancellor of the Exchequer whether his attention had been called to the character of some blends of so-called Irish and Scotch malt whisky; whether he was aware that a blend made up in a bonded warehouse in Scotland, the total amount of [illegible] dealt with in the [illegible] to the House.

The Sale of Poisons.

Sir THOMAS DEWAR asked the President of the Local Government Board whether his attention had been called to a coroner's inquest, held at Southwark on Feb. 23rd, when the jury, in returning a verdict of death by misadventure, added a rider that the sellers of acids and all poisons should be compelled to label the vessel with the na[illegible] word "poison" and [illegible] except in sealed b[illegible] on the subject wo[illegible] who replied, said [illegible] but as to further le[illegible] refer my hon. frien[illegible] March 4th last, ind[illegible] opportunity.

Medical Officers and Milk-supplies.

[illegible] Local Government Board [illegible] Prevention of Diseases) Bill, 1903. [illegible] as no doubt elimi[illegible] the Local Govern[illegible] ention to this cir[illegible] It was found, how-
cumstance in [illegible]
ever, that, notwithstanding this, the clause was in a large number of
cases allowed by committees. Moreover, a similar provision was made
for Scotland in the Public Health (Scotland) Act, 1897. In these cir-
cumstances the Board in 1899 discontinued the practice of drawing
attention in its reports to the action of Parliament in 1890 and I do
not propose to resume that practice.

BOOKS, ETC., RECEIVED.

LONGMANS, GREEN, AND CO., 39, Paternoster-row, E.C.
Introduction to the Study of Physical Chemistry. By Sir William Ramsay, K.C.B., F.R.S. Price 1s. net.
The Phase Rule and its Applications. By Alex. Findlay, M.A.,

Ph.D., D Sc., Lecturer and Demonstrator in Chemistry, University of Birmingham. Together with an introduction to the Study of Physical Chemistry by Sir William Ramsay, K.C.B., F.R.S., Editor of the Series. Price 5*s.*

The Thompson Yates and Johnston Laboratories Report. Edited by Rubert Boyce and Charles S. Sherrington, with H. E. Annett, A. S. Grunbaum, Benjamin Moore, Ronald Ross, and E. W. Hope, assisted by W. B. Warrington, E. E. Glynn, J. W. W. Stephens, J. Hill Abram, K. W. Monsarrat, J. F. Ryder, J. E. Dutton, R. E. Montgomery, J. Thomas, H. E. Roaf, J. L. Todd, and S. F. Linton. Vol. V. (New Series), Part II., December, 1903. Price 12*s.* 6*d.* (Published for the University Press of Liverpool.)

REINHARDT, ERNST, Karlstrasse, 4, München.

Die Zunehmende Unfähigkeit der Frauen ihre Kinder zu stillen. Die Ursachen dieser Unfähigkeit, die Mittel zur Verhütung. Ein Vortrag von G. v. Bunge, Professor an der Universität Basel. Dritte, durch neues statistisches Material vermehrte Auflage. Price Pf.80.

RUDEVAL, F. R. DE, 4, Rue Antoine Dubois, Paris.

Précis des Maladies Mentales. Par le Dr. A. Rémond (de Metz), Professeur de Clinique des Maladies Mentales de la Faculté de Médecine de Toulouse. Price Fr.4.

La Fièvre Jaune. Étude basée sur des Observations personelles. Par le Dr. J. Th. Dupuy, de la Faculté de Médecine de Paris, Médecin Sanitaire Maritime. Price Fr.2.

La Peste. Etude Critique des Moyens Prophylactiques Actuels. Par le Dr. J. Th. Dupuy, Médecin Sanitaire Maritime. Price Fr.2.

STEINHEIL, G., 2, Rue Casimir-Delavigne, Paris.

L'Arthritis avec ses Diverses Manifestations—Rhumatisme, Goutte, Diabète, Artério-sclérose, Neurasthénie, Affections Nerveuses, Asthme, Calculs, &c., est une Maladie Générale, Microbienne e, Transmissible. Prophylaxie et Traitement. Par le Dr. Théophile Guyot, de Paris. Avec une Préface du Dr. Ernest Besnier, Membre de l'Académie de Médecine, Médecin Honoraire de l'Hôpital Saint-Louis. Price Fr.3.50.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ADENEY, G. C., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician to St. Thomas's Hospital.

ASHDOWNE, WALLACE, F.R.C.S. Eng., has l Surgeon to the Metropolitan Hospital,

AUSTIN, E. C., M.R.C.S., L.R.C.P. Lond., l ing Surgeon under the Factory Act for the Broughton Astley District of the county of Leicester.

BENNETT, H. S., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Out-Patient Department at St. Thomas's Hospital.

BIRKS, G. T., M.B., B.C. Cantab, has been appointed House Surgeon to the Out-patient Department at St. Thomas's Hospital.

BIRT, A. C., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Out-Patient Department at St. Thomas's Hospital.

CARVER, N. C., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Out-Patient Department at St. Thomas's Hospital.

CLIFT, M. L., M.R.C.S. Eng., L.S.A., has been appointed Divisional Surgeon to the City-road Station, G Division Metropolitan Police.

GUTHRIE, T., M.B., B.C. Cantab., has been appointed Resident House Surgeon to St. Thomas's Hospital.

HARNETT, W. L., M.B., B.C. Cantab., has been appointed Resident House Surgeon to St. Thomas's Hospital

HOFFMANN, H. D., B.C. Cantab., has been appointed Ophthalmic House Surgeon to St. Thomas's Hospital.

KEYSER, CHAS. R., F.R.C.S. Eng., has been appointed Surgical Registrar to the Cancer Hospital.

LATHAM, C. H., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the Out-patient Department at St. Thomas's Hospital.

LEACH, R. E. H., M.B., B.Ch. Oxon., has been appointed Resident House Physician to St. Thomas's Hospital.

LECKY, H. C., M.B., B.Ch. Oxon., has been appointed House Physician to the Out-patient Department at St. Thomas's Hospital.

NEWTON, W. T., M.R.C S. Eng, L.S.A., has been appointed Divisional Surgeon to the City-road Station, G Division Metropolitan Police.

PINCHES, H. I., M.B., B.C. Cantab., has been appointed Resident House Surgeon to St. Thomas's Hospital.

POUNDEN, J. C., M.D. Dub., has been appointed Certifying Surgeon under the Factory Act for the Alfreton District of the county of Derby.

PRINGLE, G. A., M.B., B.S. Dub., has been appointed Certifying Surgeon under the Factory Act for the Aughnacloy District of the county of Tyrone.

RICHMOND, G. E., M.D., B.S., B.A., B.Sc. Lond., D.P.H. Camb., has been appointed Demonstrator of Hygiene and Public Health at University College, London.

RICKETT, G. R., B.C. Cantab., has been appointed Resident House Physician to St. Thomas's Hospital.

ROSS, E. A., M B., B.C. Cantab., has been appointed Resident House Physician to St. Thomas's Hospital.

SEARS, C. N., M.B., B.S. Lond., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

SHIPWAY, F. E., M.B., B.C. Cantab., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

SMITH, KENNETH RAWLINGS, M.D., B.S. Lond., M.R.C.S., L.S.A., has been re-elected Medical Officer of Health of Totnes (Devon) for three years.

STOCKER, E. G., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Clevedon District of the county of Somerset.

WIGRAM, L. E., M.B., B.C. Cantab., has been appointed Resident House Surgeon to St. Thomas's Hospital.

WORGER, THOMAS HEWLETT, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health of Radstock (Somerset).

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ARMY COUNCIL, 68, Victoria-street, S.W.—Eight Dental Surgeons. Salary £365 per annum and travelling expenses.

AYR DISTRICT ASYLUM.—Assistant Medical Officer, unmarried. Salary £120, with board, apartments, attendance, and washing.

BIRKENHEAD BOROUGH HOSPITAL.—Senior and Junior House Surgeons (resident). Salaries £100 and £80 per annum and fees.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House Surgeon. Salary £75 per annum, with board and attendance.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary £150 per annum, with rooms, fire, lights, and attendance, and allowance for cab hire.

BRENTFORD UNION INFIRMARY, WORKHOUSE, AND SCHOOLS, Isleworth. —Medical Superintendent and Medical Officer. Salary £300 per annum, with residence, rations, washing, &c., and fees.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—Resident Junior House Surgeon, for six months. Salary £50 per year, with board, apartments, and laundress.

CUMBERLAND INFIRMARY, Carlisle.—Resident Medical Officer. Salary at rate of £80, with board, lodging, and washing.

DUDLEY, GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £40 per annum, with residence, board, and washing.

HORTON INFIRMARY, Banbury.—House Surgeon. Salary £80 per annum, with board and residence.

HULL ROYAL INFIRMARY.—Casualty House Surgeon. Salary £50, with board and lodging.

INFANTS' HOSPITAL, Hampstead.—Additional Physicians.

KENT AND CANTERBURY HOSPITAL.—House Surgeon, unmarried. Salary £90 a year, with board and lodging.

LONDON FEVER HOSPITAL, Islington, N.—Assistant Resident Medical Officer. Salary £120 a year, with board and lodging.

MALDON UNION.—Medical Officer and Public Vaccinator. Salary £65 a year, with fees.

MANCHESTER CHILDREN'S HOSPITAL.—Junior Resident Medical Officer, unmarried, for six months. Salary at rate of £80 a year, with board and lodging.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer, unmarried. Salary £150 per annum, with board and residence.

MANCHESTER, VICTORIA UNIVERSITY OF, OWENS COLLEGE.—Lecturer in Diseases of the Larynx.

METROPOLITAN BOROUGH OF CHELSEA.—Food and Drugs Analyst. Salary £200 per annum.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, Assistant House Physician, and Assistant House Surgeon, all for six months. Salary of two former at rate of £40 a year; of two latter at rate of £20 a year.

NEW HOSPITAL FOR WOMEN.—Pathologist (female).

READING, ROYAL BERKSHIRE HOSPITAL.—Assistant House Surgeon for six months. Salary £60 per annum, with board, lodging, and washing.

ROYAL EAR HOSPITAL.—Clinical Assistants.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—House Physician for six months. Salary at rate of £60 per annum, with board, lodging, and washing.

ST. PETER'S HOSPITAL FOR STONE, &c., Henrietta-street, Covent Garden, W.C.—Assistant Anæsthetist. Honorarium of £25 a year.

SALOP INFIRMARY.—House Physician, for six months. Salary at rate of £50 per annum, with

VICTORIA HOSPITAL FOR CH S.W.—House Physician for six mont th board and lodging.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House Surgeon for six months. Honorarium at rate of £75 per annum, with board, lodging, and washing.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory Act at Banff, in the county of Banff.

Births, Marriages, and Deaths.

BIRTHS.

ORMEROD.—On the 28th February, at Beauchamp Lodge, Wimborne, the wife of Ernest William Ormerod, M.D. Camb., of a daughter.

WARRINGTON.—On Feb. 17th, at Rodney-street, Liverpool, the wife of W. B. Warrington, M.D., M.R.C.P., of a son.

WELLBY.—On Feb. 25th, at Fletham, Liss, the wife of S. Wellby, M.D., of a daughter.

DEATHS.

DIXON.—On Feb. 22nd (sud Southsea, James Deighton Dixon, M.B., R.C.S.,

MACARTNEY.—On March 1s in his L.R.C.P., late of 75, Jerningham-road, New Cross, 43rd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

CLUB PRACTICE MEDICINE.

To the Editors of THE LANCET.

SIRS,—If I might venture to offer any advice to "Inquirer" *re* Hunyadi Janos water in club practice it would be to recommend the patient strongly to have nothing whatever to do with it and to tell him that what was one man's medicine was another's poison, but, of course, if he (the patient) thought it worth his while to procure some for himself and try it he (the medical man) would have no objection provided he was not expected to pay for it. I should also reserve to myself at the same time the right of deciding what was "medicine" and what was not, as a lay committee of working men cannot possibly know anything of that question.

The clubs and contract system are as bad as they can be but that is no reason why we (the medical profession) should *lose* by them. There are many mixtures which go by the name of "club mixtures," and what are their main characteristics? Firstly, the most important, they *must* be the cheapest procurable; and secondly, they must be decidedly unpleasant to take. If club members prefer to deal in the cheapest market, is it not only reasonable that they should have the cheapest goods? Whilst discussing this subject of clubs I should like to ask how it is that they continue to exist, when *apparently* so many medical men object to them. Club members' wages have risen considerably since the clubs were founded, so this cannot be the reason; if they supply a real need why should not the fee be made in proportion to the work done? For instance, instead of a fixed sum per annum why should not the fee for visit and medicine be fixed at 2*s.* 6*d.* (of course, within a certain radius) and 1*s.* 6*d.* for advice and medicine at the surgery, these fees to come principally from the general body of the members but also a small proportion of each fee from the patient himself, say 3*d.* in the 1*s.*; he would undoubtedly attach more value to his medical man's advice and services and *vice versâ* the medical man would feel that he was to a certain extent being paid by the patient himself and would have a better feeling towards him. Of course, all fees to be collected and paid to the medical man by the secretary. This system would do away largely with that malingering one sees so much of in club practice and also with that class of patient who generally decides on a Sunday that he has not had any medicine lately, so promptly sets off to see "his doctor" and honour him with a visit.

What is the chief inducement to a man to join a club? His sick pay, his "death" money, and his medical man whom he "sweats." Let them have their sick pay and their pensions and their death money by all means, but let them pay for these things themselves and do not let the medical profession pay for them; they have their own pensions to provide for and how often are they able to do it? I believe that medical attendance is one of the biggest bribes that sick societies have to offer to their clients.

I also believe that the prime reason which enables clubs to dictate [illegible] cerning their own interests. Surely their own interests are plain enough in the club question. We are supposed to belong to a noble profession, but where does the nobility show itself in the eagerness with which one man takes what his next-door neighbour has refused on the grounds that the "labourer is worthy of his hire"?

I would suggest as a cure for all these injustices and grievances (almost if not quite the worst the medical profession has to contend against) that the General Medical Council or the British Medical Association, or better still both combined, should issue a fiat that "any medical man who accepts any club or contract practice at less than 10*s.* per head per annum, or the so much per visit and medicine system should be guilty of conduct infamous in a professional respect." I believe that the result of this would be that half the clubs in the kingdom would become bankrupt, but at any rate the social status of the medical profession would be raised and after all that is what is wanted most. Apologising for troubling you at such length,

I am, Sirs, yours faithfully,

Feb. 16th, 1904. ANTI CLUB.

"POE AND HIS MISUNDERSTOOD PERSONALITY."

Edgar Allen Poe, like De Quincey, Carlyle, and Wagner, is perpetually criticised as an author from the standpoint of his physical condition or personal habits. In the *Arena* of last month is an article, entitled, "Poe and his Misunderstood Personality," by Dr. William Lee Howard, who points out that Poe himself made the extraordinary discovery that his habits of intoxication were due to his psychopathic condition. Dr. Howard quotes a letter from Poe to G. W. Eveleth, written in 1848, in which Poe says: "But I am constitutionally sensitive—nervous in an unusual degree. I became insane with long intervals of horrible sanity. During these fits of absolute unconsciousness I drank—God only knows how often or how much. As a matter of course, my enemies *referred the insanity to the drink rather than the drink to the insanity*" Dr. Howard states that Poe here described a disease now recognised by neurologists as psychic epilepsy and no more under his control than is the epileptic attack so familiar to us all. Without following the author into a disquisition upon the various forms of disease and their etiology recognised under the name "dipsomania," we think that there is no doubt [illegible] literary work and to count for much in the high position—very high considering both the character and bulk of his work—that Poe enjoys in the literary world. It was his mental and moral instability that disturbed his calm power with riotous fancy and the blend has proved of extraordinary fascination to critical and imaginative palates. Despite his crude sensationalism Poe has always been an author's author.

PAYMENT OF MEDICAL WITNESSES.

To the Editors of THE LANCET.

SIRS,—Can an M.B., Ch.B., recover fees in medicine and surgery in a court of law

I am, Sirs, yours faithfully,

Feb. 20th, 1904. M.B., CH.B.

*** Yes.—ED. L.

"HIS MAJESTY'S HEAVIEST SUBJECT."

A CORRESPONDENT writes. "It is several years since I saw Mr. Thomas Longley who was known at Dover as His Majesty's heaviest subject, but the announcement of his death on Feb. 22nd has prompted me to send you a few particulars which will no doubt be of interest to your readers, especially in connexion with your recent annotation on the fat boy of Peckham (Jan 9th, p. 106) and the note from a correspondent on Daniel Lambert (Jan. 23rd, p. 207). In his youth I believe Mr. Longley did not greatly differ in his bodily proportions from the average, but at the time of his death he was said to be over six feet in height, to have measured 70 inches round the chest, an abdominal girth of 85 inches, and a calf 26 inches round. His weight was over 46 stones. If my memory serves me, his wife was below the average in stature and his son, though of stout proportions, showed no indication of going beyond the limits of normal growth. On the other hand, his daughter far exceeded the average build for her age. Visitors to the Star Inn, of which Mr. Longley was proprietor, could generally obtain a view of this big man through the open door of the parlour in which he was practically a prisoner, supporting his body on one chair while with another in front of him he supported his ponderous abdomen. He was extremely shy, however, of being looked upon as an exhibit but was exceedingly affable to those fortunate to obtain an introduction to him through the intermediary of a local resident. Enterprising showmen frequently made him handsome offers to become a member of their shows but they always met with a prompt though courteous refusal."

THE OLDER L.S.A.'S AND SURGICAL FEES.

To the Editors of THE LANCET.

SIRS,—A patient objects to the "exorbitant" amount (£10 10*s.*) of [illegible] fully [illegible]

1876.

*** We think that the full fee should be paid. But the question is a purely legal one, and we cannot guess how a county court judge might decide it.—ED. L.

THE TREATMENT OF HYPERCHLORHYDRIA AND ATONIC DILATATION OF THE STOMACH.

To the Editors of THE LANCET.

SIRS,—If you or any of your readers could advise me of literature dealing with this subject I would feel greatly obliged. Any medical man's personal experience on himself or a patient, with the prognosis, and especially with the opinion regarding the benefits of operation, would be inestimable.

I am, Sirs, yours faithfully,

Feb. 27th, 1904. F.R.C.S.

TEMPERATURE AND DREAMS.

A CORRESPONDENT sends us an account of his experiences as follows:—

> Has any connexion been shown to exist between the blood temperature and dreams? Perhaps my personal experience may not be devoid of interest. Recently I took a three days' rest in bed, starting with a temperature of 103° F. At this temperature I cannot dream at all. I have no control over the thought apparatus and merely obtain drowsy moments of perhaps ten minutes' duration in which all is chaos, yet pervaded by some one object which I cannot define. Let me call it a "brick." I cannot get away from that brick which conveys no fixed impression. At 102° things improve a little and perhaps there are two bricks. At 101° I cannot well remember what takes place, everything is so indefinite, but the bricks have disappeared.
>
> But at 99·5° (exactly) the fun begins. On closing my eyes and thinking *absolutely of nothing* in a short time living pictures appear, dim at first, but as the brain gets into working order

finally most vivid. I seem to be walking about amongst living men and women and observing all that they do; but it is not like a common dream in which you imagine you are a part of the scene and can experience joy or fear, &c. On the contrary, I know I am not really present but that it is as if my "astral body" were out "on his own," and I have to keep my *eyes closed* all the time as the moment I open them the vision disappears. Sometimes I am unnoticed among the crowd, at others people stare very hard and attempt to converse, but I can hear nothing nor can I address them—to do so or to open my eyes would bring me back in bed. If I get tired of one scene I can wander off to another and if I lose myself I open my eyes and immediately make a fresh start. Last night I met with some very unpleasant but still interesting individuals. As examples of deformities they were not to be beaten. Faces without features, for instance. Some people had hands and faces resembling polished Spanish mahogany but very much deformed. Once I actually revisited a former scene.

Now none of these visions represents any mental impressions formerly received. Some are common enough but others are so very extraordinary that it shows the brain is *creating* them. When the temperature falls to 99° my "astral body" has to remain in bed. I get no visions at all. As a *rule* I do not dream, or if I do I am unconscious of the fact in the morning, but these visions occur when I am *less* asleep than the usual dreaming stage and the recollection becomes more permanent.

HERMAPHRODITISM.

OUR contemporary *Mr. Punch* has unearthed the following delightful advertisement from the *Christian Advocate*:—

> GOVERNESS, JUNIOR; Intermediate; male and female.

There is no doubt about the intermediateness in this case.

PERSONAL RECOLLECTIONS OF SIR RICHARD OWEN.

A CORRESPONDENT sends us the following anecdotes of Sir Richard Owen:—

> While reading the other day a chapter on the aye-aye of Madagascar in "Mostly Mammals," by R. Lydekker, I was reminded of the late Sir Richard Owen. It was in the early sixties that I had occasion to confer with Professor Owen who was then curator of the Hunterian Museum; I met him in the College library and after discussing the matter in which we were both interested he at once entered upon the peculiarities of the aye aye, a specimen of which he had just then been examining, commenting in his fervid, earnest manner on the animal's large ears, prominent eyeballs, peculiar dentition, and attenuated middle fingers; in doing so he himself became quite a study in his enthusiasm and the abounding pleasure he experienced in making out and determining the history of the animal's habits, its method of obtaining its particular food, as illustrated by the means it possessed for effecting its purpose.
>
> Perhaps another reminiscence may not be out of place. At a dinner given to Sir Edwin Chadwick, the sanitary pioneer, Professor Owen narrated an anecdote of his younger days which may not be without interest now that the question of the London water-supply is to the fore. When occupied at Lancaster some old women of the town were in the habit of taking tea together at one another's houses in turn; part of the town was supplied with water from the river, which had several degrees of hardness, but a fresh source of soft water which came from the rocky hills had been adopted for other parts. In one of these latter districts a tea party was held at which the company was loud in the praise of the quality of the beverage; one of them, addressing the hostess, observed she must have put a power of tea in t' pot. "Na, na," she replied, "it's no t' tay that's ower good, it's t' watter."

A CASE OF VERONAL POISONING.

Dr. F. A. Philippi (Bad Salzschlirf) writes in regard to this case, which was described by Mr. G. Fernandez M. Clarke in THE LANCET of Jan. 23rd, p. 223, that veronal is stated to be a di-ethyl-malonyl compound of urea which is manufactured by E. Merck of Darmstadt who possesses some literature about this drug.

◆

Interested should procure a copy of the report of the Departmental Committee on the Use of Preservatives and Colouring Matters in the Preservation and Colouring of Food, published by Eyre and Spottiswoode, East Harding street, E C., 1901. The recommendations have not yet become part of the statute, although it is very desirable that they should be adopted.

M.B., F.R C.S.—We cannot publish so violent a tirade against the profession of which our correspondent is a member, but we quite admit that to a certain extent he is right and we will consider the possibility of treating the subject editorially.

Quassia will, in our opinion, be very wrong to set up in practice within the mile radius. He obtained his introductions presumably by working for his present principal and it would be distinctly unfair to set up against him.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 3rd, 1904.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radia in Vacuo.	Maximum Temp Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Feb. 26	30·02	S.	...	46	38	34	33	35	Hazy
" 27	30·17	N.E.	...	61	40	32	32	34	Overcast
" 28	30 20	N.E.	...	67	36	31	Fzn.	31	Cloudy
" 29	29 93	E.	...	57	33	30	Fzn.	30	Cloudy
Mar. 1	29·89	N.E.	...	53	37	30	Fzn.	32	Snowing
" 2	30 00	N.E.	0 09	44	40	31	35	35	Snowing
" 3	30 03	N.E.	0·22	43	39	34	35	35	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex ([illegible] M.), Chelsea (2 P.M.), Samaritan [illegible] 2 P.M.), Soho-square (2 P.M.), Ro[illegible] Orthopædic (4 P.M.), Gt. Northern [illegible] ion (2 30 P.M.), London Throat (9 30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P M.).

TUESDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9 30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.).

WEDNESDAY (9th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9 30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (10th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's [illegible] Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-s[illegible] London (2 P.M.), Gt. Northern Central [illegible] Metropolitan (2.30 P.M.), London Thro[illegible] (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.[illegible] (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (11th).—Lon[illegible] (1.30 P.M.), St. Thomas's (3.30 P.M [illegible] Charing Cross (3 P.M.), St. [illegible] Mary's [illegible] M.), Gt. [illegible] (2 P.M.), Ophthalr[illegible] London [illegible] Northern Central [illegible] Throat, Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (12th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (7th).—OTOLOGICAL SOCIETY OF GREAT BRITAIN (11, Chandos-street, Cavendish-square, W.).—4.30 P.M. Meeting.

SOCIETY OF ARTS (John-street, Adelphi, W.C.).—8 P.M. (Cantor Lecture) Mr. B. Blount: Recent Advances in Electro-chemistry.

TUESDAY (8th).—CHELSEA CLINICAL SOCIETY (Chelsea Dispensary, Manor-street, King's-road, S.W.).—8.30 P.M. Annual Clinical Debate: Internal Secretion, in Disease and in Treatment. Sir Lauder Brunton, Sir Victor Horsley, Dr. H. D. Rolleston, and Dr. A. E Wright will speak.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN (17, Bloomsbury-square, W.C.).—8 P.M. Communications:—Mr. H. Finnemore: Some Supposed Spurious Virginian Prune Barks.—Miss E. S. Hooper: A Beilschmiedea Bark. (A communication from the Research Laboratory of the Society.)

MEDICAL SOCIETY OF LONDON (Whitehall Rooms, Hôtel Métropole).—7.30 P.M. Anniversary Dinner.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8 30 P M. Paper:—Dr. W. Gordon: Cardiac Dulness in Cases of Cancer.—Mr. H. B. Robinson: On a Case of Properitoneal Hernia.

WEDNESDAY (9th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8.30 P.M. Pathological Evening. Exhibition of Specimens.

DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—5.15 P.M. Demonstration of Cases of Interest.

SOUTH-WEST LONDON MEDICAL SOCIETY (Bolingbroke Hospital, Wandsworth Common).—8.45 P.M. Dr. R. Maguire: The Treatment of Aneurysm by Gelatin Injections.

THURSDAY (10th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware road, W.)—8.30 P.M. Papers:—Mr. L. Evans: The Treatment of Congenital Club-foot during Early Infancy, with a Series of Consecutive Cases.—Dr. S. V. Pearson: The Diagnosis of Pulmonary Tuberculosis in Infants and Young Children.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.)—9 P.M. Clinical Evening. Cases will be shown by Mr. J. R. Lunn, Mr. H. Grimsdale, Mr. A. H. Bonnett, Mr. H. L. Eason, and Mr. C. Worth. Patients will be in attendance at 8 P.M.

BRITISH GYNÆCOLOGICAL SOC[illegible] Specimens will be shown by [illegible] Parsons, and Mr. F. Jordan. Harcourt Chloroform Inhale[illegible] Chloroform in Surgical Anæsthesia.

FRIDAY (11th).—THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (9, Adelphi terrace, Strand, W.C.).—7.30 P.M. Paper: Dr. C. K. Millard: The Leicester Method of dealing with Small pox. To be followed by discussion.

CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.)—8.30 P.M. Papers:—Dr. P. Weber and Dr. J. H. Watson: A Case of Polycythæmia with Enlarged Spleen, possibly a Disease of the Bone-Marrow.—Dr. Pasteur and Mr. T. H. Kellock: Foreign Body impacted in Bronchus; Removal by Operation.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (7th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. A. W. M. Robson: The Surgery of the Pancreas. (Hunterian Lecture.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.)—5 P.M. Mr. P. Dunn: Cataract.

MEDICA[illegible] W.C.) [illegible] H. Til[illegible]

UNIVER[illegible] Phys[illegible]

TUESDAY (8th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East).—5 P.M. Dr. R. Hutchison: Some Disorders of the Blood and Blood forming Organs in Early Life. (Goulstonian Lecture.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Ball: Certain Symptoms of Disease of the Throat.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. C. T. Williams: Clinique. (Medical.) 5.15 P.M. Dr. G. F. Still: Some Gastro-intestinal Diseases of Infancy and Childhood.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square, Bloomsbury).—3.30 P.M. Dr. A. Turner: Neuritis.

WEDNESDAY (9th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. A. W. M. Robson: The Surgery of the Pancreas. (Hunterian Lecture.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.)—5 P.M. Dr. Beddard: Practical Medicine.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. M. Collier: Clinique. (Surgical.) 5.15 P.M. Dr. G. Ogilvie: What is Syphilitic?

HOSPITAL FOR C[illegible] AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. F[illegible] H. Macken[illegible]

THURSDAY (10th).—[illegible] ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East).—[illegible] P.M. Dr. R. Hutchison: Some Disorders of the Blood and Blood-forming Organs in Early Life. (Goulstonian Lecture.)

POST-GRADUATE C[illegible]LLEGE (West London Hospital, Hammersmith-road, W.)—5 P.M. Mr. Keetley: Dislocations of the Hip, Trau-[illegible]

[illegible] CLINIC (22, Chenies-street, [illegible]ue. (Surgical.) 5.15 P.M.

[illegible] Marylebone-road, N.W.).—[illegible]ent Cysts.

[illegible]ROSS HOSPITAL.—4 P.M. Mr. Clogg: Demonstration of Surg[illegible]al Cases. (Post-Graduate Course.)

[illegible] AND DISEASES OF THE [illegible] Mr. R. Lake: Demonstra-[illegible] (I.) (Post-Graduate Course.)

St. J[illegible]s HOSPITAL FOR DISEASES OF THE SKIN (Leicester square, W.C.)[illegible] 6.15 P.M. Dr. M. Dockrell: Herpetic Diseases. (Chesterfield Lecture.)

[illegible]

Tem[illegible]erature

NORTH-[illegible]AST LONDON POST GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M. Dr. G. P. Chappel: The Early Signs and Symptoms of Phthisis.

FRIDAY (11th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. A. W. M. Robson: The Surgery of the Pancreas. (Hunterian Lecture.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.)—5 P.M. [illegible]

MEDICAL GRADUATES [illegible] W.C.).—4 P.M. Dr [illegible]

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ROYAL INSTITUTION [illegible] 9 P.M. Prof. F. T. [illegible] (illustrated by experiment).

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We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1903, which was completed with the issue of Dec. 26th, were given in THE LANCET of Jan. 2nd, 1904.

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A Clinical Lecture

ON

THE TREATMENT OF CANCER OF THE BREAST BY OPERATION.

Delivered at King's College Hospital

BY W. WATSON CHEYNE, C.B., F.R.S., F.R.C.S. ENG.,

PROFESSOR OF CLINICAL SURGERY AT KING'S COLLEGE AND SENIOR SURGEON TO KING'S COLLEGE HOSPITAL, ETC.

GENTLEMEN,—You have of late seen a number of cases of cancer of the breast in which operations have been performed and as the operative procedure which has been adopted in these cases is a matter of great importance I propose to put before you some of the main points. You will have observed that in all cases the operation has been a very extensive one It is true that in some instances the disease itself was extensive, but in others the tumour in the breast has been comparatively small and nevertheless a large operation has been performed. Indeed, the extent of the operation has not been affected to any great degree by the amount of disease present, except in so far as the skin incisions are concerned or as the posterior triangle of the neck has been opened or not.

The modern operation which you see here is based on two fundamental principles, first, on the view that cancer is primarily a local disease and, secondly, on the removal of all probable lines along which it may spread whether visibly infected or not. The local *versus* the constitutional nature of cancer has been much debated and I need not discuss the matter here. Suffice it to say that the recent operative measures are founded on the belief that whatever may be the constitutional predisposition to the disease it actually commences in one spot and spreads from that over the rest of the body and that the aim of the operation must be not only to remove all visible disease but also to take away any invisible germs which may have become disseminated in the vicinity. On the view of the local origin of cancer it follows that if both the visible and the invisible disease are removed the patient should be freed from that particular attack and may never have any further trouble, although, of course, [illegible]ere is nothing in the operation to prevent him from having [illegible]resh outbreak in other epithelial tissues.

In former days surgeons were very undecided on this [illegible]estion and hence the operations were performed, so to [illegible]eak, in a half-hearted manner. Apart from that also the fear of sepsis and the want of knowledge of what we may call the anatomy of the disease rendered the old operation a very imperfect one according to our present ideas. Thus, if we go back, say, 50 years the operation laid down for cancer of the breast was a comparatively small and [illegible] prominent part of th[illegible]rous lump, was removed. [illegible] was extended to the axil[illegible] the axilla were taken away. The result of these operations was that, while a case occasionally remained well—and it is quite possible that some of these were not carcinoma at all, seeing that histological examinations were at that time in their infancy—the disease recurred within a short time in the vast majority of the patients and very frequently the recurrence took the form of numerous nodules scattered along the line of the scar and in its vicinity; and, further, the disease frequently progressed much more rapidly after operative interference than it was apparently doing before. Indeed, so much was the latter the case that in the more slowly growing forms, of which what is termed "atrophic cancer" is the type, it came to be laid down generally that operation was not permissible. It was pointed out that in these cases the patients might live for several years without operation, while, on the other hand, if an operation was performed recurrence would in all probability take place quickly and the progress of the disease would be much more rapid than it had been—in fact, the cancer would lose more or less its atrophic character. And in other forms of the disease even the most sanguine held that at the best operation added but a few months to the life of the patient, while some surgeons, such as Benedikt, were so discouraged by the results which they obtained, partly as regards the mortality after operation and partly as regards the constant recurrence of the disease, that they gave up operating on cancer of the breast altogether. While this was the general result of operation in these cases some surgeons who held that the disease was really a local one tried to obtain better results by enlarging the area of operative interference. Thus, Gross made a clean sweep of the whole of the prominent part of the breast with the skin over it and also to some extent of the axilla, often leaving a large wound which could not be closed afterwards by stitches but which had to heal by granulation. To some extent his procedure was justified by improved results.

For a long time the enlargement of the glands in the axilla was a point to which attention was not greatly paid. The chief reason for this was no doubt that in those days sepsis was very prevalent and that the opening up of the axilla was generally followed by diffuse suppuration in that region, while some also held that the enlargement of the glands in the axilla was not necessarily due to cancerous infection but might to some extent be inflammatory. Where the surgeon came to the conclusion that the enlargement of the axillary glands was due to actual infection with cancerous material the presence of this condition was usually regarded as a contra indication to operation. As regards the glands, the utmost that was done was to shell out any noticeably enlarged glands.

It was not till the end of the "sixties" that Lord Lister pointed out the possibility and the advisability of removing the axillary glands and fat in these cases by methodical dissection and under the protection of the antiseptic treatment. The operation as performed by Lord Lister from that time forward was a very free one compared with the old operation. He removed the skin much more extensively than was usually done and it was *chiefly with the view of* obtaining subsequent union of the edges in these operations that he elaborated his method of suturing wounds with button sutures, &c. He also made a point in most cases of stripping off the pectoral fascia and clearing the axilla in practically every case. His method remained the most complete up to recent times and has been followed by several other surgeons with marked improvement in results. As I saw almost all his later operations I became very much interested in the results and they certainly seemed to me to be a great advance on what was formerly obtained. Towards the end of the "eighties," however, I tried to trace as many of his private cases as I could and I was surprised and much disappointed to find that a large proportion had recurred either locally or internally, although the average prolongation of life was decidedly greater than formerly.

Up to this time what may be called the anatomy of cancer of the breast, and, indeed, the anatomy of the breast itself, was not really understood. These more extensive operations were done on the general idea that it was advisable to take as wide an area around the cancer as possible, but there was no precise knowledge as to the extent and direction of the possibly infected area, and it was not till the histological work of Heidenhain in Germany and of Stiles in Edinburgh was done that we knew with anything like precision what the state of matters was and what tissues must be removed in order to get rid of all possible disease. Before these researches were published this department of operative surgery was more or less haphazard and, while in some instances good results were obtained there was a total want of precision about the work. Heidenhain and Stiles, however, *showed* us the lines of spread of cancer of the breast, how it tended to run along the lymphatics in the suspensory ligaments to the skin, how the lymphatics in the pectoral fascia became affected, how intimately the pectoral fascia is associated with the pectoralis major muscle, how the infection spreads in the breast and axilla, how extensive the breast itself is, and how the removal of the prominent part of the breast in no way implies removal of the whole organ.

I had the opportunity of seeing Mr. Stiles's work before it was published and was so impressed by it that about the end of 1889 I began to put his results into practice in operative work. I soon found marked improvement as regards the question of local recurrence and in April, 1892, I read a paper at the Nottingham Medico-Chirurgical Society[1] calling attention to these new facts and indicating the nature of the operation which was required to apply them to practice. In 1894 Halsted,[2] who was working on the same lines, based more especially on Heidenhain's researches, also published a paper on this subject and his paper attracted more attention than mine; indeed, at that time he carried out the procedures in a still more thorough manner. This modern operation, founded on the researches of Heidenhain and Stiles, has now been adopted by many surgeons and it is this operation which you see carried out here.

I may now in a few words point out the essence of the modern operation. I will not go into details but I may recapitulate the essential points and these have reference chiefly to the method of dealing with the skin, with the fascia and muscles, and with the lymphatic glands and vessels.

1. *As regards the skin.*—The removal of the skin cannot be too free. None of the skin over the prominent part of the breast should be left behind and if the cancer is laterally situated irregular incisions must be made in that region so as not to approach the cancer closer than a couple of inches at least in any direction. Further, the incision must not be carried straight down to the muscle; it must gradually shelve away from the breast so that, for instance, in the case of the upper incision one should not in a fairly fat woman see the pectoral muscle till just below the clavicle. Unless this is done lobules of the breast will, as Stiles has shown, almost inevitably be left behind. I have never seen any sloughing of the edges of the skin follow even extensive undermining of the flaps and, in addition to the more thorough removal of the breast in this way, such undermining also increases the possibility of closing the wound after the operation is completed. As regards this last point, however, although in the great majority of cases by extensive undermining of the skin and by the use of strong silver wire tied as tightly as can be done I am able to bring the edges together, that is quite a secondary consideration and should not influence us with regard to the amount of skin removed, although it may be taken into account in planning the direction of the incisions

2 *The method of dealing with the pectoral fascia and the muscle.*—The pectoral fascia must be completely removed and a portion at least of the greater pectoral muscle should be taken away in all cases. The latter must be done for two reasons: in the first place the pectoral fascia is so intimately connected with the muscle, dipping in between the muscular bundles, that an attempt to separate the fascia from the muscle is very apt to lead to lymphatic vessels and also outlying lobules of the breast which might possibly be infected being left behind In addition, infected lymphatic vessels may be cut into and the cancer cells may thus be distributed over the surface of the wound. The second point of importance is that if a portion at any rate of the pectoral muscle is not taken away it is very difficult to clear out the axilla as thoroughly as ought to be done. The fascia over the serratus magnus where it is exposed in the axilla should also be taken away. As to the amount of the pectoral muscle that should be removed it is advisable to take away practically the whole of the sternal portion of the pectoralis major. At any rate it is essential to take away the lower portion coextensive with the prominent part of the breast so as to be sure of taking all the pectoral fascia beneath it. But if this is done the remainder of the sternal attachment is not of any particular use; its nerve supply will in all probability be injured, while its removal facilitates the clearance of the axilla very considerably and also gives a better chance of approximating the edges of the wound afterwards. As regards the clavicular portion I think it is but seldom that it need be taken away, for its removal does not materially help the clearance of the axilla, while I have never seen any reason to suppose that infection may spread from the sternal to the clavicular portions and I believe that it is of much value for the subsequent mobility of the arm. As regards the question of the pectoralis minor some surgeons always remove that muscle as well, and no doubt where there is much glandular infection it is well to do so, both because in that way more thorough access to the axilla is obtained and also because in those circumstances the nerve supply of the muscle is almost certain to be injured, in which case it is, of course, rendered useless. Where, however, the axillary glands are not much affected and where the nerve supply can be preserved I generally leave the pectoralis minor, because in these circumstances the space can be quite well cleared without taking it away.

3. *The lymphatic glands and vessels.*—All the glands and fat in the axilla should be removed in one mass along with the breast. The breast should not be taken away first lest in dividing the tissues infected glands or lymphatic vessels be opened and cancer cells be distributed over the wound. The direction of the various chains of glands must also be borne in mind and there are three groups to which special attention must be paid. In the first place we have those which follow the axillary vein and in regard to these I would particularly direct attention to the importance of lifting up the vein at the apex of the axilla and of removing the fat and glands which lie behind it. One not uncommonly finds enlarged glands hidden away behind the vein at the upper part and unless the vessel is lifted up and the tissue is removed from behind it the operation will be futile. The other two chief lines of spread are upwards in front of the vessels and nerves and also behind them, following the course of the nerve of Bell; in both of these directions the fat and glands must be thoroughly dealt with.

A very important question which arises is whether the fat and glands in the posterior triangle of the neck should also be removed, although not apparently infected, in all cases. Of course, if any enlarged glands are felt in that situation there can be no question that the space should be thoroughly cleared if the operation is performed at all, and I must say that I am becoming inclined to clear the supraclavicular space more often than I formerly did. Certainly if in clearing the axilla infected glands are found high up in any of the positions indicated the probability of commencing infection of glands above the clavicle is very considerable and in those circumstances I think that it is well to open the posterior triangle and to clear out the fat and glands at the root of the neck. This is quite essential where enlarged glands are found at the point where the vein passes out of the axilla. But any marked enlargement of the supraclavicular glands in my opinion renders the case inoperable from the point of view of radical removal. Halsted has also advocated in some cases following the glands down into the mediastinum. Personally, I have never done this and I doubt very much whether such a severe procedure is worth while. The cases where that would be necessary seem to me to come under the class of inoperable cases.

Such are the essential points of the operation as you see it carried out here and you will naturally ask, Are the results better than those which are obtained by a less severe operation and, if so, are they so much better as to justify the much greater severity of the procedure? With regard to the latter point the mortality after these operations is so slight that it may be practically disregarded. I have performed a large number of operations now and have only lost three patients; one of them at the time of the operation from ether and shock combined; one where the patient died suddenly ten days after the operation; and one from sepsis, where we found afterwards that my assistant had a small pustule on his finger which he did not know of at the time. Hence, from the point of view of mortality, the greater severity of the procedure is practically a matter of no moment and we are really only concerned with the relative value of the results obtained. These results must be considered from two points of view—namely, the prolongation of life and the question of recurrence

In my Harveian lectures on the Objects and Limits of Operations for Cancer, published in 1896, I gave a list of the cases on which I had operated on on the above lines and in a later paper, which appeared in THE LANCET[3] I not only brought these cases up to date but added a number of others, making the list up to 99 Since that time I have operated on a much larger number of patients, but it is unnecessary to make a further list because the results are apparently the same as those formerly obtained, and, as a matter of fact, what we want now to know is not so much the condition of the patient soon after the operation as the condition after the lapse of several years. As six years at least have elapsed since the operations on the patients in my last list were performed, we can obtain some information with regard to the latter point and I have attempted to trace these patients up to the present time. My list contained cases operated on both in private and at the hospital and, as regards the private patients, I have been able to trace all with one exception and have either been able to verify the results myself or have been informed of them by the medical attendant. As regards the hospital patients, such a large number cannot now be traced that they are useless from a statistical point of view and comparatively few have been verified either by myself or by a medical man. In a large city like London it is not surprising that the poor should be lost sight of in a number of years varying from six to 13. They do not remain long in one place and there is no particular reason why they should leave their addresses and the result is that a number of my letters have been returned marked "Gone away" or "Not known" It will, however, I think, suffice for all practical purposes if I use the private patients, all of whom I can trace with one exception. They give a very fair view of what may be expected from the radical operation after a long period of years.

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[1] See THE LANCET, August 13th, 1892, p. 357.

[2] Annals of Surgery, vol. xx.

[3] THE LANCET, March 18th, 1899, p. 756.

Before going into the figures I may here state that in determining the cases to be operated on I make no selection from the point of view of getting good statistics. Hopeless cases have naturally been refused operation—that is to say, cases where from the local distribution of the disease it was clearly impossible to remove it or where internal deposits were undoubtedly present. But where there has seemed any chance of removing the disease, even though only a very poor one, the patient has been given the benefit of the doubt It will be seen from the lists published in the Harveian lectures and in THE LANCET as before mentioned that some of the cases were so nearly hopeless that if I had had the slightest regard for statistical results they would have been excluded, but as in several very unfavourable cases no recurrence has taken place after a considerable time I have not felt justified in refusing operation except in clearly hopeless cases.

Coming now to the statistical results in the list referred to 34 of the cases were private patients and were operated on in private and I have been able to trace them all with one exception. In these cases from six to 13 years have elapsed since the operation was performed.[4] The result is that at the present time 17[5] of these 34 cases are alive and well without any recurrence. In 14 cases[6] recurrence has taken place and 13 of these patients have now died from the disease Two patients have died from other troubles without any trace of recurrence having manifested itself; one (Case 51) died from pneumonia two years after the operation and one (Case 54) from heart disease seven years after the operation One patient (Case 55) cannot be traced. This gives 50 per cent. alive and well after periods varying from six to 13 years[7] or if we study the recurrences we have 58·8 per cent. in which there was no recurrence and 41 per cent. in which there was recurrence; or if we assume that the case lost sight of also recurred there are 44·1 per cent. of recurrences; or, to make the result still more definite, as the future of the two cases which died is uncertain as regards ultimate recurrence, we may say that we know the exact facts in 31 cases and of these 17, or 54 8 per cent., are alive and well and 14, or 45·2 per cent. have recurred.

Thus, in whatever way we work out the figures we get the result that from 50 to 55 per cent. of the cases in which this operation has been performed are alive and well after periods varying from six to 13 years. This gives a very fair estimate of the final results of the modern operation as applied to all cases except those in which it is obviously impossible to remove all the existing disease. I have no doubt that had I aimed at getting the best statistical results and selected the cases from that point of view a decidedly better percentage would have been obtained; but I do not think that such a selection is fair to a patient suffering from such an inevitably fatal disease as cancer of the breast, more especially as in this instance the mortality after operation is quite insignificant. The question of selection of cases for operation is totally different where the cancer is situated in regions where the mortality from the operation is considerable and where it increases with the extent of the disease. In such circumstances the question must be whether the probability of non-recurrence is sufficiently great to justify the risk which the patient runs, but in these instances, where the question of operative mortality may be practically ignored, I do not think that such selection is justifiable. Besides, it is impossible to prophesy the result as regards recurrence after operation. Several cases which seemed limited and small and which I looked on most hopefully have recurred, while others which I thought were practically hopeless have shown no further sign of disease.

Thus, taking this list of private patients, had I been selecting them with an eye to statistical results I would probably have excluded 11 (two of these, indeed, were practically hopeless from the first—namely, Cases 35 and 84). Nevertheless, of these 11 cases four have remained free from disease—namely, Case 27 for ten years, Case 35 for nine and a half years, Case 72 for seven and a half years, and Case 54 who died from heart disease after seven years without any sign of recurrence. From a practical point of view, however, it is interesting to attempt to separate the cases into groups and we may take two sets of groups—namely, (1) according to the apparent rapidity of the growth; and (2) according to the extent of the disease at the time of the operation.

1. In the first group, looked at from the apparent rapidity of growth, we have two classes: (*a*) Slow-growing cancers. In this group we probably have Nos. 6, 14, 39, 55, 59, 67, 71, and 88—eight cases, of which six remained well, one recurred, and one has been lost sight of. Assuming that the latter recurred, we have 75 per cent. in this group remaining well and 25 per cent. recurring. (*b*) More rapidly growing cancers. Here we have a list of 26 cases, 13 of which remained well and 13 recurred, giving 50 per cent. each way.

2. A more useful grouping is according to the extent of the disease at the time of the operation: (*a*) Small tumour in the breast with moderate infection of the axilla. Here we have Cases 5, 6, 11, 39, 50, 53, 55, 59, 61, 67, 71, 74, 76, 82, 87, 88, 90, 94, and 98—that is to say, 19 cases of which 13 have remained well, five have recurred and one has been lost sight of; thus, 68 4 per cent. certainly remain well and probably 31·6 per cent. have recurred. (*b*) Marked infection of the axillary glands. These include Cases 14, 27, 33, 35, 37, 51, 54, 72, 83, 86, 96, 97, and 99—that is to say, 13 cases of which six, or 46 per cent., have not recurred and seven, or 54 per cent., have recurred. (*c*) Cases where the supraclavicular glands were distinctly enlarged at the time of the operation. These were two in number—namely Cases 36 and 81—and in both of these recurrence took place. This last division is a most useful one and gives a fair idea of the result of the modern operation. It shows that the earlier and more limited the cancer the greater the chances of success; but it also shows that there is no possibility of prophesying in any individual case, for, on the one hand, in the most favourable cases recurrence may take place when the disease has apparently been widely removed, while in other cases which seemed unfavourable the patients remain well. This no doubt depends on various circumstances which have led, on the one hand, to an early and wide dissemination of the disease and, on the other hand, to marked local growth without dissemination. What these circumstances are it is most difficult to say. Cancers vary very much in their virulence, some having a great tendency to rapid dissemination and growth, such as the florid cancers of the breast, while others grow and disseminate with extreme slowness, such as the typical atrophic scirrhus, and there is every degree between these two extremes. This may be due to the existence of different kinds of cancer or, on the other hand, to varying tendencies in the body to cellular growth. The early dissemination may also be due to accidental circumstances, such as handling the growth, blows, &c, which force the cells into the vessels and thus lead to early dissemination in cases where the disease is otherwise apparently small and limited.

It is interesting to note the seat of recurrences in the first group. In No 11 the recurrence appeared in the internal organs about six and a half years after the operation, and later in the form of nodules in the skin and various parts of the body. In Case 53 the recurrence took place in the abdomen and was evident in less than two years. In Case 76 a thickening appeared about two years later in the other breast and afterwards there were nodules in the skin. The disease in the other breast may have been, of course, a fresh development. The patient was still alive in July, 1903. In Case 90 the recurrence was quite rapid and occurred especially in the thorax and liver and the patient died 11 months after the operation. In Case 98 the patient had an attack of pleurisy (? cancerous) about two and a half years after the operation and subsequently developed intense pain in the spine followed by paralysis and she ultimately died; there was no local recurrence. As regards the third group, although it only contained two cases it confirms the conclusion which I have come to—namely, that when the supraclavicular glands are infected the chances of arresting the disease are extremely slight; in fact, if at all marked, especially if the disease is noticeable towards the anterior part of the root of the neck, the chances are, I believe, practically *nil.*

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[4] The numbers of these cases in the former lists are 5 6, 11, 14, 27, 33, 35, 36, 37, 39, 50 51 53 54, 55, 59 61, 67, 71, 72, 74, 76, 82, 83 84, 86 87, 88 90 94, 96, 97 98 and 99. (See Harveian lectures, 1896, and THE LANCET, March 18th, 1899 p. 756)

[5] Nos 5, 6 27, 35, 39 50 59 61 67 71, 72 74, 82, 83 87 88, and 94.

[6] Nos. 11, 14, 33 36 37 53, 76, 84, 86, 90, 96 97, 98, and 99

[7] Of these cases 2 are alive after 13 years, 1 after ten years, 2 between nine and ten years, 3 between eight and nine years, 6 between seven and eight years, and 3 between six and seven years.

The most striking fact with regard to these cases is the great rarity of a second operation and, indeed, in the above list in only three instances was a second operation performed. This is my experience not only in these cases but in the whole of my work. Instead of, as used to be the case formerly, a second operation being performed after a few months or a year in a very considerable number of instances it is quite rarely that I operate for recurrence and that for two reasons. In the first place, in cases really favourable for operation recurrence in the area of the operation wound—that is to say, in the breast or the axilla—is quite a rarity. As a rule when recurrence takes place in these cases it is either in the supraclavicular glands or in the bones or in some internal organ, and almost the only secondary operations I have performed have been done with the view of removing enlarged glands from the posterior triangle of the neck. In the second place, where recurrence has taken place in the region of the operation it has been in bad cases and there has been evident disease elsewhere and therefore operation for the removal of such recurrences would be futile; indeed, in the few instances where nodules have appeared on the side of the chest this has not as a rule been the first place where recurrence was noticed. Most usually internal recurrences, more especially intrathoracic disease, have been observed before anything was apparent on the external surface and then the nodules in the skin and subcutaneous tissues have come as a more or less sudden eruption. In these circumstances they have seemed to me to be not so much an indication of local deposits left behind at the time of the operation as a generalised eruption secondary to the internal recurrence.

As to the date of recurrences I only know approximately the time at which attention was drawn to them, which, of course, is not the time at which the fresh disease began to grow. As would be expected, where the recurrences are not local a longer time will elapse before the recurrence becomes evident than where it is the result of disease left behind in the area of the operation and in the cases where recurrence has taken place there has evidently been a considerable gain in the length of life over the old operation. One very interesting point is the lateness of the recurrence in several instances. The longest case of late recurrence which I have had was one in which I did a free operation before I began following the definite lines of Stiles's and Heidenhain's researches. In that case the patient turned up at the hospital some 13 years after the operation with numerous large glands in the posterior triangle of the neck. She stated that she was quite well till about six months previously when she had a bad attack of influenza and that subsequently to that the glands above the clavicle began to enlarge. I did not operate on her and therefore cannot assert positively that these were cancerous glands, but I have not the slightest doubt in my own mind that they were so from the clinical appearances.

In the cases in this list there are two distinct instances of late recurrence—namely, Case 11, where the disease appeared about six years after the operation, apparently about the sternum and mediastinum, and Case 14, where the disease appeared about seven years after the operation in the glands of the neck. In these instances there can be no doubt that the cancer cells were present in the glands, &c., at the time that the operation was performed and they must have either been lying dormant for some time afterwards or else have been growing extremely slowly. In Case 14 the cancer approximated closely to the atrophic form of scirrhus and therefore the growth may have been steady but very slow, but in the other cases this was not so. The cancer was a much more rapidly growing form and it seems to me that in that instance the growth of the cells must have been more or less arrested for a time after the operation. In several other cases where the cancer was growing rapidly at the time of the operation and where I have expected rapid recurrence an interval of two or three years has elapsed before this has taken place and I cannot but think that the cancer cells in these cases must have grown more slowly, if at all for a time, after the operation than they were doing before it. In more than one instance the reappearance of the disease followed an illness, such as influenza, which left the patient in a weak state of health.

From a study of the recurrences after the modern operation I have come to the conclusion either (1) that cancer in its early stage in a healthy body grows extremely slowly and that it is only in the later stages, when the resistance of the body is broken down, that the more rapid growth occurs; or, on the other hand, (2) that the extensive modern operation in some way or other exerts an inhibitory growth on cancer cells which are left behind in the vicinity. It is quite conceivable that a combination of these two explanations may be correct. Thus, where only two or three cancer cells are present in the body of the patient with good resistance they may take a long time to acquire a firm hold and not till the body resistance is broken down either by intercurrent illness or by toxæmia from the products of the cancer cells themselves does the growth become more rapid. Hence operation, by removing the cancerous masses which are lowering the body resistance by their products, may render it difficult for the few cells that are left behind to start fresh growth. From this point of view the difference in the rapidity of recurrence after the modern and after the old operation may be solely dependent on the amount of disease left behind in the two cases. In many instances in the old operation collections of considerable size are left behind and recurrence is rapid; whereas in the modern operation presumably any cells which are left behind in the vicinity are very few in number and local recurrence is slow. In the matter of internal recurrence there is no marked difference in the two cases. In that instance in all probability the internal deposits, although not yet producing symptoms, are of sufficient size to be more or less independent of the resisting power of the body.

In some instances, however, it appears as if the cancer cells must have lain dormant for a time after the operation. In that case, apart from the removal of the mass which is poisoning the body and thus allowing the resistance of the body to be improved, it is conceivable that the modern operation may influence local deposits left behind in other ways. As the result of the procedure lymph channels are extensively removed and the lymph flow is arrested or slowed through the part and thus the distribution and nutrition of any cancer cells left behind may be much interfered with. The vascular arrangements are also much altered and nerves are extensively divided. As regards the latter point, Mr. G. L. Cheatle has shown some very interesting photographs which seem to indicate a certain relation between nerve supply and the growth of cancer. They especially indicate a greater tendency for the disease to spread along the area of the particular nerve distribution in which it first occurred rather than indefinitely into neighbouring nerve areas. In this operation the trophic nerve influence must be profoundly altered in the area of the operation and this may be of some unknown importance.

I think that we may now form a fairly final judgment with regard to the treatment of cancer of the breast by operation. We may say, for example, that taking the average of all cases operated on, favourable or otherwise, something like 50 per cent. will remain well for a number of years and in those cases in which the tumour is small and well limited and the glandular infection is slight the proportion of successes will be considerably greater. We may also say that where recurrence takes place it is most usually internally and the suffering of the patient is less than if no operation had been performed, while life is considerably prolonged: and that these results are due to the more precise and extensive removal of all possibly infected areas—the breast, the skin, the pectoral fascia, the muscles, the glands, &c.—in the modern operation, and also, and this is very important, to the fact that the cancerous deposits are not cut into at the time of the operation and the cells thereby distributed through the tissue. Again, we may conclude that cancer is a local disease at its commencement and if only all the existing disease can be got rid of there is no reason for any further development from the primary focus. It is purely a question at the time of the operation of getting beyond all the disease. Recurrences, both general and local, are the result of direct spread from the original ocus Epithelial growths cannot originate in the lymphatic lands or other non-epithelial structures; the cancer cells re the direct progeny of cells in the original tumour. At he same time I do think there is a greater tendency to ancer in one individual than in another and that, for xample, the formation of cancer in one breast after removal f the other for the same disease may just as likely be a resh development altogether as a growth secondary to the riginal tumour. I have seen cylindrical epithelioma appear n the rectum in a patient whose tongue had been successully excised for a squamous epithelioma five years previously. have seen a rodent ulcer occur after a successful operation or cancer of the breast, and so on, and I must say I believe n the existence of a general tendency to cancerous developnent. But even if this be the case and the patient may me day develop another cancer elsewhere that is no argunent against the removal of the original disease as comletely as possible, seeing that it may be many years, if at ll, before any fresh trouble arises and that, on the other and, if the original disease is left or only partially taken way the life of the patient must be comparatively short. bove all things remember that in the *first* operation lies the atient's only chance and that it must therefore be done with the greatest thoroughness, however limited the disease nay be at the time of the operation

ABSTRACT OF

The Hunterian Lectures

ON

THE EVOLUTION AND ACTION OF CERTAIN MUSCULAR STRUCTURES OF THE HEART.

Delivered before the Royal College of Surgeons of England on Feb. 22nd, 24th, and 26th, 1904,

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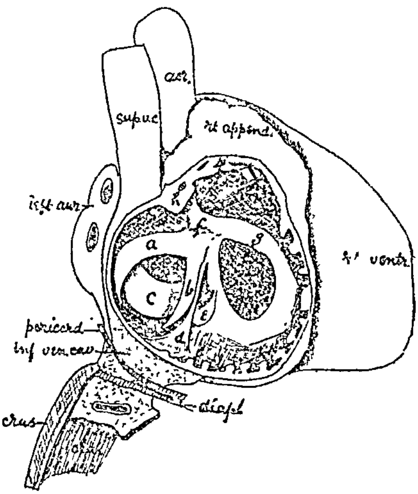
LECTURE III.[1]

Delivered on Feb. 26th.

CLOSURE OF THE FORAMEN OVALE.

MR. PRESIDENT AND GENTLEMEN.—The impression given on reading an account of fœtal circulation is that the right auricle is a passive, open chamber through which the blood of the superior vena cava passes to the right ventricle and that of the inferior vena cava flows through the foramen ovale into the left auricle. The active contraction of the limbic muscular bands which make up the annulus ovalis is not taken into account (Fig. 12). Since only about one-third of the blood from the right ventricle passes through the lungs before birth and thus reaches the left auricle at least twothirds of the blood must reach the left ventricle by the foramen ovale. Before birth the auricles are surrounded by the solid unyielding lungs and are filled by being actively dilated through the contraction of the ventricles, for there is then no respiratory pump. At the commencement of auricular systole the limbic bands which seize the termination of the inferior vena cava, by compressing and drawing that vessel towards the foramen ovale, pump the pure arterial or placental blood into the left side of the heart. With the first descent of the diaphragm the action of the limbic bands is altered. The termination of the inferior vena cava, firmly fixed in the diaphragm, is drawn down by that muscle and the plane on which the limbic bands act becomes more vertical in direction. Their origin in the inter-auricular septum is drawn towards the vena cava, thus helping to close the foramen ovale (*Fig. 12*). The fall of pressure in the right ventricle and the rise of pressure in the left auricle are the other conditions which lead to closure of the foramen ovale.

FIG 12.

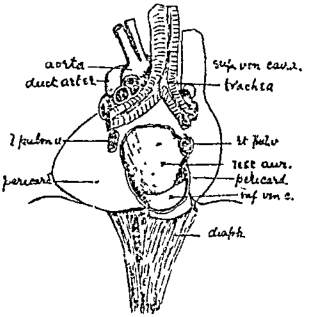


The right auricle of a newly born child thrown open. *a*, Upper limbic band. *b*, Lower limbic band. *c*, Septum ovale *d*, Eustachian valve. *e*, Thebesian valve. *f*, Union of limbic bands on septum, behind root of aorta. *g*, Annular fibres of auricular canal. *h*, Section of right tænia terminalis.

CLOSURE OF THE DUCTUS ARTERIOSUS.

As a rule nothing is said in accounts of the fœtal circulation of the mechanism which brings about the closure of the ductus arteriosus. With the first breath two forces come into operation which lead to its obliteration. When a section is made across the aorta and ductus near their point of union (Fig 13) it is seen that the wall of the ductus is round in outline and projects within the aorta, giving the lumen of that vessel a crescentic shape From that appearance one may infer that the pressure within the pulmonary artery is greater than that within the aorta before birth, and the fact that the wall of the right ventricle is then thicker than that of the left points to this being so. At birth, owing to the opening up of the pulmonary circulation and the closure of the foramen ovale, the pressure in the aorta becomes twice that, or more, in the ductus arteriosus, with the result that the wall of the aorta now bulges outwards and projects within the lumen of the

FIG. 13.



The heart and great vessels of a full-time child exposed on their posterior aspect. The wall of the ductus anteriosus is seen to project within the lumen of the aorta ductus arteriosus, thus blocking the flow through that vessel. The diaphragm also plays a part. Before birth the ductus arteriosus is on a level with the arch of the aorta; after birth it ascends obliquely to reach that vessel. The ductus arteriosus arises within the apex of the pericardium and passes to the arch of the aorta. With the descent of the diaphragm the whole pericardium and its contents are drawn downwards. The arch of the aorta, on the other hand, is bound to the neck by the carotid sheaths and cervical fascia. Hence a strain is thrown on the ductus which assists in retarding the flow of blood through it.

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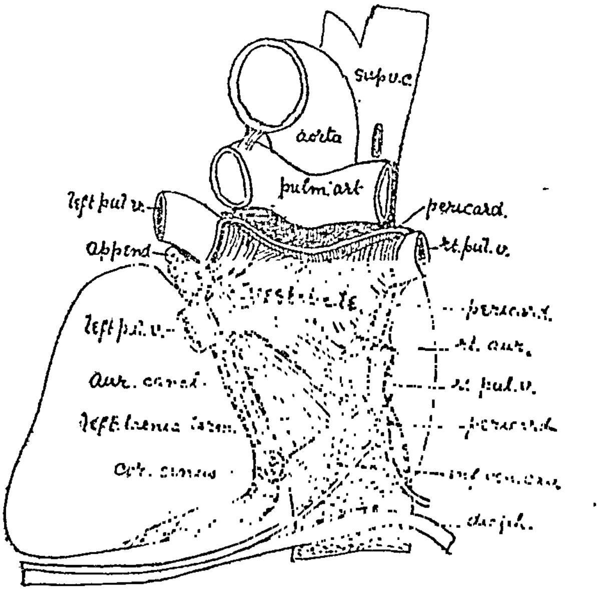
[1] Lectures I. and II. were published in THE LANCET of Feb. 27th (p. 555) and March 5th (p 629), 1904, respectively.

CONSTITUTION OF THE LEFT AURICLE.

In the human left auricle is to be seen the climax of a transformation which has led to the partial suppression of the auricle proper by the growth of a new part—the vestibule. The vestibule is shown in Fig. 14; it is that part of the left auricle into which the pulmonary veins pour their blood and which is demarcated from the rest of the auricle by the strong muscular band already described as the left tænia terminalis. At an early stage of development the left auricle, like the right, consists of two parts, an auricular canal and the auricle proper; there is then no vestibule. The septum between the two auricles is derived by an inflection of the auricular canal. The lungs occupy the dorsal or spinal part of the body cavity, the heart the ventral or sternal. The pulmonary veins issue from the lungs and join to form a single trunk which passes forwards to pierce the auricular canal. To the right of its orifice is the septum, to its left a band of muscle representing the tænia terminalis which in the amphibians and reptiles helps to close the orifice of the vein during auricular systole and which we may suppose acts in a similar manner in the human embryo. In the course of development the heart sinks backwards between the lungs and the lungs grow forwards over the heart, thus altering completely the relationship of the pulmonary veins to the heart. The pulmonary veins are pulled right and left, their common termination in the auricle separates, and their orifices move apart. Then the upper and lower veins of the same side separate and move apart. As the venous orifices separate the musculature of the auricular canal grows over and fills the intervals of separation and in this way the vestibule of the left heart is produced and ultimately comes to lie behind the right auricle and to form by far the largest part of the left (Fig. 14). The left tænia terminalis is drawn outwards from the septum and forms a horseshoe band that surrounds the vestibule (Fig. 14). Every stage in the development of the vestibule of the human heart can be seen in a permanent form by a study of the hearts of reptiles, birds, and mammals. The auricle proper, which is so large in the right chamber, is reduced to the mere appendix in the left. The auricular canal from which the vestibule was developed is surrounded by annular fibres which lie hid in the auriculo-ventricular groove. Thus the left auricle consists of vestibule, auricular canal, and auricle proper.

FIG. 14.



Heart dissected from behind to show the parts of the left auricle. The attachments of the pericardium to the heart are represented. It will be seen that the termination of the inferior vena cava acts as a fulcrum for the musculature of the left auricle.

CLOSURE OF THE PULMONARY VEINS.

The left auricle is suspended between the roots of the lungs (Fig. 15). As the pulmonary veins enter the pericardium they are surrounded by circular fibres continuous with, and derived from, the musculature of the vestibule (Fig. 14). Besides these circular fibres, which act as sphincters to the pulmonary orifices, the left tænia terminalis plays a leading part in preventing regurgitation of blood. Rising from the termination of the superior vena cava, where it is continuous with the corresponding band of the right side, it passes to the left, looping round the vestibule and termination of the pulmonary veins to end in the inter-auricular septum and auricular canal. In systole it sinks within the auricle and covers the orifices of the pulmonary veins. It becomes greatly hypertrophied in the early stages of mitral stenosis.

FIG. 15.

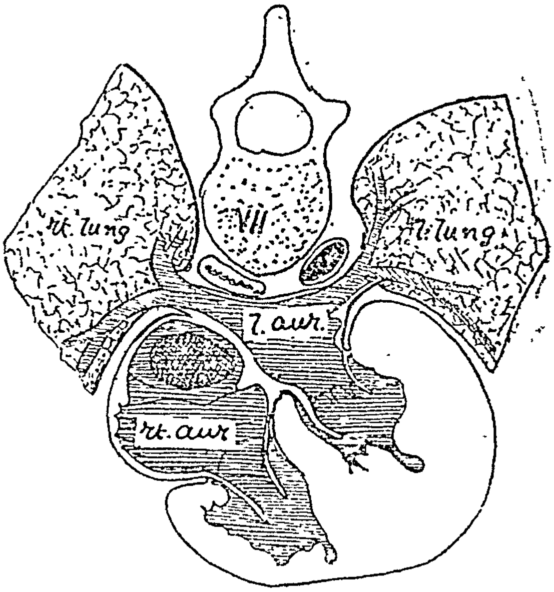


Diagram to show the relationship of the left auricle to the roots of the lungs. A transverse section at the level of the seventh dorsal vertebra is represented.

THE DIFFERENT EFFECT OF MITRAL INCOMPETENCE AND MITRAL STENOSIS ON THE PULMONARY VEINS.

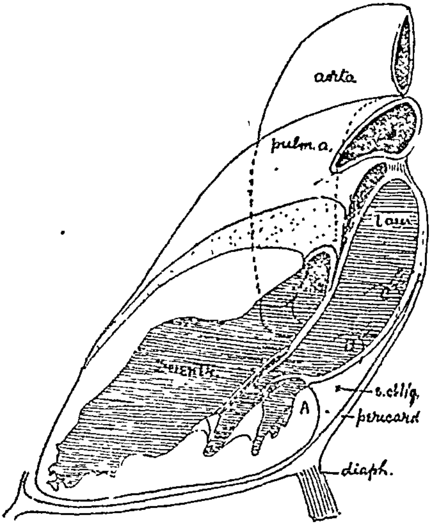
No fact is better recognised than that the train of symptoms which follows mitral stenosis differs from those that follow mitral incompetence. The difficulty in explaining the cause of the difference lies in a loose conception of the manner and time in which the pulmonary orifices are closed. In mitral stenosis the highest pressure within the auricle occurs during systole of the chamber when the pulmonary orifices are closed or, in case of dilatation from back pressure, partially closed; in mitral incompetence the highest pressure occurs when the walls of the auricle are relaxed in diastole and when the pulmonary orifices stand wide open, so that the ventricular wave of pressure may spread right within the venous system of the lung. The widespread character of mitral regurgitant bruits is probably due to their diffusion in the veins.

CONTRACTION OF THE LEFT AURICLE.

In systole the anterior wall of the left auricle comes into apposition with the posterior wall and the cavity of the vestibule is reduced to a slit. In studying the manner in which this is produced one has to take into account the relationships of the auricle (Figs. 15 and 16). Behind, it is in contact with the œsophagus and aorta in the posterior mediastinum and spinal column, unyielding structures which prevent any forward movement of the posterior wall.

In front of it are the commencement of the aorta and right auricle, both of which are drawn backwards in auricular systole and come forwards again in diastole. When the auricle contracts the posterior part of the base of the left ventricle is drawn upwards and occupies the room vacated by the auricle (Fig. 16). The manner in which that movement is produced may be understood from a reference to Fig. 14, which shows the left auricle in a position of semi-contraction. The annular fibres which surround the neck of the left auricle rise within the inter-auricular septum and pass to the left in front of, and behind, the auricle to meet and to turn up on the appendix. When they contract the neck of the auricle is greatly contracted and pulled inwards and upwards to the inter auricular septum, carrying in the same direction the base of the left ventricle. The vestibule, it will be observed, is firmly fixed to the termination of the inferior vena cava, which serves as a fulcrum for its musculature (Fig. 14); its right and left extremities are held by the pulmonary veins; its upper border is bound by a reflection of pericardium to the fibrous tissue below the arch of the aorta. Hence in systole of the auricle its walls converge upwards and to the right towards the fixed points just enumerated. As the auricle contracts the base of the left ventricle is drawn upwards to occupy its vacated space and thus receives its load. The auricle, because it is fixed by the venous terminations, cannot move to the ventricle, so the base of the ventricle moves to the auricle. When the thorax is opened and the lungs collapse the left auricle loses its pulmonary supports and its muscular mechanism is thus upset.

FIG. 16.



Vertical section of the heart (hardened *in situ*) laying open the left side. The left auricle is dilated from a stenosis of the mitral orifice. A, Posterior base of the left ventricle. B, The position of a normal base in diastole of the auricle. C, The position of a normal base in systole of the auricle.

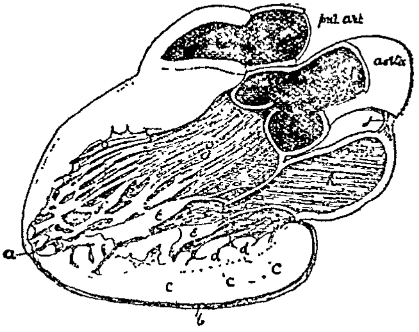
DIASTOLE OF THE LEFT AURICLE AND PRODUCTION OF ITS NEGATIVE PRESSURE.

In systole of the ventricle its posterior base moves downwards and brings about an active dilatation of the left auricle (Fig. 16). With the outflow of blood into the aorta the arch of that vessel is unbent somewhat and its ascending part springs forwards, thus helping to increase the size of the auricule [illegible] pulmonary artery [illegible] that in the aorta from 140 to 180 millimetres I found that the ascending aorta came forwards 8 millimetres. The descent of the base of the left ventricle is due to (1) the fibres which rising at the apex of the heart ascend straight on the diaphragmatic or posterior surface of the left ventricle to end on the membranous ring at the auriculo-ventricular orifice; (2) to the columnar layer on the inner surface of the heart which runs on the lateral wall of the ventricle from apex to the membranous ring at the base; and (3) to the musculi papillares. All these act from the apex as a fixed point.

THE EFFECT OF PERICARDITIS ON MOVEMENTS OF THE LEFT AURICLE.

In order to allow its movements to take place freely and without friction the anterior wall of the left auricle is separated from the aorta and pulmonary artery by the transverse sinus (Fig. 17), while the posterior has inserted between it and the pericardium a serous diverticulum, the sinus obliquus (Fig. 16). In pericarditis adhesions are very apt to occur between the walls of the left auricle and the surrounding structures, with the result that the movements of the auricle and the power to produce a negative pressure within their cavities is partly or completely lost.

FIG. 17.



Section of the left side of a heart, hardened *in situ*, to show the thinning of the muscular wall at the apex and the [illegible] the auri- [illegible] of the [illegible] fibres [illegible] ircular [illegible] umnar [illegible], Mus- [illegible] to the [illegible] uricle. [illegible] auricle to the aorta.

MOVEMENT AND FUNCTION OF THE AURICULAR APPENDICES.

In late stages of heart disease when the auricles become greatly dilated the appendix of the right auricle, very rarely that of the left, is found filled and distended by an ante-mortem clot. The contraction of the appendix constitutes the final act of the auricular systole. The base of the appendix moves nearer the centre of the auricle so that its mouth lies over the auriculo-ventricular orifice at the end of auricular systole. The systolic retraction of the right appendix is brought about by a special retractor band which, rising from the tænia terminalis internal to the superior caval orifice, branches out within [illegible] the appendix. The left appendix, which [illegible] the whole of the proper [illegible] is drawn inwards by a band which springs from the left tænia terminalis. The contraction of the appendices completes the loading of the ventricles. When the auricles become permanently distended the ventricles are filled in the initial stage of the auricular systole, so that the appendices get no opportunity of discharging their load. Dr. James Mackenzie regards the clot in the appendix as a result of paralysis of the auricle.

FIXATION OF THE APEX OF THE HEART.

The apex of the heart is the least moved part of the ventricles during systole. It becomes then a functionally fixed point from which the musculature of the ventricles may act on the auricles. In reptiles the cardiac apex is fixed by a ligament, but in birds and mammals this end is accomplished by the peculiar structure of the left ventricle.

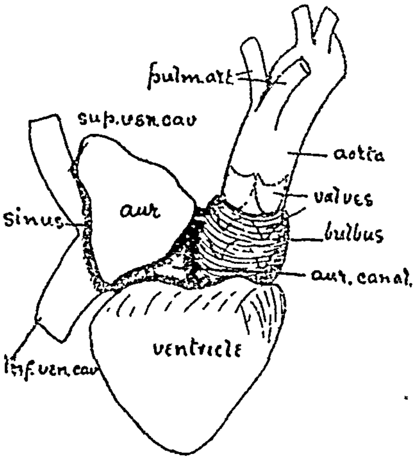
Those who have examined the thickness of the wall of the normal left ventricle must have been struck by its thinness at the apex (from two to three millimetres) and thickness at the base (from 12 to 15 millimetres) and marvelled why rupture of the apex is not more common than it is (Fig. 17). The muscular fibres at the base, owing to the wide calibre, act at a disadvantage in emptying the ventricle and therefore are increased in number, but the difference between the diameter of the base and apex will not account for the great difference in the thickness and arrangement of their muscular coats. In the wall of the left ventricle of all mammals the three layers of muscle described by Henle can be recognised. They are the outer longitudinal, the inner longitudinal, and the great middle "driving" layer of circular or spiral fibres. Of the bundles of spiral fibres no more need be said than this, that they pass in their oblique course from the outer to the inner surface of the ventricular wall and that each layer runs at a slightly different angle to the one deeper to it. In the superficial longitudinal fibres there are two distinct sets and both rise in the vortex at the apex (Fig. 17). One set runs straight upwards on the diaphragmatic surface of the left ventricle to end in the membranous ring at the base. The other passes spirally on the anterior surface to end chiefly on the base of the aorta, but some end by passing into the septum at the anterior interventricular groove. The inner longitudinal fibres begin in the reticular meshwork of the apex and like the outer longitudinal fibres, those on the septal wall end in the aortic orifice, while those in the lateral and posterior wall, including the musculi papillares, end in the membranous ring at the base. In systole the apex becomes the seat at which two forces act in opposite directions. While the thick layer of circular fibres in the basal part would drive it outwards, the longitudinal fibres act in the opposite direction and draw it inwards. The two forces are equally balanced in expelling the ventricular column of blood and hence the comparatively stationary position of the apex. While the longitudinal fibres that end in the root of the aorta act mainly on the apex as restraining fibres (for the slightness of the shortening from the apex to the origin of the aorta in systole is an observation in which physiologists agree) the fibres which pass to the base of the ventricles use the apex as a fulcrum from which they draw forwards the lateral and posterior base of the left ventricle.

On looking over the specimens of rupture of the left ventricle in the London Hospital College Museum I found they were of two distinct classes—one due to a localised thrombosis of the coronary artery which may occur at any point, the other class being greatly dilated hearts in which the rupture had occurred at the apical vortex. The region of the apical vortex is apparently contracted at an early stage of the systole in the healthy heart, otherwise it could not withstand the high systolic pressure, but in greatly dilated hearts it apparently closes later and has to withstand a higher ventricular pressure and hence becomes the seat of rupture.

THE MANNER IN WHICH THE PULMONARY VALVES ARE RENDERED COMPETENT.

It has been shown that there is still a remnant of the musculature of the sinus venosus in the right auricle of man but there is also a remnant round the base of the pulmonary artery of the musculature of that fourth chamber of the heart known as the bulbus arteriosus. In Fig. 18 is shown the bulbus arteriosus of a child who lived for some weeks which is in every way similar to that found in many fishes. The circular muscle fibres surround the common aortic stem in which the pulmonary artery and aorta are still unseparated, and within the bulbus are rows of valves with three well-marked semilunar valves at the summit (Fig. 18). Normally, the bulbus arteriosus is divided to form the roots of the aorta and pulmonary artery, but while its musculature, as shown in Borns's models, disappears from the aorta it remains as loops which encircle the terminal part of the infundibulum of the right ventricle and take their fixed origin from the base of the aorta. In all vertebrates the competency of the semilunar valves depends on this musculature.

FIG. 18.



Heart of a child showing retention of the bulbus arteriosus (from a specimen in the London Hospital Medical College Museum).

The great development of the bulbus arteriosus in gill-breathing vertebrates is due to the peculiar nature of their circulation. The heart is primarily a respiratory pump; the ventricle throws its load into the short aorta leading to the gills. To be able to receive the ventricular load and to force it onwards, that vessel is endowed with enormous elasticity so that no valves situated within it could be mechanically competent were they not furnished with a muscular or elastic support, such as is provided by the bulbus arteriosus. The musculature of the bulbus like that of the aorta is always in action but most so in *diastole* of the ventricle. In every way the pulmonary artery resembles the short gill aorta of fishes of which it is the functional representative in air-breathing vertebrates. The elasticity of the aorta has a definite limit; once the pressure is raised to from 120 to 130 mm. Hg the physiological limits of its expansibility are reached, but with the pulmonary artery it is different; it goes on increasing in size with every increment of pressure up to about 60 mm. Hg. The elasticity of the pulmonary artery becomes partially lost in emphysema. The pulmonary artery of amphibious mammals is enormous and capable of storing up many ventricular discharges. Dr. E. A. Gibson proved years ago that the pulmonary valves of the human heart received their competency from the musculature of the infundibulum.[2] The fibres of the bulbus arteriosus in lower vertebrates are not truly discharging but regulating fibres that maintain their tonicity when the true fibres of the ventricle have passed into a state of diastole. As far as one can tell with the naked eye this seems to be also the case in the mammalian heart. They probably play a part in the much discussed question of functional systolic bruits at the pulmonary orifice. When the right heart is distended the circular fibres round the base of the pulmonary artery form a functional stricture at the commencement of ventricular systole between the infundibulum and greatly dilated artery and are a factor which must be considered in explaining the production of pulmonary systolic bruits.

THE CLOSURE OF THE INTERVENTRICULAR FORAMEN.

In cases of congenital pulmonary stenosis, the commonest of all congenital diseases of the heart, or in those where the infundibular part of the right ventricle has never been functionally opened up, the interventricular foramen stands widely open. In birds and mammals it becomes closed whenever the foramen ovale is opened up. In the human embryo it is closed early in the second month, its disappearance being due to the development of a great band of musculature which is characteristic of the mammalian right ventricle and of which no notice has been taken (Fig. 19, B.). The relationship of this band to the interventricular foramen, or, rather to the membranous space which marks the position of that opening, is shown in Fig. 19. When the septal wall of the infundibulum of the right ventricle is examined there will be observed a raised wide flat band of muscular fibres which end in the base of the aorta (Fig. 19, A). That band is well known in the reptilia in which it is attached above to the septum between the orifices of the aorta and pulmonary artery. In a manner which need not be described it separates the arterial from the venous blood during systole of the reptilian ventricles. The great muscular band which first appears in the mammalian ventricle is shown cut across near its origin in Fig. 19, B. It is part of the inner system of the musculature of the right ventricle which bends inwards to reach the base of the aorta and fuses at its origin with the flat band on the infundibular septum (Fig. 19, A). From that origin it proceeds on the lateral wall of the right ventricle towards the right border of the heart, but its main branches run along the base of the ventricle, on the lateral margin of the right auriculo-ventricular orifice. In systole of the ventricle it helps to draw the lateral against the septal wall of the ventricle and forms a part of the safety-valve mechanism of the tricuspid orifice. The relationship of this band to the interventricular orifice will be observed. In systole the margin of the band falls right across the opening and closes it. In abnormal hearts showing congenital pulmonary stenosis this band is either absent or it has failed to join the septal band.

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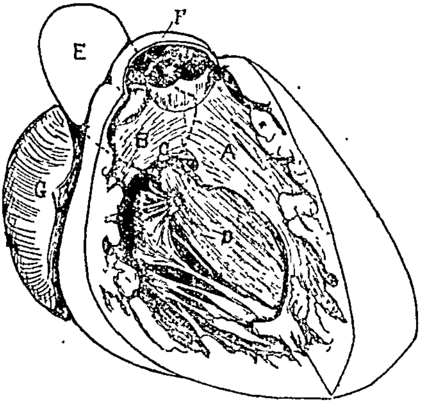
[2] E. A. Gibson: Diseases of the Heart and Aorta, 1898.

FIG. 19.



Right ventricle laid open to show A, a band on the septum corresponding to the pulmono-aortic band of reptiles. B, The great basal band which rises from the root of the aorta. C, The interventricular foramen. D, Septal wall of the right ventricle. E, Aorta. F, Pulmonary artery.

In conclusion, I should like to say that I have sought to show that the Hunterian method of using structure to interpret function and of using physiological knowledge to interpret structure is the most profitable of anatomical methods. If much advantage has followed the complete separation of anatomy and physiology much harm has also been done by this divorce which can only be remedied by a restoration of former relationships. No description of the anatomy of the heart can be considered satisfactory unless it can show the meaning of the structure of that organ. The key to the form and arrangement of the parts of the heart is a proper understanding of a wide principle which affects all mammalian hearts—namely, that they are so constructed that the ventricular systole may be utilised to fill the auricles.

TROPICAL DISEASES.—At a meeting of the West India Committee held at 15, Seething-lane, E.C., on March 8th, the Duke of Marlborough presiding, a paper on the Disease Problem in the West Indies was read by Sir Patrick Manson who said that the list of West Indian diseases included all the diseases of Europe with some two or three dozen tropical diseases He suggested that a well-equipped laboratory with an able and experienced director with suitable assistance should be established at some central and otherwise suitable point in the West Indies and also that every boy and girl in every school in the West Indian colonies should be taught the leading facts on which a rational system of tropical sanitation might be founded. All that was required was a short course of instruction to the teachers, together with a few diagrams and two or three additional pages in the current school-books. He felt sure that if these suggestions were carried out incalculable benefit would result to the West Indies in a few years.

Presidential Address

ON

THE CONGENITAL ORIGIN OF HERNIA.

Delivered before the Medical Society of Victoria, Australia, on Jan 6th, 1904,

BY R. HAMILTON RUSSELL, F.R.C.S. ENG.,

SURGEON TO THE ALFRED HOSPITAL, MELBOURNE.

GENTLEMEN,—Considerable latitude is by custom accorded to the retiring president in his choice of a subject for the annual address. I propose to deal with a subject which I would entitle "The Congenital Origin of Hernia" and as it is my intention that this address shall fall into series with various papers that I have published on the subject of hernia during the last five years I must ask your permission very briefly to epitomise the views I have already expressed on the subject. At the Brisbane Congress of 1899 in a paper on the Etiology and Treatment of Inguinal Hernia in the Young[1] the following conclusions were arrived at: 1. Oblique inguinal hernia is invariably caused by the presence of a congenital sac which in the vast majority of cases is provided by patency of the whole or a portion of the processus vaginalis. 2. There is no evidence in favour of the view that congenital weakness of the abdominal wall in the inguinal region is a factor in the causation of inguinal hernia. 3. While actual weakness of the abdominal wall in the inguinal region is frequently met with and may be an occasional cause of recurrence after operation, such weakness is not congenital but is an acquired weakness due to the existence of the hernia during a lengthened period. 4. Complete removal of the sac when performed before the abdominal wall has sustained such damage will not be followed by recurrence; it is furthermore the only treatment which is in the true sense curative. 5. It follows from the foregoing that the use of a truss (except in the case of very young infants) is an improper method of treatment and that the only permissible course to advocate for every case of hernia in a child is operative removal of the sac—the sole cause of the hernia.

Three years later, at the Hobart Congress of 1902 I was enabled to produce a [illegible] short, perhaps, of being quite [illegible] congenital origin of femoral hernia;[2] I then felt that with a little close scrutiny we might possibly gain some information as to direct inguinal hernia, that would at once resolve our doubts and enable us to place it in the same category with the oblique inguinal and the femoral varieties and regard it as being due to the presence of a congenital sac internal to the epigastric artery. This expectation has been at least partly realised, for I have here [illegible] which I am indebted to Professo [illegible] sac associated with an open pro [illegible] was taken from the body of a man who had never been the subject of hernia. My own belief is that such a pouch would be found to be always antecedent to the occurrence of direct hernia. I will supplement the evidence I adduced at the Hobart Congress of 1902 in favour of the congenital origin of femoral hernia by some additional facts which will render it impossible any longer to regard it as other than absolutely conclusively proved. My method of investigation has been exceedingly simple; it has consisted merely in looking at hernial sacs after their removal by operation and I purpose to narrate in detail the appearances observed which [illegible] afford instructive information as to the nature [illegible]

[illegible] lesson the case of a boy, aged nine years, with a somewhat large hydrocele of the cord on the left side, who came under my care at the Children's Hospital in May, 1900 On close examination I found that I was able to diminish the volume of the swelling somewhat by manipulation and I concluded that there must be a small opening of communication with the general peritoneal cavity. I removed the sac of the hydrocele and on examining the specimen which is depicted in Fig. 1 this is what I found. Above there was an exceedingly narrow communication with the abdominal peritoneum through which the peritoneal fluid was enabled to percolate but far too small to permit the escape of any portion of bowel. The remarkable sacculated outline of the bag should be noted and also that one of the sacculations has become completely closed over, forming a cyst. The whole sac is, of course, obviously congenital; it is a portion of the funicular process. The sacculations are also obviously congenital, for it can hardly be suggested that they could have been caused by pressure from within even were the cyst not present to give an absolute denial to such a view. It is rare to find an inguinal sac with this secondary sacculation so well marked but it is still more rare to find one without some more or less distinct diverticula. Sometimes inspection will reveal only one or two irregular contractions of the serous surface. On the other hand, the sacculation, either single or multiple, may assume any form, occupy any position, and be of any size.

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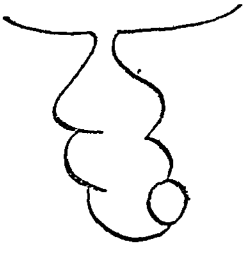
[1] THE LANCET, Nov. 18th, 1899, p. 1353.
[2] THE LANCET, May 31st, 1902, p. 1519.

FIG. 1.



Sac of hydrocele showing sacculation.

I have selected this case for consideration in the first instance because it is free from certain factors that might have become the subject of debate and doubt in a case in which hernia had been present. It is impossible to over-estimate the importance of this observation as to the liability of the congenital sac to display a certain amount of sacculation. You are perhaps a little puzzled at my insistence on this point, for I am not aware that attention has been called to it at all prominently before this evening. It is true that these appearances have been noted and occasionally alluded to, but the real significance and the far-reaching influence of this secondary sacculation do not seem to have occurred to observers who have usually ascribed it quite erroneously to the results of localised inflammation. Nevertheless, it is not merely of fundamental importance to the correct understanding of hernia, it is the very alphabet of the subject. For just as we have already seen that the cause of hernia is the presence of a sac, so I shall endeavour to show that all the multitudinous varieties of inguinal hernia owe their origin to corresponding varieties of sacculation of the sac. This being so, it becomes a matter of great importance to inquire as to the cause of this sacculation, and in order to do this we must go back to the embryological period at which the sac is formed. Further, for reasons that will appear, we shall do well in the first instance to direct our attention to the study of the femoral sac, from which we shall gather information which will enable us the more readily to fathom the somewhat intricate problems associated with the varieties of inguinal hernia. At an early period of embryonic development the three primary layers of the embryo become arranged in the manner depicted diagrammatically in Fig. 2. Ventrally two main layers are formed, the splanchnopleure closing in the primitive alimentary canal and the somatopleure constituting the body wall. Between these two layers is situate the primitive pleuro-peritoneal cavity lined throughout with mesodermic tissue, on the inner surface of which a layer of cells, flattened and stratified, will ultimately become specialised as the endothelial structure of the peritoneum. During the second month bud-like projections are extruded from the surface of the body wall which are the rudiments of the four limbs. These buds are projections of the whole thickness of the body wall and it may quite probably be a normal event for a pouch of peritoneum to be included in the bud (Fig. 2, D) to become subsequently obliterated. Whether this inclusion of a pouch of peritoneum is a normal event or whether it is a developmental accident matters not at all. That which does concern us is the fact that such a pouch of peritoneum is not only often formed but that it often persists; further, that it may occur in more than one situation in the limb but that its most frequent seat is in the immediate vicinity of the main vessels and is the future crural canal. This peritoneal pouch having been formed at a very early period it becomes a matter of extreme interest to trace its destiny and to see how it will fare during the period of rapid changes associated with the developing limb. There is a method of studying the finer processes of embryonic development which is peculiarly helpful to us in this matter, for it must be confessed that the knowledge we are enabled to gather from the skilled examination of embryos at varying periods would unaided be of scarcely sufficiently fine texture to enable us to predict the probable future of so minute an embryological structure as this peritoneal sac. Such knowledge may, however, sometimes be usefully supplemented by a process of inductive reasoning from observation of the distribution of blood-vessels and nerves. I need not elaborate this principle here, as I have already drawn attention to it in a previous article,[3] but I will at once invite your attention to a consideration of the branches of the common femoral artery which run upwards on to the abdominal wall, the superficial epigastric and circumflex iliac vessels, and the superior and inferior external pudics. The explanation of the somewhat retrograde course pursued by these little vessels becomes very evident if we refer to the first beginnings of a vascular system in the embryonic limb bud. The first branches that are given off from the main vessel of the limb bud will be apportioned to structures that are destined to form part of the abdominal wall, so that when in the course of development the groin becomes deepened and the limb undergoes changes that are to fit it to straighten out it will at once be seen how it comes about that the superficial epigastric artery and its fellows follow the course they do. A little twig passing directly upwards will ultimately become the superficial epigastric, another with a slightly outward tendency will become the circumflex iliac, and one or two passing somewhat inwards the external pudics.

FIG. 2.

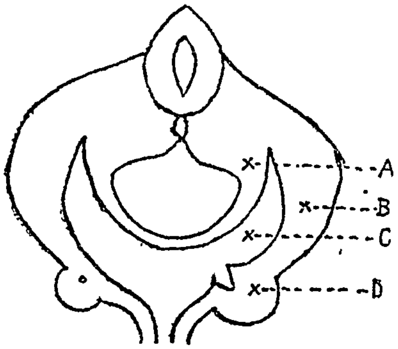


Diagram of embryo. A, Somatopleure. B, Splanchnopleure. C, Primitive pleuro-peritoneal cavity. D, Limb bud with hernial sac.

And now that we have arrived at a conclusion as to the causes that have determined the course of the branches of the common femoral it would seem reasonable to expect that a contemporaneous peritoneal sac occupying a similar position in the evolving limb should in response to the same developmental influences incur a like fate, so that a sac which is of sufficient length and suitably disposed at its inception would assume a position similar to that of the epigastric artery; another in like manner will display an outward and upward direction like the circumflex iliac, while yet another will follow a course corresponding to that of the external pudics; and this is exactly what we find. It is impossible to look at Fig. 3, which represents the branches of the femoral artery on one side and the favourite positions assumed by femoral sacs on the other, without being impressed with the conviction that the developmental influences which determine the course of the arteries on the one hand and the position of the hernial sacs the other are [illegible]. The three upper sacs depicted in Fig. 3 have all come under my personal observation during the last three years. I venture to assert that any material enlargement of a femoral sac as the result of the presence of hernia is impossible and I would also venture to formulate the following law of hernia—viz., *the variations observed in the clinical manifestations of hernia are mainly determined by the size and position of the sac.*

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[3] Ibid.

FIG. 3.

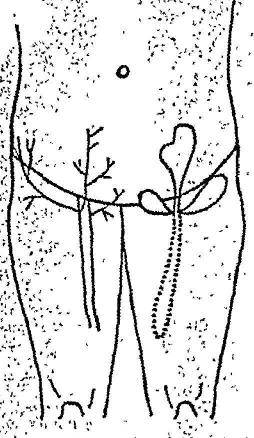


Diagram showing on the *right side* the *femoral artery* and its branches and on the left side the favourite seats of femoral sacs. That shown passing downwards is extremely rare (see Macready, Treatise on Ruptures).

[Mr. Russell went on to say that even in small femoral sacs there was evidence of their congenital origin. He continued:]

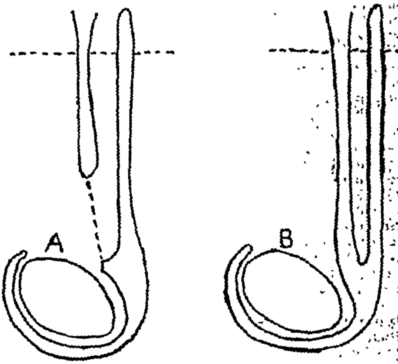
I shall have to refer to the relationship between the course of the blood-vessels in the fully formed body and the processes of embryological development which determined their disposition. A similar relationship must, of course, exist between the branches which, by repeated multiplication, dwindle to the smallest arterial ramifications and the evolutions of the parts to which they are distributed; only here the processes in question become too rapid and *too minute* for detection by the eye of embryological research, so that the vascular arrangements supply the only available *record* we possess of their nature. Now, it would be remarkable if these mesodermic evolutions, which are finally mapped out for us in the tortuosities of the arterial branches, should leave no mark upon the sac which is subject to the same vicissitudes, and we should expect to find some permanent record of their incidence in the shape of irregularities of the sac wall or sacculi. Here, again, our expectations have been abundantly realised. Of all the femoral sacs that I have removed during the last three years in every one has secondary sacculation been not merely evident but exceedingly marked; I should be interested to see a femoral sac devoid of sacculation of this kind. This evidence appears to me to be quite conclusive, but I would point out that apart from these various points that I have alluded to the mere inspection of the tissue of a femoral sac with eyes that are alert would convince us that it is a congenital structure. It is a thick structure lined, it is true, with endothelium continuous with that of the peritoneum, but comprising in addition a quantity of [illegible] muscle, fibrous tissue, and fat. In fact, I have no hesitation in saying that if we really look at an ordinary femoral sac now that these various features of it have been pointed out we shall only wonder that the truth about femoral hernia should have lain hidden so long and that it should ever have been thought that femoral hernia was an acquired form of the affection

I turn now to a branch of the subject which surpasses in interest that which we have been considering and enter upon an examination of the different varieties of inguinal hernia. Of these there are a whole cluster of which the great majority (all excepting one, in fact) are produced by developmental variations in the formation of the processus vaginalis. I have classified the varieties of inguinal hernia in the accompanying table and you will notice that under the heading of *funicular varieties* of hernia I place the commoner oblique forms and in addition the infantile, interstitial, and properitoneal forms.

Congenital inguinal hernia.	Funicular.	Simple—total and partial funicular hernia.
		Sacculated—interstitial, properitoneal, and *infantile*.
	Non-funicular—direct inguinal hernia.	
Acquired inguinal hernia.	Probably not existent (? direct hernia *sometimes*).	

In order to understand how these numerous varieties of inguinal hernia take their origin it becomes necessary to cast back once more to the developmental period. The events which result in the formation of the processus vaginalis have not been observed with any exactness but certain things are abundantly evident and these are sufficient for our practical purposes. The chief one is that in its extension from the primitive pleuro-peritoneal cavity to the scrotum the funicular process is subject to accidents of a special kind. Between the abdominal cavity, on the one hand, and the scrotum on the other it has, as it were, to run the gauntlet of the very actively developing abdominal wall. There is then a liability to the occurrence of a process of sacculation analogous to that about which I have already said a good deal in speaking of femoral hernia and of which the evidences in the inguinal region are most abundant. Here (Fig. 4, A) is diagrammatically represented an interesting example of the way in which the funicular process is liable to be "caught" by the abdominal wall in the process of development. It is the case of a man on whom I operated for left inguinal hernia in the Alfred Hospital. On making the usual incision in the groin I at once found myself in the tunica vaginalis which was arranged as depicted in the diagram. At one point the descending process of peritoneum had simply been implicated by the muscles of the abdominal wall during development, so that the descent of the testis had caused it to be drawn out into this long bag. On incising the further wall of the tunica vaginalis an ordinary hernial sac was found behind it which was removed in the usual way. How this arrangement has come about as the result of a developmental accident to the processus vaginalis will be readily understood from the diagram. If we mentally restore the portion of the processus vaginalis that has been obliterated so that we see that structure as it was originally it will be at once seen what has occurred (Fig. 4, B). A portion of the descending peritoneal sac has been caught and fixed by the developing abdominal wall and it has so happened that the hung-up portion was at a sufficient distance from the testis to permit of the normal descent of that

FIG. 4.



A, Diagram of condition found at operation, the hernial sac lying behind the tunica vaginalis. B, Diagram showing developmental condition before processus vaginalis is partly obliterated.

They are not applied tightly but merely laid on so as to get the exact size of the limb. The cast is removed while still wet. The best plan of removal of the outside plaster cast is to split it down the front by a vertical incision slightly to the outer side and then horizontally across the front of the ankle-joint. The edges are then fitted together again, the incision thus being closed, and the whole is consolidated by a final plaster of Paris bandage applied after removal. The cast thus taken should be about a quarter of an inch thick. From the cast a model is made in solid plaster and on this the leather casings are modelled. It is impossible, of course, to mould dry leather on the plaster so that it will keep its shape, but the difficulty is surmounted by soaking the leather in water. The only difficulty I have met with in this country is getting suitable leather. English leather does not seem to be nearly so pliable on soaking or to set so well on drying as the continental leather.

In order to make sure that the leather casings are strong enough, especially in the case of adults, thin steel bands are imbedded in the leather. These bands are first fastened securely on the plaster model, then on moulding the leather above them they leave an impress on the casing, so that on removal the bands may be riveted in their exact position in the leather. One band must always strengthen the thigh-piece below the tuber ischii. The holes for the escape of perspiration are punched from within out. The lateral supports are jointed at the knee but the joint is fitted with a peg screw, so that, if desirable, it may be immobilised.

By means of this splint the patient in nearly every case of fracture of the leg can be made to walk, with or without the aid of a stick, at the end of a week. Case 2 was one of the worst cases of Pott's fracture it was possible to meet, where the swelling and ecchymosis were so great that the posterior surface of the limb is still ecchymosed as high as the middle of the thigh now a month after his accident. If this splint can be applied to so severe a case of fracture any case can be treated with it. The bone is united well and the patient's joints, knee and ankle, are no longer stiff, as they would have been had they been kept at rest during the whole time he was in bed with a splint on or had plaster of Paris been applied to the limb. The advantage of this splint, in enabling a man to get up out of bed, to walk about, and even to go to business at the end of a week or ten days, must be very obvious. In cases of fracture of the femur also in old people where it is essential that they should not be kept in the recumbent position with a long splint on, this appliance will enable them to be got out of bed, and the tendency to hypostatic congestion of the lungs and bed-sore is thereby counteracted. The case of fractured femur shown above was one of fracture of the middle of the thigh bone, but this splint is also applicable to fractures of the lower and upper extremities of the femur. This splint was made for me by Mr. Hoefftcke, 21, Woodstock-street, London, W., who has modified and considerably improved Hessing's appliance.

Wimpole-street, W.

AN INQUIRY INTO THE SOURCE OF SCARLATINAL INFECTION AND ITS BEARING UPON HOSPITAL TREATMENT.[1]

BY R. E. LAUDER, F.R.C.S. EDIN., D.P.H.,

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MY first duty is to thank you for this opportunity of bringing before the Southampton Medical Society for its serious consideration a subject of much medical and public importance. The conclusions at which I have arrived are not altogether in accordance with those usually accepted and as a public official I look upon this society as the only competent tribunal in the borough to discuss and to decide the points at issue. As, moreover, the patients of everyone here form the basis of my remarks and deductions you will further be able to express an opinion as to the accuracy of the statistics and details I place before you. To this end I have sent to each medical practitioner a list of the cases notified by him during the past year and marked those which had been discharged from the isolation hospital and considered responsible for "return" cases. Gentlemen also who have notified cases of scarlet fever and are not members of this society have been invited to attend and if unable to do so have been asked to communicate any observations they might desire to make on cases which have been discharged from hospital and which are likely to be considered responsible for "return" cases.

The value of isolation hospitals from a public health point of view has recently been a subject of discussion both in the medical press and at the conferences of medical officers of health, and while it is true our knowledge of the infective process is not such as to preclude the possibility of mistakes, yet the observations of those controlling large hospitals and areas must help towards the solution of the problem. The difficulties of an isolation hospital present themselves, by universal opinion, very especially in scarlet fever wards. It is about scarlet fever that the greatest uncertainty exists and this uncertainty has led some experienced officers to demand the abolition of centred hospitals. In making this demand, however, a very important question has been largely ignored—viz., the question of internal administration. Before we can decide whether isolation hospitals are a failure or not we must ask ourselves whether our administration is such that the isolation principle has been properly tested.

In February last I altered my methods of administration and I propose now to sketch shortly the new procedure adopted, with the results obtained since that date. Our isolation hospital is for the use of the whole area of Southampton, in addition to being a refuge for the port sanitary authority, and during the past 12 months a sufficient number of cases of scarlet fever has been admitted and discharged to form a reasonable judgment of the value of the altered methods. The new methods are due to a firm belief, based on observation, that more classification and more segregation are essential and, moreover, that "return" cases are attributable not to the peeling condition, as is generally contended, but mainly to undetected discharges from the respiratory passages and ears in those who have left the hospital. The value of ordinary personal observation in arriving at this belief is enhanced when we bring into review our want of knowledge of the specific organisms and our present ignorance of where and when infection ceases. My observations, extending over a wide range of cases, have led me to regard the upper respiratory passages, particularly the naso-pharynx and the pharyngeal and faucial tonsils, as responsible for the reception and propagation of the infection.

It is not the purpose of this paper to discuss questions of pathological anatomy but a review of the anatomical peculiarities of the upper respiratory tract is essential in considering the feasibility of my contentions. The structure of this region, moreover, shows the possibilities that exist of long-continued infection and may of itself throw light on this obscure problem. I presume, therefore, to remind you very briefly of the more salient points. The nasal passages in the living subject present a very different picture from that viewed in the bony framework, owing to the thick mucous membrane which covers it, causing a narrowing of the openings of the different sinuses and nasal duct. The mucous membrane is thickest over the middle and inferior turbinates and covered by ciliated columnar epithelium with goblet cells on a delicate basement membrane and extends into the various air cells, communicating with the nasal fossæ. The tunica propria is composed of white fibrous tissue, rich in leucocytes and traversed by a venous plexus. Numerous compound racemose mucous glands open on the surface and between them there is much lymphoid tissue sometimes accumulated into nodules. In the air cells the tunica propria is very thin and sparingly supplied with glands. The following sinuses communicate more or less directly with the nose: the antrum, the frontal sinus, the anterior, middle, and posterior ethmoidal and sphenoidal cells, as well as the nasal duct, while the Eustachian tube connects the naso pharynx with the middle ear. The patency of all these communications depends for our purpose on a healthy condition of the mucous membrane. The mucous membrane lining the accessory sinuses is thin and pale and, with the exception of the frontal sinus, the drainage of these cavities, owing to their openings not being placed near the bottom, depends on the healthy and efficient ciliary action of their epithelium.

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[1] A paper read as the annual address before the Southampton Medical Society on Jan. 20th, 1904.

The naso- and oro-pharynx, including the tonsils, present points of first importance. Here, again, the mucous membrane is rich in lymphoid tissue; particularly is this so at the vault and across the back of the pharynx on a level with the hard palate where it forms the pharyngeal tonsils. The mucous glands are very numerous and the surface down to the level of the hard palate is covered with columnar ciliated epithelium. The faucial tonsils are substantially masses of lymph nodules with numerous irregular depressions, into the bottom of which mucous glands open. We have here an extensive surface of glandular tissue richly supplied with vascular and lymphatic vessels, the main functions—outside the special senses—of the nose and tonsils being to purify, to warm, and to moisten the air inspired. It is not difficult thus to appreciate the possibilities offered by the upper respiratory tract for the reception, cultivation, and dissemination of specific micro organisms.

Independent of adenoids and enlarged tonsils so common in children it is easy to realise how, with our rapidly varying climatic conditions, a modification in the mucous membrane of the upper respiratory tract can be produced suitable for the reception, development, and manifestation of the specific microbe of an infectious disease. Again, the glandular tissues and the accessory sinuses may afford conditions favourable to the continued existence of this specific poison —conditions which may be sometimes [illegible] impossible [illegible] parent, may [illegible] membrane [illegible] jected and [illegible] more or less degeneration and shedding of the epithelium. An increase in the severity of this process may present many phases up to that of ulceration or sloughing. In the very simplest variety one can readily realise that a patient who has run a favourable course may be sent from hospital with one or more follicles distended with infective secretion, the virus being probably in an attenuated condition, which, under conditions such as catarrh, may discharge and infect a surface ripe for its cultivation, often leading to rhinorrhœa or middle-ear disease and invariably causing a "return" case. In the more severe cases accompanied by marked proliferation of adenoid tissue and altered secretions the probability of spreading infection is recognised not only while discharges continue but for a considerable period after they have ceased, being in proportion to the abnormal conditions set up in the mucous membrane and the implication of the tonsils and accessory sinuses.

The fact that prolonged stay in hospital or the absence of desquamation does not assist in preventing "return" cases gives support to the potentialities of the upper respiratory tract as being the focus of infection. This is indicated by the following clinical observations. 1. The class—young persons—which is most susceptible to scarlet fever is also most subject to abnormal conditions of the tissues of the naso-pharynx and the tonsillar region These tissues, consisting as they do of a large amount of lymphoid tissues with involutions of the mucous membrane, offer a most favourable nidus. 2 The period of incubation is short and the changes in the mucous membrane of the upper respiratory tract appear early. 3. Evidence of infection following operation on the upper respiratory tract 4. The constitutional symptoms and fever are, as a rule, in proportion to the condition of the respiratory passages. 5. The great majority of "return" cases is associated with discharges coming from the upper respiratory passages and ears. 6 Enlarged glands are in proportion to the crowding of the ward and the introduction of fresh acute cases.

Previously to February of last year the method employed here was that I believe in almost universal practice, of treating all cases in the general wards until such time as peeling and discharges had ceased. Patients were then disinfected by being passed in the ordinary way through the out-bathing station. Under this system complications of the fever in our wards were both common and obstinate. Nor is it difficult to postulate a reason for this. In such conditions the respiratory passages, healthy or otherwise, were kept continually within a zone of active infection, an infection, moreover, not necessarily confined to that peculiar to scarlet fever. The method now adopted aims at the protection of mild and convalescent cases by segregating them from those which are received in an acute state or are suffering from discharges. These mild and convalescent cases are thus, as far as possible, guarded against reinfection and their respiratory passages are assisted to free themselves naturally from the organisms of infection.

The following is a brief account of the methods adopted in our hospital. The cases are brought to the hospital from only one house at a time. On arrival each patient is examined before removal from the ambulance by the resident medical officer and a swab is taken from the throat for bacteriological examination. Doubtful cases are put into an observation ward and detained or sent home according to whether scarlet fever is found to be present or absent, the ward being disinfected immediately after their removal. Undoubted cases of scarlet fever are put into an "acute room" and kept there until the acute stage of the disease has passed and a bacteriological examination of the swab has excluded diphtheria They are then removed into the general ward where the recent cases are kept apart from those that are convalescent. These precautions are taken even with the mildest cases. If at any time aural or nasal discharges, enlarged tonsils, glands, &c., develop the patient is removed from the general ward to a pavilion or block reserved for such complications. At the end of the third week of the disease, if free from complications, the patients are transferred from the general ward to another pavilion which has been thoroughly disinfected and to which no cases are admitted except through the out-bathing station with the same precautions as if they were being discharged from hospital. They are kept in this pavilion apart from all other patients for one week, the nose, ears, and throat being carefully douched with a disinfectant each evening after bathing. At the end of the week—that is, the end of the fourth week of the disease—they are discharged from hospital after again passing through the out-bathing station, no matter what the condition with regard to the peeling may be. After their discharge no patients are admitted into the same pavilion until it has been thoroughly disinfected. The general wards are thoroughly disinfected at least once a month or as indicated by the condition of the patients. These methods have not only comparatively freed us from the occurrence of albuminuria, enlarged glands, discharges from the nose and ears, &c, in the patients, but have reduced the duration of fever and the period during which they had to be kept in bed, and left us during the year without a single case of post-scarlatinal diphtheria or relapse. Further benefit would, I believe, result from the complete and continued separation of each individual case.

I wish now to put before you in tabular form the results of carrying out the methods I have shortly described. The cases dealt with in the tables I lay before you have, as I have already mentioned, been submitted to each medical practitioner who notified. In this way each member has it in his power to challenge, if he has any grounds for doing so, the accuracy of the figures. The statistics of results obtained under the different methods are given in Table I. During 1902 no cases were discharged from hospital until all peeling had ceased, but during 1903 I have acted on the belief that the infection is in the respiratory tract, that the constitutional condition and particularly the rash are only the result of toxic products, and that therefore the desquamation of skin is not *per se* a source of danger.

TABLE I.

Year.	Cases notified.	Removed *to* hospital.	Discharged *from* hospital.	Average period in hospital (days).	Number causing "return" cases.	Cases treated at home.
1902 ...	261	208	164	48	7	53
1903 ...	427	353	325	34	7	74

In Table I. a contrast under various headings of the work of 1902 and 1903 will be found. You will notice at once that the total number notified in 1903 exceeds that of 1902 by 166; you will further observe that in 1902 the average period of detention in hospital was 48 days, while in 1903 it was 34 days—a reduction of 14 days. Notwithstanding this reduction in the period of hospital treatment the number causing "return" cases is in each period the same—viz., seven—and this works out in 1902 as 4·27 per cent. and in

1903 as 2·15 per cent. So that the percentage after 48 days' treatment was greater considerably than the percentage after 34 days, showing clearly, as far as statistics for such a period can show, that the longer period of detention with the associated causes did not remove, but rather increased, the possibility of the patient carrying away infection.

In Table II. a further analysis of the 325 cases discharged from the hospital during the year will be found :—

TABLE II.

—	Dis-charged.	Average duration in hospital (days).	Number causing "return" cases.
1. Without peeling or complications	33	33	0
2. Peeling without complications	204	28	2
3. Cases with complications ...	88	50	5
Total	325	34	7

I have arranged this table so as to illustrate the length of time each class was detained in hospital and also the number in each group that could possibly be held responsible for "return" cases. In the first group, limited to 33, and dismissed after 33 days' residence, without either peeling or complications, we received no "return" cases. The second group—those peeling but without complications—includes the great majority of cases treated. There were 204 in this group dismissed after an average of 28 days' treatment. None of those 204 had suffered from complications during their stay in hospital and at the time of their leaving no symptoms of any discharge were apparent. This large class was responsible for two patients to whom "return" cases were due. The details of these cases I will submit further on. The third group, in which complications of various kinds had occurred, numbered 88. These were detained an average of 50 days in hospital. This group produced the largest number of "return" cases—five—the particulars of which I will also submit to you. The second class of cases in the table—204 in number—were followed to their homes, being visited there daily for ten days This method was adopted so as to preclude the slightest possibility of even a mild case occurring without detection The conditions, also, to which these patients returned were carefully investigated, as their surroundings had considerable bearing on the probable spread of infection. Few, if any, of the cases could have been satisfactorily isolated at their own homes The statistics show that the 204 cases returned to 180 houses. These houses had an average accommodation of five or six rooms and contained 744 persons who had never suffered from scarlet fever. Of these, 363 persons were under 15 years of age, 36 were between 15 and 18 years, and the remainder—or 345—were over 18 years. If, therefore, peeling *per se* were infectious these 204 cases were returned to the very conditions under which the infection was likely to spread Of the "return" cases notified the following are the details of the two in Group 2 of Table II.

CASE 1.—The patient, a girl, aged eight years, was discharged after 29 days' treatment and while still peeling Eight days after leaving the hospital she was found to be suffering from a discharge from the nose. A brother and sister of the patient developed all the symptoms of scarlet fever five days later i e, on the thirteenth day after the patient had left hospital In this case it is probable that the specific organism still remained in an attenuated condition and was rekindled into activity by the condition causing the catarrh.

CASE 2—The patient, a girl, aged three years, was discharged after 24 days' isolation, peeling A sister developed scarlet fever three days later. The former case received seven days' special treatment in the same room as another patient who had suffered from discharges until three days before admission into the special ward. In this case probably the specific organisms remained in unhealthy tissues which ceased to give outward evidence of their presence

So that in the two cases of this group responsible for "return" cases there were other possible sources of infection present, and considering the total number—204—followed by only two "return" cases it is not illogical or unreasonable to say that the desquamation played no part in the result. Of the five "return" cases under Class 3 of Table II. the following briefly are the details.

CASE 3.—The patient, aged four years, was in hospital 54 days; no peeling on discharge. Suffered from nasal and aural discharges; nasal discharge returned on the day after leaving hospital. A servant was notified as suffering from scarlet fever ten days after the patient's return home.

CASE 4.—The patient, aged six years, was in hospital 44 days; no peeling or discharge on leaving hospital; had had aural discharge. A brother was notified seven days after the patient's return home.

CASE 5.—The patient, aged seven years, was in hospital 31 days; peeling; had watery discharge from the nose. A brother was notified as suffering from scarlet fever eight days after the patient's return home.

CASE 6—The patient, aged four years, was in hospital 31 days; peeling on feet; no discharge; had had discharge from the ears and the nose which had ceased ten days prior to leaving hospital. A brother was taken ill four days after the patient's return home.

CASE 7.—The patient, aged five years, was in hospital 28 days; peeling on feet; no discharge; tonsils enlarged and nodular condition of pharynx. The patient developed a purulent discharge from the nose two days after leaving hospital. A sister was notified as suffering from scarlet fever 15 days after the patient returned home.

These cases clearly point to the discharges as being the source of infection.

Table III. shows the number of cases treated in hospital and at home and the respective duration of treatment, with mortality.

TABLE III.

—	Number of cases.	Average duration of treatment.	Deaths.	Case mortality (per cent.).
Number discharged from hospital ...	325	34 days.	5	1·5
Cases treated at home	74	38 days.	3	4·1

Table III. is of value in showing that in patients treated at their homes the duration of treatment is much reduced from what it formerly was, the average duration for the hospital being 34 and in private 38 days. The mortality percentage is put down in this table not for the purpose of drawing any comparative conclusions. Such conclusions are undesirable and, moreover, are impossible, inasmuch as necessary factors are wanting. The low percentage mortality in the hospital, however, shows that treatment in centred hospitals is far from deserving a criticism so severe as to justify the statement that isolation hospitals should be abolished.

Such, then, are the main features of a year's work in our scarlet fever wards and I have taken the earliest opportunity of submitting them to you. I have dealt only with my own experiences, leaving out altogether the conclusions and methods of other workers. It is only by so doing and adding gradually to evidence already gathered that the vexed question of infection can be finally settled. I have put before you my contention that the respiratory tract is the source and centre of scarlatinal infection and I have put this contention before you not as a theory only but as a theory which has, I believe, stood the test of practice. If peeling *per se* were infectious then it is almost impossible to conceive how 204 patients discharged from the hospital in a peeling condition failed to be responsible for more than two "return" cases. This failure, moreover, of these patients to infect others was not due to any special condition of the homes and surroundings to which they returned. The conditions which did exist were just such as would put the method to a crucial test. For in nearly all the cases—as you will see by the statistics, each unit of which you must be acquainted with—the discharged patients were located in surroundings which were distinctly favourable to the spread of infection.

Although the primary object of an isolation hospital is the prevention of infection, yet the treatment of the patients is equally important, and I think our hospital records show that the short period of detention with the methods practised is not prejudicial to complete and early convalescence but rather the reverse. The patient is removed *sooner from the* infected zone and the risks of the many *complications are* minimised. Another advantage derived from this *system is* the increase of our hospital accommodation. *This is, of* course, a minor consideration, but from the point of view *of* a public official administering a large and expensive *department* it is a feature not to be disregarded. Can I not therefore claim that for the interests of public health, for the welfare of the patients, and for the advantage *of the ratepayers*, the system adopted has proved successful? It was not, I can assure you, without a feeling of *considerable* anxiety that I commenced to carry out a method so much at variance with the accepted traditions of the *profession*, but as case after case left the hospital without producing *any of* the dreaded results I felt to be *working on safe grounds*. Now, at the end of a year, I invite *your opinion* of the method employed.

Southampton.

ABSTRACT OF A CONTRIBUTION TO THE STUDY OF THE ACTION OF INDIAN COBRA POISON.[1]

BY R. H. ELLIOT, M.B., B.S. LOND., F.R.C.S. ENG., D.P.H. CANTAB.,
MAJOR, I.M.S.

THIS research[2] was undertaken by Major Elliot, who is on special duty making investigations into snake *venom* under the orders of the Secretary of *State for* India, with a view of accurately ascertaining the precise part played by the various important centres, nerves, and organs in the production of death from cobraism. After detailing the work of previous investigators and the methods *employed* in his researches Major Elliot came to the following summary of *conclusions* :—

1. Cobra venom acts directly on the muscular tissue *of* the blood-vessels or through their vaso-motor nerve endings, constricting the arterioles and thus raising the arterial *blood* pressure. It probably affects all organs alike. In the *frog* vessels the action can be traced down to dilutions of 1 in 10,000,000 In a cobra bitten man the concentration *of* venom *in* the *blood is* probably at least 30 times as great as this.

2. Cobra venom also acts directly on the *isolated frog* ventricle, killing it in a position of firm *systole if the solution* be *concentrated* and stimulating it if a *weaker strength* be *employed.* The limit of the speedy lethal action on the isolated heart is reached at a *concentration of about* 1 in 500 000. The stimulating action can be traced down to a *dilution of* 1 in 10,000 000. *This action* of cobra venom brings it into line with the glucosides of the *strophanthin* group Its action is more *rapid than that of strophanthin and is* certainly not inferior to it in *strength. Atropin sulphate* and cobra venom, when acting in the same solution, *intensify* each other's action and *produce more summation of effect* than one would have anticipated. This *detracts from the* value of the atropin salt *in the treatment of* cobraism and makes it a dangerous remedy. The blood pressure work has confirmed this view *of the case.*

3. Cobra venom powerfully affects the isolated mammalian heart when *solutions of* it are *perfused through the coronary* circulation. The *action* appears to be a *dual one—viz* : (1) a direct action on the muscular fibre, or on the *nerve endings,* closely resembling that which is produced on *the isolated frog* ventricle; and (2) an action on the intracardiac vagal mechanism, which makes *for* inhibition. The result is that in strong solutions we find an *irregular* and extreme excitation *of the* heart, *followed by early death in* a position of systolic tone. *If the concentration* be less *the early stage* of excitement yields to a prolonged *phase in* which the tonic action *of the* poison on the heart is most pronounced; the beat is regular, steady, and strong. Cobra *venom interferes* with the circulation through the heart in a marked manner. This is probably due (1) to a constriction of the *coronary vessels*, brought about by the direct action of the venom on the vessel walls, and (2) to the condition of tonus *into* [illegible] ss.

4. [illegible] low lethal doses cobra veno[illegible] [illegible]piratory centre. Such a *paralysis is* in these circumstances gradually evolved and in the *early* stages of the process there is often evidence of a phase of stimulation preceding the paretic phase. There is a gradually *increasing* venosity of the blood and in consequence thereof all the harmful results of slow asphyxiation are produced. If life is prolonged beyond the usual *term by* artificial respiration, and possibly also if the dose *of venom* is a very low lethal one which takes many hours to kill, the phrenic and other motor nerve ends may *become* paralysed, but *this* is certainly not an essential feature of death from lethal doses of cobra venom which kill within *five hours. I hope to make* a further communication on this subject later. The convulsions which precede death are purely asphyxial and can be at once stopped by artificial aeration of the blood. Each such convulsion is followed by a phase of exhaustion of the respiratory *mechanism* which is almost certainly central. If the dose of cobra venom administered be a large one, and especially if it be given intravenously, the respiratory centre is quickly and severely affected and respiration may cease almost at once. This cessation of breathing may be permanent if artificial respiration be not quickly started, but if the dose be a *smaller* one the rhythmic activity of the centre reasserts itself. At first there may be a number of deep spasmodic gasps and then the movements of respiration re-begin, very gently at the commencement and gaining force as time goes *on* till a normal rhythm is re-established or even a stage of stimulation is manifested Soon, however, the centre fails again and all the phenomena of asphyxiation appear. By applying cobra venom directly to the exposed medulla oblongata of the rabbit I have shown that the respiratory centre can be paralysed without the phrenic nerve ends or the heart being appreciably affected. If very large doses of venom are injected death may take place by cardiac failure before the respiratory mechanism has given way. We have here to do with the direct action of the venom on the heart muscle; the beats become rapid and shortened and the heart passes into a systolic phase in which it dies tightly contracted.

5 Cobra venom when given in low lethal doses subcutaneously raises the general blood pressure There *may* be a slight preliminary fall before the rise but often this is wanting. In the absence of further interference the blood pressure remains high till very near the end of life. In the asphyxial convulsions which herald death a further steep rise of blood pressure takes place; this is soon followed by a sudden and very rapid fall to death The high level of blood pressure is due to (1) the direct action of the circulating venom on the muscular tissue of the arterioles, causing a constriction of these vessels and thus opposing a barrier to the onward flow of the blood; (2) the increased force of the heart beat as the outcome of the direct stimulating action of the venom on its muscular tissue; and (3) the stimulation of the vaso-motor centre, as a result of the steadily increasing venosity of the blood. The slight preliminary fall of blood pressure which is sometimes seen is due to cardiac inhibition, but this subject will be reserved for discussion when dealing in the next section with the action of large doses of the poison. The late fall in the rate of the heart beat is due to cardiac inhibition; the latter is due to several factors. 1. A gradually progressive asphyxiation is taking place throughout such an experiment; this affects the vagal centre in common with the rest of the nervous system; the result is a stimulation of the inhibitory mechanism and a consequent slowing and weakening of the heart 2 The direct stimulating action of the venom on t[illegible] [illegible]s in the same direction as the [illegible] 3. There is distinct evidence [illegible] of the vagal centres is remov[illegible] continues to [illegible] the blood. 4 It is not [illegible] of the heart muscle follows the early stimulative action of

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[1] A paper communicated by Professor Sir Thomas R. Fraser, F.R.S. [illegible]

[2] [illegible] Sir Thomas Fraser at [illegible] enabled to carry out researc[illegible] Univers[illegible] were r[illegible] Moray [illegible]

the venom. 5. Exhaustion of the heart is probably predisposed to by the strain put upon the organ in having to work for a long period against an abnormally high blood pressure.

We are now in a position to explain the sudden rapid fall of the curves of heart-beat rate and of blood pressure which ushers in death at the close of one of these long experiments. An over-strained and weakened heart is suddenly and violently called upon to bear a further burden, for respiration has ceased and the medullary centres are acutely asphyxiated. As a consequence there is a violent excitation of the cardio-inhibitory and vaso-motor mechanisms. The heart is slowed and at the same time has to work against a suddenly increased pressure and it gives way. In fact, we have the phenomena of asphyxiation in their entirety. The vessels of the splanchnic area are affected *pari passu* with those of the body generally and they in no wise act independently. The vaso-motor mechanism remains active throughout and is, as we have seen, profoundly affected by changes in the venosity of the blood.

6. Cobra venom, when injected in large doses and especially when given intravenously, causes: (1) a sudden fall of blood pressure; (2) a subsequent rise, provided that the dose has not been too large; and (3) a final fall to zero. The early fall is undoubtedly due to inhibition of the heart. It has been clearly shown that this is mainly brought about by the direct action of the poison on the vagal centres in the medulla oblongata, as it occurs before the accompanying failure of respiration has had time to act. Moreover, it is seen whilst artificial respiration is being actively carried on and can be checked in these circumstances by division of the vagi. On the other hand, there can be no doubt that asphyxiation of the vago inhibitory centre intensifies and maintains the inhibition which direct influence of the venom on the vagal centre produces. The spontaneous recovery of respiration or the application of artificial respiration has a powerful influence in mitigating the action of the venom on the vagal centre. In the same way artificial respiration, and to a less extent the spontaneous recovery of respiration, appear to act beneficially on the poisoned respiratory centre. Even if the heart is cut adrift from all central vagal impulses, whether direct or indirect, by the division of the vagi there yet remains evidence of a continued inhibition which must be attributed to the direct action of cobra venom on the terminals of the vago-inhibitory mechanism. This action would appear to be a direct one but there is every probability that it is indirect as well, in other words, that it acts through asphyxiation of the vagal terminals as well as by the poisoning of these parts by the circulating poison. There is, however, another factor which must not be lost sight of—viz., a direct exhaustion of the heart muscle as the result of irregular over-stimulation.

7. When the secondary rise of blood pressure which follows the primary fall takes place it is due to the same factors which determine its occurrence when small doses have been injected. It remains to explain why it is sometimes absent, brief, or ill marked. The explanation is simple: it is merely a question of cardiac failure. We have seen that the direct inhibitory action of the venom through the vagal centre is capable of overcoming the tendency which the blood circulating through the heart muscle has to throw that muscle into death in systolic tone. Were it not for these two rival forces to some extent equilibrating each other cobra poison would kill by its direct action on the heart muscle. When the doses are comparatively small, or when the vagi are cut or thrown out of gear by atropin, we find the tonic cardio-muscular influence of the venom in evidence, but when the dose of venom is large, and especially when it is given intravenously (the vagi remaining intact), the inhibitory action overpowers the muscular excitation and failure of the heart occurs. If the inhibition is sufficiently well marked no amount of arteriolar spasm that occurs will compensate it, consequently the blood pressure falls. When the dose of venom is a very large one the direct muscular stimulation may be so intense as to overcome the maximum inhibitory impulse and then the heart dies in systole with a quickened beat and is found after death as hard as a contracted post-partum uterus. In such circumstances any increase in the force of the heart is temporary, for the beat is probably a very partial one, the heart passes through a stage of excitement into one of increasing systolic tonus in which the contractions are very limited in extent.

THE TREATMENT OF INCONTINENCE OF FÆCES BY THE SUBMUCOUS INJECTION OF PARAFFIN.[1]

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INCONTINENCE of fæces may arise from many and very varied causes but from the point of view of surgical treatment the cases may be broadly classed into two groups. 1. Those cases in which the sphincter ani still retains some amount of power but not sufficient to close entirely the anal orifice. It is conceivable that if by introducing paraffin into the submucous tissue on the inner surface of the sphincter we narrow the lumen of the bowel at this situation and thereby diminish the work which the sphincter has to perform, even a weakened sphincter may be able firmly to occlude the remaining lumen and so to render the patient continent. 2. Those cases in which the sphincter is completely paralysed, as in many nervous diseases, or has been entirely removed as after the operation of excision of the rectum. Various plastic procedures have from time to time been advocated with the object of surrounding the anus in such cases with muscular fibres diverted from their natural function, the chief muscles concerned being the gluteus maximus and the levator ani. Attempts have also been made to produce a valvular action of the rectal wall, such as by dissecting out the rectum, twisting it on its long axis, and refixing it, or by producing a sharp curvature or kink in its lower portion—attempts which are frequently unsuccessful. In two cases of incontinence of fæces belonging to this second group, one of which was associated with rectal prolapse, I have obtained great benefit from the submucous injection of paraffin into the lower portion of the rectum, as originally suggested by Gersuny of Vienna in 1899.

CASE 1.—The patient, a male, aged 58 years, was admitted to the Manchester Union Hospital with the history that three years previously he had undergone two operations elsewhere for fistula in ano, as the result of which the fistula was cured but he was completely incontinent of fæces. Two subsequent plastic operations were performed to relieve this condition, but were unsuccessful, and he had had absolutely no control over his stools for three years. On examination no trace of a sphincter could be discovered, the anus extended in a posterior direction almost to the coccyx and was surrounded by several dense scars, the result of former ulceration. Under anæsthesia I injected paraffin in several places into the submucous tissue of the rectum, commencing as high up as I could reach and working towards the anus. In all, upon two occasions, the rather large amount of 52 cubic centimetres of paraffin was introduced, its melting point being 111° F. This patient was shown at a clinical meeting of the Manchester Medical Society three weeks after the operation and I last heard of him nine weeks afterwards, during which interval he had had complete control over his motions and had never soiled his linen upon a single occasion.

CASE 2.—The patient, a boy, aged seven years, had been an inmate either of the Manchester Union Hospital or of the Swinton Schools attached thereto for the last five years, suffering from complete incontinence of fæces associated with a large rectal prolapse dating from infancy. During the past four years he had undergone linear cauterisation on two or three occasions, excision of the elliptical folds of the mucous membrane, and, finally, excision of the lower portion of the prolapsed rectum, all of which were unsuccessful in curing the prolapse, and had no effect upon the incontinence. The anus was abnormally large and lax and easily admitted four fingers, while there appeared to be an entire absence of sphincteric action. At first I injected only six cubic centimetres of paraffin submucously, but even this small amount certainly prevented the prolapse from descending with anything like its former frequency. On a subsequent occasion I introduced 27 cubic centimetres in three successive tiers, each tier consisting of three nodules of three cubic centimetres each and the prolapse has never since recurred, while the incontinence was very considerably improved. As, however, he still occasionally soiled his linen at night I decided to narrow the enlarged anus, which I did by a plastic procedure similar to Tait's flap-splitting operation for the repair of an incomplete laceration of the female perineum and this operation, performed 12 weeks ago, has resulted in complete relief. The boy is still under observation and his general condition has considerably improved since he acquired full control over his motions. An interesting point in this case was that when the patient was under the anæsthetic on the last occasion, before commencing the plastic operation I attempted to draw the former prolapse forcibly down but could not do so.

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[1] A portion of a paper communicated to the Manchester Medica Society on Feb 3rd, 1904.

Manchester.

THE THERAPEUTICS OF THE ICHTHYOL COMPOUNDS: WITH SPECIAL REFERENCE TO ICHTHOFORM AND ICHTHARGAN.[1]

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Exactly a year ago I had the honour and privilege of bringing before your notice my experiences with ichthyol in the treatment of pulmonary diseases.[2] When I was asked to give you something on the same lines this session I thought I could not do better than follow up my former paper by saying a few words about the various compounds of ichthyol. As some of you may know, I have devoted much time and careful research to the investigation of ichthyol and its preparations, so convinced am I that in it we possess a most valuable therapeutic agent the properties of which depend not so much on its containing a fairly large amount of sulphur in its composition as on its being a very powerful anti-inflammatory agent. This fact I have tried to bring to the notice of the profession in a short paper on the subject which I recently contributed to the *Journal of Tuberculosis.*[3] I may, perhaps, be allowed to quote the concluding sentences of that paper: "I am no believer in the theory that ichthyol owes its action to its antiseptic property nor in the view that its beneficial effects are entirely due to its action upon nutrition. We must go further afield and regard ichthyol in its true light as a vaso-constrictor and as an anti-inflammatory agent. This is its true action and the only one which is of much value in the application of the remedy to cases of pulmonary tuberculosis. Thus regarded ichthyol becomes a remedy of the greatest importance and one worthy the support of the profession everywhere." Ichthyol, I need hardly remind you, is a natural product that has been chemically treated. It is, in fact, a hydrocarbon oil obtained from a fossiliferous mineral, and this, after being acted on by sulphuric acid, gives us ichthyol-sulphonic acid. It is the ammonia salt of this acid which is known commercially as ichthyol. The history of the discovery of this hydrocarbon oil is of the greatest possible interest but it is somewhat outside the scope of the present paper.

Ichthyol, moreover, may be combined with quite a variety of active therapeutic substances. Thus we have iron-ichthyol, otherwise known as ferrichthol, calcium-ichthyol, sodium-ichthyol, and combinations with lithium, zinc, and mercury. Lastly, we have two quite recent ichthyol compounds—namely, ichthoform and ichthargan—the former being a compound of ichthyol with formic aldehyde and the latter the silver salt of ichthyol. Although I have had considerable experience with all of these time will not permit of my making more than a passing reference to most of them, reserving the greater part of my paper to a more detailed consideration of the two last named—ichthoform and ichthargan.

Iron-ichthyol or ferrichthol is a brownish-black, amorphous powder, very light and non-hygroscopic. It is practically odourless and tasteless and is best administered in cachet or in tablet form. The amount of iron contained in this preparation is about 3·5 per cent. Aufrecht of Berlin was one of the first to publish results of clinical tests with this compound. Personal clinical experience with ferrichthol shows that it is an excellent remedy in secondary anæmia. Thus in a case of subacute rheumatism in which the red corpuscles and the hæmoglobin were reduced they returned to normal within a month under the administration of 30 grains of ferrichthol per day. Another case in which this remedy proved valuable was that of a woman suffering from carcinoma ventriculi. She was able to take ten grains of ferrichthol in the 24 hours without producing nausea, although many other iron preparations previously given had not been retained. In a case of chronic renal disease where the patient suffered from intense headache and was markedly anæmic ferrichthol proved very useful not only in improving the condition of the blood but also in diminishing the frequency and severity of the cephalic pain. In severe cases of dysmenorrhœa associated with constipation and anæmia one of the most suitable remedies is ferrichthol in ten-grain doses thrice daily. In cases of chlorosis, on the other hand, I have seen no good results follow its persistent employment. It is, therefore, in secondary anæmia that it is of most value, and here no doubt the action of the iron is largely aided by the presence of the ichthyol with which it is combined. Although I have no personal experience of its use in skin affections it is interesting to note that Unna[4] advises its adoption in all chronic conditions, especially in urticaria and analogous skin diseases, in papular and bullous affections, and in lichen as it occurs in children. Again he finds it of service in diseases complicated either by chlorosis or by anæmia. Thus in eczemas occurring in anæmic subjects the ichthyol in combination with iron improves the circulation and so does good. No doubt iron-ichthyol has a wide sphere of therapeutic application in all diseased conditions associated with anæmia, and my own observations on its value in general diseases are fully borne out by Unna's with regard to dermatological conditions.

Sodium-ichthyol is a solid preparation and thus forms an excellent substitute for the internal administration of the ammonia salt as it can readily be made into pills. I am of opinion, however, that it is not nearly so active in pulmonary disease as is the original ammonia salt, though it is perhaps a little more readily taken by fastidious patients. In chronic gastric catarrh it has the power of checking the fermentative processes which form such a troublesome element in many of these cases. Generally speaking, where ichthyol is indicated this preparation should be prescribed, except in cases of pulmonary disease in which the original ammonia salt alone should be employed.

Calcium ichthyol is well suited for use in dermatological practice and I have found it readily taken by children. It is not, however, in my experience such a generally useful salt as are some of the others. The zinc salt finds many indications for its use in diseases of the skin and hence its value appeals most to dermatologists. It may be used as an ingredient in ointments and in certain cases is to be preferred to the ammoni. [illegible]
now speak as, not being [illegible]
have not felt it my du [illegible]
compound of ichthyol.

Within the last few years ichthyol has been made use of as a vehicle for certain insoluble agents such as cresol, eucalyptol, and even iodine. I have elsewhere[5] fully recorded my experience of the use of iodine anytol, as this new combination is called, and I need not stay to consider these quite recent additions to our pharmaceutical armamentarium. Of all preparations of ichthyol two stand out pre-eminently—namely, ichthoform and ichthargan. Of these I have been making trial for some time past and it is with the greatest possible pleasure that I take this opportunity of bringing the results of my work in this connexion before your notice.

Ichthoform is an amorphous, brownish-black powder, being practically odourless and tasteless. It is insoluble in ordinary media such as water, alcohol, and glycerine. When brought into contact with dilute alkalies it gradually splits up into its two components—ichthyol and formic aldehyde. The latter being a powerful germicide and the former an active anti-inflammatory agent, ichthoform is at once an antiseptic and an astringent. It is practically a non-toxic substance and can therefore be administered internally with comparative safety. Rabow and Galli-Valerio of Lausanne[6] made a thorough investigation into the properties of ichthoform for the purpose of clearing up the following questions:—1. What is its influence on the development of bacteria and fungi? 2. What is its value as a deodorant? 3. How is it borne by animals? 4. What effect has it on man? They found that gelatin plates infected with such organisms as bacterium coli, bacillus typhosus, bacillus icteroides, bacillus pyocyaneus, staphylococcus pyogenes aureus, and aspergillus niger when dusted over with ichthoform showed sterility during the first week, while vigorous development took place in control plates. In some cases development occurred during the second week, but the colonies were few in number with the exception of aspergillus niger. To show the deodorant action of ichthoform they took nine grammes of rabbit's fæces, diluted these with water, and then added half a gramme of ichthoform. This was then heated to a temperature of 37° C., but no disagreeable odour was felt even after the lapse of several days. They then took frogs weighing 32 grammes and introduced into the abdomen one-tenth of a gramme of ichthoform without producing any untoward result. They further experimented with guinea-pigs weighing 250 grammes and into these they injected half a gramme of ichthoform without producing any functional disturbance. As regards its effect on man it was found that from two to three grammes could be taken daily without harmful effects. It gave excellent results in intestinal diseases and also in the treatment of wounds, in the latter case forming a valuable substitute for other less agreeable substances such as iodoform.

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[1] [illegible] Society on [illegible] 1904.

[2] [illegible]
and [illegible]

[3] October, [illegible]

[4] Monatshefte für Praktische Dermatologie, 1901, Band xxxii., Heft 5.

[5] The Medical Times, Dec 20th, 1902.

Personally I have used ichthoform more or less extensively in four different directions: (1) as an intestinal astringent and antiseptic; (2) as a dusting powder; (3) as an ingredient in ointments; and (4) as a means of impregnating gauze.

1. *As an intestinal astringent and antiseptic* I have employed ichthoform in a large number of cases. In infantile diarrhœa, so prevalent in the summer months and no doubt due to the presence of micro-organisms, ichthoform has afforded me excellent results. My practice is to administer it to infants one year of age in doses of two grains every six hours in a little jelly. For children generally the dose ranges from two to ten grains given thrice daily. To them it may be given concealed in milk, cocoa, or gruel; but I much prefer to give it sandwiched between two thin pieces of buttered bread. In tuberculous lesions of the intestinal tract ichthoform has given me great satisfaction. Where diarrhœa is a prominent symptom I have ordered ichthoform in doses of from 10 to 15 grains thrice daily with marked effect. In a few instances the dose has been increased to 20, 25 and even to 30 grains, but these doses are somewhat excessive and may give rise to dryness of the throat and other troublesome phenomena These I have not observed personally in my own cases, but Schäfer of Munich mentions[7] especially dryness of the throat as resulting in one or two of his cases. I am of opinion that these undesirable symptoms were entirely due to the remedy being given in somewhat too large doses. As he states, however, ichthoform is non-poisonous and may be given in amounts even up to ten grammes a day without any harmful effects, and so too much importance need not be attached to the occurrence of these untoward results. In mild cases I have noticed great improvement even on the third day after its administration, and within a week, as a rule, the diarrhœa was found to have ceased. In more obstinate and severe cases not infrequently the dose of ichthoform has had to be raised to 30 grains before any evident effect was produced. In one or two cases I have tried rectal injections of mucilage of starch containing from 40 to 50 grains of ichthoform. As these were cases in which the patients were practically moribund no inference of any practical importance can be drawn as to the ultimate result of this form of treatment, but certainly in all cases the diarrhœa and abdominal discomfort were considerably alleviated. I would urge, however, that this means of employing ichthoform should be given a more extended trial.

Polacco of Milan has given us a short account[8] of his experiences with ichthoform in the treatment of enteric fever. He employed doses of half a gramme frequently repeated, so that in some cases the patients received as much as six grammes per day. This form of treatment was at times combined with ichthyol baths. 60 grammes of ichthyol were dissolved in a bath of hot water at a temperature of 95° F., and while the patient was in the bath this was reduced to 86° and even to 81·5°. The patient remained in the bath from 10 to 15 minutes and all the time an ice-bag was kept to the head. This combined method of treating enteric fever resulted in a reduction of the patient's temperature and a diminution in the frequency of the pulse, while the respirations became fuller and deeper. Polacco's statistics for the year 1900-01 give a mortality of 5·4 per cent. under this treatment, whereas previously it had been as high as 22 22 per cent.

2 I shall now pass on to consider my second use of ichthoform—viz., *as a dusting powder*. It is more particularly in cases of varicose ulcer that I have found benefit from this use of ichthoform. In many of these cases I have used it pure. Even foul discharging ulcers have healed under the simple daily free application of this powder. The fœtor rapidly disappears and the astringent action of the remedy soon makes itself felt. It thus stimulates healing by formation of healthy tissue. For foul ulcers I know no more trustworthy remedy. Admixed with equal parts of boric acid ichthoform will be found serviceable as a dusting powder for general use. Wherever there is a tendency to the formation of redundant granulation tissue during the process of wound-healing the area should be freely covered with ichthoform and zinc oxide in equal parts. For dysidrosis I find nothing so satisfactory as a powder composed of ichthoform, bismuth, and starch.

3. *As an ingredient in ointments* ichthoform is of special value. Time after time cases of chronic eczema have yielded to ointments into the composition of which ichthoform has entered. It may be used in strengths of from 1 to 5 per cent. with lanoline or vaseline as base. If used in too great strength it is apt to harden the skin and so delay the process of repair. Although, naturally, I have not had very great facilities for treating skin diseases with ichthoform still in the few that have come under my care I have made use of ichthoform with definite results. It is of service not only in subacute and chronic eczema, but also in the impetiginous eczema so frequently met with in school children, in certain affections of the nails, and also in scabies.

4 Lastly, I have suggested its use in the form of *ichthoform gauze*, to be used as a substitute for iodoform gauze for packing cavities. Thus for cavities left after removing tuberculous cervical glands or in cases of ischio-rectal abscess and fistula in ano nothing will be found so suitable and so efficacious as gauze thoroughly impregnated with ichthoform. I trust that a gauze of this nature will soon be made available for general use as a better and less expensive material than the present iodoform gauze.

If I were to sum up the conclusions which I have arrived at after considerable experience in the use of ichthoform in private and other practice I should say that: 1. It is one of the most efficacious antiseptics which we at present possess, more especially in cases of intestinal disease where its action is more certain and less harmful than salol and similar substances. 2. It forms an excellent substitute for iodoform in all cases where the latter is indicated. It is odourless and practically non-toxic, epithets which cannot be applied to iodoform. 3. For internal administration it is best given in small doses frequently repeated. Large single doses do not give the same satisfactory results and are more likely to produce untoward symptoms. As much as two drachms may be given in one day if divided into small, frequently repeated doses.

Although my experience with ichthargan is perhaps hardly so extensive as with ichthoform, still I hope to be able to place before you certain facts of practical interest and importance which I have noted during my employment of ichthargan. Ichthargan is a brownish-black, amorphous powder, containing 28·7 per cent. of silver, and is quite odourless and tasteless. It is readily soluble in warm or cold water, in dilute alcohol, and in glycerine. It is, however, insoluble in absolute alcohol, in ether, and in chloroform. Its solutions are clear when freshly prepared but become dark on exposure to light. It is relatively non-toxic.

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[6] Therapeutische Monatshefte, April, 1900.

[7] Therapie der Gegenwart, October, 1900.

[8] Deutsche Medicinische Wochenschrift, 1901, No. 5.

Solutions should always be prepared fresh with sterilised water and filtered.

As regards the bacteriological properties of ichthargan Aufrecht has shown[9] that it is more powerful than silver nitrate in its action on the streptococcus, staphylococcus pyogenes aureus, on the bacilli of enteric fever and of diphtheria, and on gonococci. He compared its effects with those produced by collargol and protargol. He not only observed the superiority of ichthargan over these other silver compounds but he also noted that ichthargan possessed greater penetrating powers. Pieces of liver were placed in a 5 per cent. solution of ichthargan for 16 hours and it was found that the entire mass had been acted on, whereas pieces similarly treated with silver nitrate only showed a deposit of silver on their surface at the expiry of the test. It was further found that ichthargan was less poisonous than other silver salts. The lethal dose for guinea-pigs and rabbits was determined by experiment to be between 0·1 and 0·15 gramme per kilogramme of body weight, whereas that of [illegible] at of [illegible] ime. [illegible] ntra-venous injections in animals I pass over as I fear we may fall into error if we apply too dogmatically to the human organism the results obtained in the case of the lower creation. The great fact which we must constantly bear in mind regarding ichthargan is that more than two thirds of it is made up of ichthyol and hence it combines the therapeutic action of a silver salt with the valuable analgesic, antiseptic, and anti-inflammatory effects of the former. Moreover, it contains a very large proportion of silver and is exceedingly stable in solution and, above all, is comparatively non-irritating.

On the whole I think it will be more profitable for us to consider together the various clinical uses to which ichthargan may be put rather than to pursue further its pharmacological and bacteriological properties. The therapeutic uses of ichthargan may be classified under seven different categories and we shall now look at each of these very briefly.

1. *The employment of ichthargan in gonorrhœal urethritis.*—Much attention has been paid by continental clinicians to the use of ichthargan in this somewhat troublesome affection, notably by Lohnstein,[10] Furst,[11] Leistikow,[12] Duhot,[13] Goldberg,[14] Rudolf,[15] and others. My experience of its value in gonorrhœa has been chiefly amongst dispensary patients. These in some respects are a difficult class to deal with, as they not only lack the ordinary habits of personal cleanliness but they are apt to treat the condition somewhat lightly and to regard themselves as cured as soon as they are free from pain and genito-urinary discomfort. Again, many of them fail to return at regular intervals, while some make only one visit and nothing more is heard of them. Putting aside the cases where the visits were either too few or irregular to be of any clinical value I find there still remain 21 in which ichthargan was employed with more or less success. The mode of treatment adopted was to prescribe an alkaline diuretic mixture combined with a little tincture of hyoscyamus and to order morning and evening urethral injections of ichthargan in distilled water. The strength of solution employed varied from 1 in 5000 to 1 in 500, according as the case was acute or chronic in its nature. I found it always advisable to begin with comparatively weak solutions and gradually to increase the strength of the injection as I found the patient's urethral mucous membrane would tolerate it. In the majority of acute cases cure was effected within three weeks, the injection being employed, as a rule, thrice daily. In two subacute cases an injection of 1 in 1000 produced considerable irritation. Patients were always advised to continue the injection at bedtime for some days after they were considered cured. In chronic cases, perhaps more so than in any others, were ichthargan injections found very valuable. The strength used never exceeded 1 in 500 as this was found to be sufficiently energetic. Leistikow, however, mentions much stronger solutions, but these I have found from experience are apt to cause the patient considerable suffering. They may, indeed, have somewhat of a caustic action and so produce cicatricial contraction of the urethral canal, a most undesirable result. In the treatment of chronic urethritis I believe bougies containing a small amount of ichthargan (say, a quarter of a grain) would be more advantageous even than injections, as they are not only more readily applied to the diseased parts but they are also more penetrating in their effects. Still, even with simple injections I have had excellent results, only four out of my total of 21 cases having failed to be cured completely, although even these exceptional cases derived much benefit from ichthargan. Indeed, I fear their failure to respond to its action with the best results was entirely due to irregularity in habits, alcoholic and otherwise. It is only fair, however, to warn against the use of too strong injections, as although ichthargan is a comparatively innocuous remedy, still it has undoubtedly a caustic effect if used in greater strengths of solution than those already mentioned.

2. *Ichthargan in gynæcological affections.*—All of you know how valuable ichthyol is in gynæcological practice and its combination with silver in the form of ichthargan is equally beneficial. The cases in which I employed it were mostly those of leucorrhœa associated with a variety of conditions, such as pelvic cellulitis, endometritis, uterine retroflexion, and cervical catarrh. My method of application was by means of pessaries containing half or one grain of active ingredient made into a mass with oil of theobroma. One of these was placed in the posterior vaginal fornix every alternate night and this was followed by boric acid douches next day aided by saline aperients. Improvement was always manifested even after the first or second pessary had been inserted and treatment rarely required to be continued for more than a few weeks. The milder cases were cured within a week; the more severe cases necessitated assiduous application of the remedy for a month or six weeks. Instead of the pessaries a 10 per cent. solution of ichthargan in glycerine may be employed. Tampons of cotton-wool are soaked in this and placed in the vagina. I prefer, however, to use pessaries, as they are cleanlier and more effective in their results. The indication for the use of ichthargan in gynæcological practice is the necessity for an astringent plus an anti-inflammatory agent.

3. *Ichthargan in dermatological practice.*—In the treatment of skin diseases ichthargan will be found of service when employed in the form of ointments of varying strengths. Here again my dispensary experience has proved of great use. Cases of skin affection which otherwise I should not have had an opportunity of treating have time and again presented themselves and I need hardly say that I have lost no opportunity in experimenting with ichthargan wherever its employment seemed indicated. The ointments used varied in strength from 0·5 to 5 per cent. in equal parts of lanoline and vaseline. The stronger ointments are apt to cause much burning where the skin is at all tender or raw and for all ordinary cases a 1 or 2 per cent ointment is quite powerful enough. My cases numbered 39 in all, a small number of cases certainly but sufficiently varied in character to afford practical evidence as to the real value of ichthargan. They include two cases of tinea tonsurans, seven of seborrhœic eczema, three of herpes zoster, and six of various types of eczema, the remainder including ulcers, boils, and a variety of minor skin affections. Boils after being thoroughly treated by means of innunctions of a 10 per cent. ichthargan ointment are very frequently aborted. Ringworm affecting the scalp also requires the application of a 5 or even a 10 per cent ointment. Otherwise I think a 1 per cent. ointment is the most generally useful.

Unna[16] has recorded his experience of this remedy in cases of ulceration. He used it as a dusting powder in strengths of 1 and 5 per cent. diluted with talc. He combined this with zinc gelatin bandages and compresses and obtained good results. He states that ichthargan is a keratoplastic remedy, inducing the formation of new epithelium. His best results were obtained in old callous ulcers where the horny epithelium was first removed by the application of salicylic-creasote or salicylic-cannabis plaster mulls. He also observes that the antiseptic and keratoplastic properties of ichthargan suggest its use in cases of eczema, especially as it is met with on children's heads.

4. *Ichthargan in affections of the throat and nose.*—So far as I am aware the only literature on the use of ichthargan in

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[9] [illegible]

[16] Monatshefte für Praktische Dermatologie, 1901, No. 2.

these diseases is a paper which appeared in the *Laryngoscope*[17] from the pen of Dr. B. Douglas of New York. I shall not attempt to do more here than to summarise his results, as my experience of ichthargan in this connexion is a very limited one. For nose and throat work a strength of 4 per cent. will be found most generally useful. In 10 per cent. solutions this remedy produces a disagreeable taste and nasal irritation which lasts from 15 minutes to two hours and causes some congestion of the mucous membrane, with profuse nasal discharge, lacrymation, and a certain amount of sneezing. After much careful experimenting with this new remedy Dr. Douglas found that the strength of solution generally most satisfactory was a 4 per cent. one. This usually caused slight burning and smarting but no congestion. If congestion was present at the time of application the surface soon became pale and contracted. Its action was prompt and lasted for from 15 to 20 minutes. In atrophic rhinitis it acts as a deodorant. It has also anti-inflammatory and stimulant effects and is a powerful modifier of nasal secretion. It is therefore *par excellence* the remedy for atrophic rhinitis. In hypertrophic cases the best results are got from a 4 or 5 per cent. solution. One of my own cases, that of a girl suffering from atrophic rhinitis, showed marked improvement after the use of a 1 per cent. ichthargan ointment. For syphilitic, tuberculous, and simple chronic laryngitis I have found pigments of a 5 per cent. ichthargan solution extremely useful.

5. *Ichthargan in diseases of the eye.*—Save of the value of a 0·5 per cent. ointment in cases of marginal blepharitis I cannot speak from personal experience of ichthargan as a remedy of importance in this connexion. Fortunately, however, for my present purpose I am able to quote from the experience of others better qualified to speak on this matter than myself. Thus Guttmann of Breslau has reported[18] its use in 61 cases of eye affections. These include 25 cases of acute catarrhal conjunctivitis, 13 of chronic conjunctivitis, seven resulting from affections of the lacrymal apparatus, ten of trachoma, six of ophthalmia neonatorum, and one of serpiginous ulcer of the cornea. His conclusions may be summarised as follows. In congestive catarrh it proves efficient although it cannot be said to replace the older remedies for such conditions. He recommends that further experiments should be made regarding its use in ophthalmia neonatorum. In affections of the lacrymal apparatus it is a very useful remover of purulent secretion. Its chief action, however, is developed in the dissecting forms of trachoma and it is one of the most useful remedies we at present possess for the medicinal treatment of pannus.

Marczel Falta,[19] writing of his use of ichthargan in cases of trachoma, says that he has used it in all forms and at all stages of this disease. He found that fresh cases were completely cured by ichthargan in from six to eight weeks. In chronic cases the pannus is reduced very speedily. He began with a 0·5 per cent. solution and gradually increased the strength to 3 per cent. These solutions are brushed over the affected part and by this means a pannus showed retrogressive metamorphosis ("Rückbildung") in from three to four days, and a case of recent trachoma could be cured in from six to eight weeks. Similar results were obtained by Gortaloff[20] in cases of trachoma, who therefore considers ichthargan an excellent remedy for the treatment of trachoma and its complications.

6. *Its internal employment.*—During the course of his investigations Aufrecht took five grains of ichthargan on three successive days and eight grains on the fourth. No loss of appetite was produced, the urine remained clear and free from albumin, while the stools were unaltered in appearance. This preparation may, therefore, safely be given internally. It may be given in solution in the proportion of from half a grain to two grains dissolved in eight ounces of water and of this a teaspoonful may be taken three or four times a day. It would seem useful in promoting the healing of gastric ulcers. It might also be given as an enema in cases of dysenteric and other intestinal lesions. Not having as yet tried ichthargan in the manner suggested I offer these remarks for what they are worth. Doubtless, further experience will convince us of their accuracy.

7. *Ichthargan in veterinary practice.*—This is, to me, a subject of much interest and I have gone through a vast collection of German literature in the hope of being able to place before you a review of the work that has been done abroad in this wide field. Time, however, forbids more than a passing reference. I wish particularly to mention the names of Eugen Bass, Eberhardt, and Leibert in this connexion. Eberhardt employed intravenous injections of ichthargan solution in cases of influenza in horses. The strength used for injection was 1 per cent. in distilled water. His results were such that frequently the temperature fell to normal within two days. This has suggested a similar use of ichthargan in cases of septicæmia as it occurs in man. I wish there was time to go more fully into this matter, as it is one of great interest, but I must not detain you longer.

From what I have said it will be evident that the various preparations of ichthyol have a wide sphere of therapeutic application. This remark applies especially perhaps to ichthoform and ichthargan which, after the parent remedy itself, are, in my opinion, two of the most valuable anti-inflammatory agents at present in our possession. They are certainly trustworthy in their action and therefore valuable additions to our therapeutic stock. They assuredly deserve to be used more extensively by the profession in this country and if these somewhat brief remarks lead to an awakened interest in the ichthyol compounds I shall feel more than rewarded for the trouble I have taken in bringing them before you.

Edinburgh.

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[17] May, 1902.

[18] Wochenschrift für Therapie und Hygiene des Auges, vol. v., No. 36.

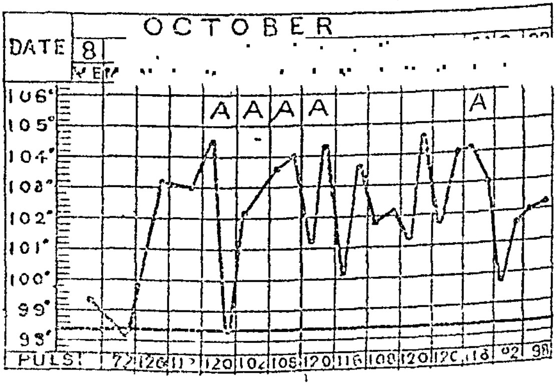
[19] Archiv für Augenheilkunde, 1901.

[20] Allgemeine Medicinische Central-Zeitung, 1902, No. 5.

A CASE OF METRITIS AND CELLULITIS IN THE PUERPERIUM TREATED WITH ANTISTREPTOCOCCIC SERUM.

BY JOHN W. DUNCAN, M.B., CH.B. ABERD.

THE patient was a primipara, aged 24 years. The labour was normal after the case came under my care, except that the membranes were at the beginning bound to the uterus by slight adhesions that had to be broken before the os commenced to dilate. There was a history of irritation and discharge from the vulva before labour. The woman had been told by her mother and the nurse to bear down strongly and she had done so for a good while before the time when I first saw her, which was about 7 A.M. on Oct. 8th. Delivery took place the same day at 2 P.M. The perineum externally was intact but some abrasions were found in front afterwards. In the evening the fundus uteri was two fingers' breadth below the umbilicus and half a finger's breadth to the right side. The daily temperature and pulse-rate are shown on the accompanying chart. On the 9th the patient seemed to be doing very well; a fairly normal pulse tracing was taken. The fundus was one finger's breadth above the umbilicus and three fingers' breadth to the right. In the afternoon she complained of pain and the nurse gave her castor oil in the evening. On the 10th there was a motion of the bowels. Headache was complained of and there was pain in the lower part of the abdomen with marked tympanites. The fundus was half a finger's breadth above the umbilicus and one finger's breadth to the right. The tongue was brown and furred



A, Ten cubic centimetres of antistreptococcic serum injected.

on the dorsum, with whitish edges. The condition was diagnosed as metritis, and turpentine stupes were applied and aperient medicine was given. On the 11th the fundus was three fingers' breadth below the umbilicus and one finger's breadth to the right. Syringing with solution of mercuric chloride was used and iodoform pessaries were ordered; by mistake these were not got and a pellet of mercuric chloride was put in the vagina by the nurse, the consequence being that the patient was thrown into an agony of pain and could not pass urine. At a consultation which was held the consultant approved of the treatment which I was adopting. On the 12th the uterus was five fingers' breadth below the umbilicus. At 2 P.M., when the temperature was 104° F. and the pulse 120 per minute, ten cubic centimetres of antistreptococcic serum, obtained from Messrs. Burroughs, Wellcome, and Co., were injected, the vaginal outlet was dusted with iodoform, and an iodoform pessary was left in the vagina after the catheter was passed. At 8.45 P.M. the temperature was 98·4° and the pulse rate 88. The vaginal abrasions were perfectly clean, showing red granulations where a "diphtheritic" covering had been; the vulva was swollen and slightly everted from irritation by the mercuric chloride. On the 13th the temperature was 102·2° as shown in the chart. The pain and tympanites were both less but hardness and tenderness were now made out in the left inguinal region and also just above the pubes. The tongue was moist but was still red at the edges with a dirty grey coating on the dorsum. The vulva was now less red and swollen. A tear was discovered in the left side of the cervix and there were many smaller ones around the edge. Ten cubic centimetres of antistreptococcic serum were injected. On the 14th an injection of ten cubic centimetres of antistreptococcic serum in the back was given in the morning and was followed by a fall in the temperature and the pulse-rate. On the 15th an injection of ten cubic centimetres of antistreptococcic serum was given in the afternoon and was followed by a rise of temperature. There was some redness of the back at the site of the injections. The fundus uteri was five and a half fingers' breadth below the umbilicus. On the 16th, 17th, 18th, and 19th the pyrexia continued. No serum was used. On the 20th ten cubic centimetres of antistreptococcic serum were injected. On the 21st there was a decided improvement in the patient's condition. On the 22nd there were marked swelling and redness on both arms [illegible] on both legs—three [illegible] The improvement [illegible] continued and her temperature became subnormal on the 30th. On the 31st she was removed in an ambulance vehicle to a more suitable house. On Nov. 6th her temperature rose to 102·2° and the pulse-rate to 112. The calf of the right leg became red and swollen and an abscess formed in the leg. This abscess and the swelling in the right arm were opened but the swelling in the left arm disappeared without being incised. Convalescence was delayed for about ten weeks from the date of confinement. Some very slight œdema was left in the leg and foot and a slight limp was apparent. Five injections of antistreptococcic serum were given and a fall in the patient's temperature followed three of them—namely, those given on Oct. 12th, 14th, and 20th, while on the contrary a rise followed the two injections given on Oct. 13th and 15th. Only a few indeterminate cocci were found in the vaginal discharge. The onset of metritis was marked by a delay in the involution of the uterus, as shown by the measurements recorded above. The house where the patient was confined was a small fruit shop, the backyard of which abutted on the backyard of a rag-and-bone shop where green, mouldy rabbit skins were to be seen in the window. Next door to the fruit shop was a butcher's shop, and the patient's mother, who was present at the confinement, kept a fish and rabbit shop.

Hockley, Birmingham.

MEDICAL MAGISTRATE.—Mr. T. W. Heywood, M.R.C.S. Eng., L.R.C.P. Irel., D.P.H., has been appointed a magistrate for the borough of Darwen.

UNIVERSITY OF OXFORD.—Sir John Burdon Sanderson, who ceased to be a member of the Board of Faculty of Medicine on his resignation of the Regius professorship of medicine, has now been made a co-opted member of the board and has been re-elected chairman for the current year.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

WESTMINSTER HOSPITAL.

FIVE CASES OF ULCERATIVE COLITIS.

(Under the care of Dr. W. MURRELL.)

CASE 1.—A man, aged 21 years, was admitted to Westminster Hospital on May 2nd, 1903, for diarrhœa and vomiting. He stated that for four months his bowels had been relaxed and that for six weeks they had acted very frequently, often 16 or 17 times a day. The motions were fluid and not infrequently mixed with blood. He had had treatment but without benefit. For two days he had suffered from persistent vomiting, with colicky pains in the abdomen, and it was the onset of this symptom which determined his visit to the hospital. His weight had fallen in two months from 9 stones 3 pounds to 6 stones 12 pounds. He was resident in London and had never been abroad; he had had no previous illness and his family history was unimportant. On admission he was found to be thin and wasted and his eyes were sunken and surrounded by dark rims. He looked anæmic but his red blood corpuscles numbered 4,650,000 and the leucocytes 15,400 per cubic millimetre. His mental condition was not impaired and he was always bright and cheerful. His temperature was elevated and for many months ranged from 100° to 103° F. daily. The pulse was 108 and of poor quality. Widal's reaction was not given. The vomiting speedily subsided and was never a troublesome feature, but the diarrhœa persisted, there being usually about 60 motions a week, most of them liquid and offensive. They were passed with very little pain and consisted chiefly of mucus, with from time to time a little blood. The deposit contained strands of mucus in which were many leucocytes but no circular pits denoting the openings of mucous glands. The bacteria of the fæces were almost entirely streptococci but sometimes they were present only in scanty numbers, other organisms being seen of which the majority were large bacilli. The tongue was clean, red, and slightly irritable. The appetite from first to last was good and the patient constantly expressed a desire for more food. Thirst was not a prominent symptom. The urine was of specific gravity 1022, faintly acid, and contained neither sugar nor albumin. The abdomen was not distended and contained no free fluid, there was no enlargement of the liver or spleen, and there was only slight tenderness over the descending colon.

As the patient was in the hospital for eight months it would serve no useful purpose to trace his progress from day to day. The elevation of temperature was constant and the diarrhœa continued persistently and never alternated with periods of constipation. In June an ischio-rectal abscess was detected on the left side and in August there was a similar formation on the opposite side. He was kept strictly in bed and for many months occupied a bright and airy room at the top of the hospital. The windows on account of the fœtid odour were kept constantly open, so that the patient had practically open-air treatment. His diet consisted chiefly of milk with a little beef-tea and plasmon arrowroot. Light puddings, chicken panada, and other easily digestible foods were tried from time to time but invariably increased the frequency of the motions. The medicinal treatment consisted in opium and morphine in all forms, including enemata, carbonate of bismuth in doses varying from a drachm to half an ounce every four hours, acetate of lead, perchloride of iron, and other astringents, antiseptics such as β naphthol, salol, perchloride of mercury, and various preparations of formic aldehyde, powdered ipecacuanha given dry and with the usual precautions, and many other drugs, none of which seemed to exert the slightest beneficial effect. The patient's general condition was so unsatisfactory that it was considered inadvisable to resort to rectal injections of nitrate of silver. The question of operation was frequently discussed and was negatived. Early in January, 1904, the range of temperature was lower and was often subnormal, the diarrhœa was more persistent, and the patient passed 191 motions in one week with 53 in the four following days. As he was rapidly losing ground it was decided to give him the chance of an operation.

On Jan. 15th, under A.C.E. mixture, Mr. W. G. Spencer made an incision in the right iliac fossa and exposed the appendix which was found to be bound down by adhesions, so that it was impossible to catheterise it as had been intended. A small incision was consequently made in the cæcum close to the origin of the appendix and a rubber catheter was inserted. An attempt was made to sew in the tube but this was impracticable owing to the rottenness of the gut wall. A knuckle of intestine was therefore withdrawn from the abdomen and fastened by a colotomy rod passed through the mesentery. Four pints of normal saline solution at 100° were poured down the catheter and ran out by the rectum. There was found to be a small perineal fistula. The exposed knuckle of gut was powdered with iodoform and covered with several layers of gauze. At 7 P.M. on the day of the operation the temperature fell to 96°, but after a hypodermic injection of morphine rose at 11 P.M. to 99°. On the following day the wound was dressed and the patient vomited five times. The temperature remained low, falling to 96° in the evening. On the 17th the vomiting continued and the temperature ranged from 97·4° to 95°, the pulse being 100 and the respirations 20. On the 18th the temperature was but little over 95° at any time during the day and the patient died early on the morning of the 19th after an illness of about 12 months' duration.

Necropsy.—At the post-mortem examination (which was performed by Dr. R. G. Hebb) all the tissues were found to be extremely pallid and exsanguine. In the peritoneal sac was much slimy pus and the serous membrane was pallid, smooth, and slimy. The whole of the large intestine from the valve to the anus was in a condition of chronic ulcerative colitis, the mucosa was thickened and œdematous, villoid in places, of blackish hue in parts, and in parts purplish. The mucosa was cut up into islets of varying size by deep fissures which reached in places to the muscular coat. The colon was contracted throughout. In the last nine inches of ileum were a few deep-set small ulcers. The mesenteric glands were much enlarged and some were cretaceous. The appendix was buried in a mass of fibrous tissue, the fibrosis extending to the rectum and adjacent parts. All the other organs of the body were normal.

CASE 2 —A man, aged 25 years, was admitted into Westminster Hospital on July 10th, 1903, with a history of diarrhœa of three months' duration. He had been for a short time in Charing Cross Hospital where he had been treated with a mixture of salicylate of bismuth, tincture of opium, and hydrocyanic acid. He was a Londoner and had never been out of England. He stated that he had had rheumatic fever nine years previously when there was diarrhœa with blood and mucus in the motions. On admission and for some weeks subsequently the temperature was slightly elevated but rarely rose above 100° F. There was persistent diarrhœa, there being usually about 70 motions a week, for the most part watery, offensive, and containing blood and mucus. On microscopical examination they were found to contain torulæ, streptococci in two varieties, bacilli (the bacillus coli communis and others), epithelial cells (columnar and spheroidal), and much pus with the débris of food. No shreds of mucosa were seen. Later the organisms of the fæces were almost exclusively bacilli, cultivation yielding not only the bacillus coli communis but a large bacillus not staining by Gram's method and probably the bacillus proteus vulgaris. No recognisable pathogenic organisms were detected. Vomiting was a prominent symptom, the contents of the stomach being evacuated from three to five times in the 24 hours. The liver was not enlarged and there was no tenderness over the abdomen. The urine was free from albumin and sugar. The treatment was in the main that followed in the previous case, but for a time the patient was given two drachms of sulphate of magnesium dissolved in the minimum of water at 6, 7, 8, and 9 o'clock in the morning and at 3, 4, 5, and 6 o'clock in the evening with five grains of quinine at the first and last dose. It was not clear, however, that it did any good. In August a bed-sore formed over the left trochanter and another over the crest of the ilium. The diarrhœa continued with unabated severity, but the temperature was lower, being at times subnormal. His general condition was most unsatisfactory and on August 31st he was practically pulseless. It was thought to be useless to restrict his dietary and he was given solid food. From that day he gained strength, the temperature returned to the normal, and the diarrhœa ceased. On Oct. 22nd he was sent to a convalescent home, but on Nov. 13th was brought back in an ambulance with a return of the fever and diarrhœa, there being 59 motions in the first week and 97 in the next. Little by little, however, the acute symptoms subsided, the appetite returned, he gained weight, and was discharged apparently well on Jan. 17th, 1904, after an illness of ten months' duration.

CASE 3.—A woman, aged 37 years, was admitted into Westminster Hospital on July 21st, 1903, having been brought from Lambeth in an ambulance. She stated that she had been taken ill ten days previously when she was "burning hot" and had severe pains in her legs. She had been in bed for five days suffering from diarrhœa, for which she had had medicine and slop diet. There was no family history of importance and her only illnesses were pleurisy nine years previously and a more recent attack of influenza. Her temperature soon after admission was 105° F. and for three days she was repeatedly sponged. Her temperature during the time she was under observation ranged from 105° to 102°. Widal's reaction was not obtained. There was no headache, nausea, or epistaxis, and for a time no vomiting. The tongue was covered with a dirty brown fur and the appetite was bad. There was persistent diarrhœa, the bowels being opened from seven to ten times a day. In six consecutive weeks the motions numbered 51, 69, 58, 73, 80, and 104. The stools were fluid and contained but little fæcal matter. There was a little blood, not in clots, and there was a considerable quantity of mucus stained green. The passage of the motions was preceded by pain. At a later period they were dark in colour and often offensive. She vomited from time to time, but not every day. The diet consisted of milk, a little beef-tea, and plasmon. The medicinal treatment consisted of tincture of iodine and carbolic acid by the mouth and enemata of opium. She gradually sank and died from asthenia on the fiftieth day of the illness.

Necropsy.—At the post-mortem examination (which was performed by Dr. Hebb) the body was much emaciated; the surface and viscera were pallid and exsanguine. There was slight diffuse pigmentation of the thighs. The stomach was normal. There was arterial injection of the small intestine. The mucosa was normal. The large intestine was dilated and in a condition of ulcerative colitis throughout. The remaining mucosa was much thickened and standing up above the ulcerated gut from two- to three-eighths of an inch. Where the mucosa was absent the wall was quite thin, especially about the ascending colon and sigmoid flexure, the coil of the latter being firmly adherent by central union. The mesenteric glands were slightly enlarged. The other organs were normal.

CASE 4 —A man, aged 31 years, was admitted into Westminster Hospital on July 11th, 1903, suffering from diarrhœa of three months' duration. The temperature was but slightly elevated and never rose above 100° F. The motions averaged about four a day. There were no mucous shreds or other adventitious substances in the fæces. They contained the bacillus subtilis, the bacillus coli communis, and a large spore-bearing, non liquefying bacillus. Cultivation yielded bacilli and micrococci, but no streptococci were present. The tongue was moist and clean and the appetite was good. There was no tenderness over the liver or the colon. The patient had never been abroad and had had no previous illness with the exception of an attack of bronchitis. Two brothers and one sister had died from phthisis. The patient was carefully examined but no lung mischief could be detected; there was no sugar or albumin in the urine and he was not markedly anæmic. He rapidly lost flesh and three weeks after admission suffered from persistent vomiting. He was put on milk diet and was given first salol and then cocaine with enemata of opium. He died on August 22nd, after an illness of about four months' duration. No necropsy was obtained.

CASE 5.—A woman, aged 30 years, was admitted into Westminster Hospital on April 20th, 1903, with diarrhœa of three weeks' duration, during which she had been confined to bed and had received medical attention. There was no family history of importance and her only previous illnesses were anæmia and occasional attacks of summer diarrhœa. She had never been out of England. On admission the temperature was 103° F. and it ranged from 100° to 102°

during the time she was in the hospital. Widal's reaction was not obtained. The pulse was 120, quick, and of low tension. The bowels were opened on an average six times a day. The motions were liquid and offensive and contained fæcal matter with a good deal of blood and but little mucus. [illegible] more than twice a day and [illegible] every day, [illegible] matter being green in colour. The patient was very weak and looked pale and wasted. There was no pain and she complained of nothing but the diarrhœa and general weakness. The tongue was pale, moist, and slightly furred. The appetite was good and she frequently asked for solid food. There was no abdominal distension and no tenderness could be detected. The liver and spleen were not palpable. A soft apical systolic murmur was heard but it was not conducted into the axilla. The treatment consisted of hypodermic injections of morphine with enemata of opium. The patient gradually sank, the temperature fell to 96°, and she died on May 7th after an illness of about five weeks' duration. No necropsy was obtained.

Remarks by Dr. MURRELL.—It is probable that all five of these cases are examples of ulcerative colitis, although in only two of them was the diagnosis confirmed by necropsy. The general course of the symptoms and the high rate of mortality confirm this view. Ulcerative colitis is by no means a common disease, at all events in London. I have consulted the records of the hospital and find that in 19 years, from 1884 to 1902 inclusive, there were only 15 cases, 11 in men and four in women, and of these there died five men and two women. In one of these cases, that of a man, aged 26 years, there were abscesses of the liver which after perforating the diaphragm opened into the lung and were partially evacuated through the bronchi. It is probable from the report of the necropsy that this was in reality a case of colitis dysenterica and should not be included in the list. That would give 14 cases of ulcerative colitis in 19 years with a mortality of 40 per cent. in the men and 50 per cent. in the women Including the present five cases we get a mortality of 46 per cent. in the men and 66 per cent. in the women.

The term "ulcerative colitis" or "simple ulcerative colitis" is admittedly a bad one, sanctioned only by long use, for ulceration of the large intestine may be dysenteric, tuberculous, or malignant in origin and is not uncommon in enteric fever. Considerable difficulty exists in distinguishing between different forms of inflammatory disease affecting the colon and post mortem it is impossible from an inspection of the large intestine alone to discriminate between ulcerative colitis and chronic dysentery. The clinical features of the disease, however, are sufficiently characteristic. Respecting its origin and causation little is known. It attacks both sexes but appears to be commoner in men than in women, for of 28 cases recorded at Guy's Hospital 15 were in men and 13 in women, whilst of the 19 cases at the Westminster Hospital 13 were in men and six in women, giving a total in 47 cases of 28 men and 19 women. The majority of cases occur between the ages of 20 and 30 years, but one of our cases was a boy aged 13 years. The onset is insidious, there is no rigor, and nothing in the early stage to distinguish it from an ordinary attack of diarrhœa. Pain is not a prominent symptom and as a rule there are no tormina nor is there tenesmus. No cause is as a rule assigned by the patient, although in one instance it is said to have followed an attack of enteric fever. One of our patients was in the habit of eating large quantities of a sweetmeat known as milk chocolate and the possibility of the disease having commenced as a tyrotoxicon infection was considered but there was nothing to support that view. The temperature was in most cases persistently high, whilst in others it was little above the normal. As a rule it was subnormal during the last 48 hours of life. In some cases vomiting was persistent, whilst in others it was absent or of rare occurrence. In all cases the patient rapidly lost weight and displayed signs of great weakness. There was little or no mental depression and most of the patients were cheerful to the end. There was no loss of appetite and a constant desire was expressed for more food and often for some particular article of diet. The diarrhœa was always the prominent feature and in most cases it was practically unceasing. The microscopical examination of the fæces gave no uniform result. In one instance the motions consisted of an almost pure culture of streptococci and it was thought that injections of anti-streptococcic serum might be indicated, but on the following day without any apparent reason the streptococci disappeared and were replaced by a totally different organism. It has been suggested that the ulceration of the colon may be due to an amœba but there is nothing definitely to support this view. Metastatic abscesses are rare and little or no change is found in the liver. It is said that the disease is associated in some way with kidney trouble but this is the exception and not the rule.

The post-mortem appearances present considerable uniformity and in both our cases there was a condition of ulcerative colitis throughout. In Dr. W. H. Allchin's classical case recorded in vol. xxvi. of the Transactions of the Pathological Society of London—the specimen is in the museum of the Westminster Hospital—there were in the ascending and transverse colons numerous circular punched-out ulcers varying in size from that of a threepenny-piece to that of a florin. In another case at the hospital, that of a woman, aged 50 years, the mucosa of the colon from the splenic flexure to the anus was extensively ulcerated, the remaining ragged mucosal areas being much thickened. The vermiform appendix is not infrequently involved and in one case it was glued to the pelvic brim by soft adhesions. It contained a fæcal calculoid of about the size of a grape-stone and from a minute aperture at the apex there was exudation of pus.

The duration of the disease is variable and in some cases it may extend over a period of three or four years. The treatment is essentially unsatisfactory; in our cases almost every drug or combination of drugs likely to be of use was tried, with the exception of injections of nitrate of silver, and they all failed. Whether surgical interference is likely to be more successful it is difficult to say. The operation commonly proposed is that of establishing an anastomosis between the ileum and the lower end of the colon, and failing this a right-sided colotomy. The operation performed by Mr. Spencer promises well, although in this particular case from unforeseen difficulties it was not successful. Continuous irrigation of the bowel either with plain water or boric acid solution is probably the key to the situation.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

A CASE OF SPONTANEOUS PERFORATION OF THE INTRA-PERICARDIAL PORTION OF THE INFERIOR VENA CAVA.

(Under the care of Mr. I. McW. BOURKE, late house physician.)

THE patient, a man, aged 60 years, was taken into the Royal Southern Hospital at 2 A.M. on a police ambulance. He had been seen to fall suddenly while walking along the street. Mr. Bourke saw him immediately after admission. He was lying on the ambulance talking very volubly but would tell nothing about himself except that he had been drinking. On examination there were no signs of injury. The pulse and respirations were quite quiet and the tension of the former was good. The patient expressed a desire to micturate and there being nothing in his condition to cause alarm he was allowed to do so. As the man lived close by Mr. Bourke arranged with the police to take him home. He was called five minutes later just as the patient was leaving and found him completely collapsed; he died in five minutes.

Necropsy.—At the post-mortem examination rigor mortis and post-mortem hypostasis were marked. There was some cyanosis of the head and the neck. In the right and left pleuræ there were old adhesions, these being scattered irregularly in the left. No fluid was present. Old scars were present in both apices of the lungs which were a little emphysematous. The left ventricle of the heart was hypertrophied and dilated. The pericardium was full of blood and two large masses of blood clot were causing considerable [illegible]. At the anterior part of the [illegible] the heart there was present [illegible] adventitia and part of the [illegible]bling a form of ulcer. The margins were not indurated nor was the surface of the patch ulcerated or sloughy; simply the tunica intima lay exposed, the patch being surrounded by no definite margin and the three layers gradually merging one into the other. In the centre of the patch there was a small perforation into the inferior vena cava which was the cause of death. Two similar patches were present, one on the lower branch of the left pulmonary vein and the other on the posterior part of the pulmonary artery. The pericardium, apart from these erosion-like ulcers, was healthy. There was marked atheroma in the aorta, many patches being calcified. The liver was fatty with a thickened capsule. There were no adhesions. Its substance was soft and friable. The pulp of the spleen was somewhat fibroid; its capsule was thickened. There were signs of old perisplenitis. Nothing abnormal was found in the alimentary system. There were signs of early cirrhosis in the kidneys. The bladder, ureters, and suprarenals were normal.

Remarks by Mr. BOURKE.—If the perforation had occurred a few minutes later the patient would have died in the street. This would have been an unfortunate occurrence which I do not think one could have foreseen. I venture to publish this case as I have never come across a similar one neither can I find any record of such a case. I am indebted to Dr. J. Lyn Dimond, pathologist to the hospital, for the post-mortem notes of the case.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Cardiac Dulness in Cases of Cancer.—A Case of Properitoneal Hernia.

A MEETING of this society was held on March 8th, Sir R. DOUGLAS POWELL, Bart., the President, being in the chair.

Dr. W. GORDON (Exeter) read a paper on the Cardiac Dulness in Cases of Cancer. He said that some years ago he had noticed in cases of gastric cancer, in which ordinary emphysema could not be thought to exist, that the cardiac dulness was greatly reduced or obliterated in the recumbent posture. After observing this in many instances he had rightly diagnosed cancer on the strength of it in five consecutive cases. Since then it had been noticed in many cases. (The normal cardiac dulness in the recumbent posture was not the same as in the erect posture. The absence or reduction of the dulness in cases of cancer was looked for in the recumbent posture only.) The following was a summary of results. Reduction or loss of cardiac dulness was common in cases of cancer, especially in cases of abdominal cancer towards their end. It was not, however, always present. It might precede cachexia, marked wasting, and loss of skin elasticity, but seemed absent in the earliest stages. If absent at first it might slowly develop towards the end It might be found, but apparently rarely, in other diseases and it did not seem to occur in cases of sarcoma. When present in a doubtful case its presence was very suggestive of the existence of a cancer. When absent in a doubtful case of considerable duration it was slightly suggestive that the case was not one of cancer. In assessing the value of this physical sign it was of course necessary to exclude the existence of all ordinary causes of alteration of the area of cardiac dulness. The explanation appeared to be that the margins of the lungs extended across the front of the heart (this was found post mortem to be the fact) owing to a loss of elasticity in their substance similar to the loss of elasticity often observed in the abdominal skin in many cases of abdominal cancer.—The PRESIDENT said that Dr. Gordon had in his cases been most careful to exclude the diminution of the cardiac dulness such as might be due to emphysema of the lung, retraction of the heart, or to atrophy of the heart itself. The explanation given was that absence of cardiac dulness was due to a change in the lung tissue. He asked if any microscopical examination had been made of the atrophic lung tissue and if any change had been found. He suggested the importance of examining a large series of cases of cancer in order to find out in what proportion of cases this sign was present.—Dr. H. S FRENCH asked whether Dr. Gordon laid stress on the absence of cardiac dulness when the case was first seen or only when the cardiac dulness disappeared under observation —Dr. GORDON replied that he had examined the lung of one case microscopically but had been unable to demonstrate any change. He was of opinion that the loss of elasticity was a condition which could not be demonstrated by microscopical examination. Both the initial absence of the cardiac dulness and its disappearance under observation were important.

Mr. H. BETHAM ROBINSON read an account of a case of Properitoneal Hernia. He said that the patient, who had been the subject of left inguinal hernia for some years, was admitted into St. Thomas's Hospital with symptoms of obstruction of three days' duration. There had never been any difficulty in reducing the hernia and on admission there was no evidence of a hernia. Abdominal section was performed and a loop of small gut and matted omentum were found entering through a small opening into a pouch situated behind the left side of the lower part of the abdominal wall at the side of the bladder. On dividing this ring the congested and matted omentum could be withdrawn but not so the bowel which was firmly adherent to the sac. On opening up the inguinal canal the bowel presented at the normal site of the inner ring. The bowel here was quite black and lacerated easily on attempted separation. It was evident that the gut occupied, and was strangulated in, a pouch behind the abdominal wall and that it was gangrenous. Having packed round the inner opening with gauze the gut was separated from the sac, withdrawn through the inner opening, and brought out externally. Four and a half inches of gut were resected and an end-to-end junction was made. The patient died somewhat suddenly four hours after the operation. A careful necropsy showed that there was a bilocular sac; an inguinal pouch extended through the canal to the external ring imbedded in the elements of the cord; the testis was normally placed. This inguinal sac communicated by a small opening with another sac deeply placed behind the abdominal wall in the subperitoneal tissue; this inner sac was of an oval form and reached from the side of the bladder outwards into the iliac fossa. Its small inner opening in which the gut had been strangulated was the true internal ring. The case was thus a typical example of a properitoneal hernia, as described by Kronlein and Breiter. It differed, however, from the majority described by them in that the testis had properly descended but from the relation of the sac to the elements of the cord there was little doubt that the sac was a patent funicular process which had undergone dilatation in such a manner as to assume the bilocular form.—Mr. W. MCADAM ECCLES said that it was necessary to distinguish between the properitoneal and the interstitial form of inguinal hernia. He mentioned the great preponderance of the properitoneal variety in the male subject and said that it was his belief that this form only occurred in males. The interstitial variety, however, was proportionately more common in females. Probably in most if not all cases of properitoneal hernia there was some congenital defect in the descent of the testis and he asked if the testes on the two sides in Mr. Robinson's case were of the same size. The production of the interstitial hernia was often due to the blockage of a small external abdominal ring by a testis; the descent of viscera into the accompanying processus vaginalis caused dilatation of the peritoneal pouch in an upward and outward direction in a plane of the abdominal wall in front of the transversalis fascia. In many cases of interstitial hernia there was no prolongation of the sac into the scrotum. He suggested the importance of exploration in all cases of imperfectly descended testis accompanied by a definite hernia.—Mr. ROBINSON, in reply, said that a crural form of properitoneal hernia did occur in females. In his case the testes were normal.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.—Electric Currents of High Frequency.—Chronic Intestinal Obstruction.

A MEETING of this society was held on March 2nd, Professor JOHN CHIENE, the President, being in the chair.

Mr. H. J. STILES showed an infant after Ligature of Both Common Carotid Arteries for Chronic Hydrocephalus. The vessels were ligatured at an interval of two weeks in order to cut off the blood-supply to the plexuses and no mental disturbance ensued from the great limitation of the supply. The operation was completed nine weeks previously and the head had only undergone an enlargement of a quarter of an inch.

Dr. D. CHALMERS WATSON showed a woman suffering from

Exophthalmic Goitre of ten years' duration, and her son, aged ten years, who also showed symptoms due to alterations in the Thyroid and in the Parathyroid Secretion.

Dr. BYROM BRAMWELL showed a boy, the subject of Pancreatic Infantilism, who had shown great improvement under treatment by pancreatic extract. Dr. Bramwell said that this was a new disease and he had not seen any previous description of the affection. He had shown the same boy to the society two years ago as an example of infantilism and he had then expressed the opinion that the condition was due to defective pancreatic secretion. At that time the boy was 4 feet 4⅛ inches in height and weighed 4 stones 7 pounds. He looked like a boy of the age of 11 years, but was really then 19 years old. For nine years previously his growth and development had been arrested and he had suffered constantly from chronic diarrhœa, there being from five to six motions daily. The boy was perfectly well formed and presented no evidences of sporadic cretinism. The diagnosis which Dr. Bramwell then made was that the diarrhœa was due to defective metabolism caused by defective pancreatic secretion. This was shown by (1) the stools containing an excess of fat and on administering pancreatic extract this fat underwent a great diminution; (2) his urine on a milk diet contained a very small amount of phosphoric acid, but this increased greatly on giving him pancreatic extract; and (3) capsules containing iodoform and made of a covering insoluble in the gastric but soluble in the pancreatic secretion were given. On testing his saliva one hour after swallowing these there was no evidence of iodine or iodates; while after giving these along with pancreatic extract the reaction readily showed itself. Under treatment by pancreatic extract the lad had grown five inches and weighed 8 stones 8 pounds. He now looked much older in the face and the sexual organs had undergone a development, the pubic hair and descended testicles being now present. Dr. Bramwell thought that this new disease was curable through the administration of pancreatic extract.

Dr. JOHN THOMSON showed two cases of Infantilism (males, aged 18 and 24½ years respectively) attended with severe dyspepsia and diarrhœa of many years' duration and probably connected with some morbid condition of the pancreas.

Dr. ALEXANDER BRUCE (at the request of the council) gave a demonstration of Electrical Currents of High Frequency, with their mode of production and therapeutic applications. He said that for several reasons electrical treatment had been received by the medical profession with indifference and even contempt. The result had been, however, the discovery by the laity that there was something in such electrical treatment and consequently all kinds of companies had been started to carry on this treatment and most of these were run on commercial and unscientific lines. High-frequency currents were periodically alternating currents and the frequency of this alternation was exceedingly high. Such currents stimulated both nerve and muscle and the degree of stimulation bore a definite relation to the frequency of the alternation. The slower the alternation (within certain limits) the greater the stimulation—as, for example, from 2000 to 3000 per second. With currents of from 5000 to 10,000 per second there was a gradual diminution in the effect produced and with alternating currents above 10,000 per second hardly any stimulation was produced. No mechanical means that had been devised enabled them to obtain currents of a greater frequency than 10,000 per second. The spark, however, from a Leyden jar consisted really in a series of discharges varying from 900 to 30,000 million per second and such were named high-frequency currents. If a series of sparks were passed from the two poles of such a jar while each lasted only the fraction of a second a succession of rapidly dying down discharges was obtained. If it were so arranged that before each died down another took its place a fairly continuous periodic alternating current of enormous frequency was obtained. Such a current could not be directly utilised from the poles of the Leyden jar, but whenever such a discharge took place from the poles a similar discharge occurred from the outside of the jar and in all apparatus it was this discharge which was employed. Instead of employing Leyden jars, which readily broke, condensers were used. These consisted of sheets of tinfoil between plates of glass. The strength of these could be easily increased or lessened by varying the size of the tinfoil. To prevent short-circuiting the condenser was placed in a glass vessel filled with petroleum. One of the simplest means of charging the condenser was the static machine, as it was most convenient and broke down least easily; it was also inexpensive to work. The uncertainty of its working in damp weather was avoided by using one made of vulcanite plates. Current could also be obtained from the main. Another method of charging the condenser was the employment of an induction coil. It gave a very satisfactory result when worked by accumulators; the spark was better and much more rapid than with the static machine. Dr. Bruce had found that the ten-inch spark coil was better than a 16-inch one for ordinary work. A third method of getting the current into the condenser was by raising the ordinary current of 450 volts to 55,000 volts by means of a "stepper." In utilising the current so obtained a "resonator" was made use of; the most convenient form of this was in the nature of a couch which was practically another Leyden jar, the patient forming one side and the indiarubber cushion representing the glass. Such high-frequency currents acted as a general tonic to the system as well as in lessening congestive conditions of the mucous membrane and relieving the pain of neuralgia, neuritis, and locomotor ataxia; in rheumatic arthritis even permanent relief might be obtained. In acute muscular rheumatism the relief might be almost immediate, as in the case of lumbago. In chronic rheumatism benefit also resulted. In neurasthenia the pains were often greatly relieved and a general improvement resulted. In hysteria, however, such a benefit was not obtained—even in some cases the pain had increased in severity. There was also good reason to hope that it might do good in some forms of muscular atrophy, especially if primary. In the treatment of most cases not only a local but a general improvement in health resulted. In alimentary diseases Dr. Bruce had noted a marked improvement in cases of dilatation of the stomach when due to atony or neurasthenia. In the acute stage hæmorrhoids rapidly improved, as did also fissure of the anus and pruritus ani. Severe cases of cardiac disease with degeneration of the heart muscle did not seem to be benefited. He had not had experience of the treatment in tuberculosis, gout, diabetes, or cancer.—Dr. BYROM BRAMWELL, Dr. GARDINER, Dr. A. D. WEBSTER, and Dr. J. O. AFFLECK took part in the discussion which followed.

Mr. DAVID WALLACE read a paper on Chronic Intestinal Obstruction caused by malignant stricture of the large intestine. The paper was based upon a series of ten cases which had been operated upon by Mr. Wallace during the past year. In eight of the ten cases the actual cause of the symptoms was a malignant annular constriction and in the other two this was also most probably present, though not absolutely determined. The condition was really a cylindrical-celled epithelioma which caused stenosis with a most characteristic appearance of the bowel at the affected part, as if a string had been tied round it, and producing an hour glass-like constriction. The new growth was very hard, small in width externally, but internally it was more spread out and fungating. The lumen of the tube was usually greatly narrowed even to the size of a crow quill ,the proximal portion of the gut generally underwent great dilatation and its wal'
whilst the gut on the distal
Though the disease must have l.
time, yet the patient may have had no other symptom than perhaps a gradually increasing degree of constipation. This insidious progress of the disease was most misleading and unfortunately might cause such delay that curative treatment became impossible. The ages of the patients varied from 47 to 82 years; six were females and four were males. As regards the site of the tumour five were situated at the splenic flexure, three at the hepatic flexure, and two in the iliac portion of the colon (sigmoid flexure). This is contrary to the usual statement that 60 per cent. of all strictures of the large intestine (including the rectum) are in the sigmoid flexure. In the hepatic and splenic flexures the tumours were by no means easily palpated as they lay deeply and high up. In a case of chronic obstruction in a patient at or above middle life with no tumour palpable through the abdominal wall or per rectum the commonest cause was an annular malignant stricture. A history of increasing constipation with perhaps general abdominal pain and some loss in weight was all that could be elicited. As regards treatment, even if the first acute attack of obstruction were got over by such means as liquid food and small doses of morphine and enemata, there remained the still greater risk of a second

attack which might end fatally or if operated on then the disease must have invaded further and the result must be less favourable. In Mr. Wallace's opinion there was only one reason for delay and that was the advantage of operating during a quiescent period. The operation was then much more favourable than if done when the bowel was full of liquid fermenting fæces. Three operative procedures were possible—(1) excision and end-to-end anastomosis; (2) short circuiting; and (3) colostomy. It was usually stated that as the disease was situated most often in the sigmoid flexure the incision ought to be made in the left linea semilunaris at the level of, or below, the umbilicus. In the ten cases narrated there was no sufficient warrant for such a position. The incision should be made through the right rectus close to the linea alba, just missing the umbilicus, and with its centre opposite the umbilicus. Such an incision allowed of easy examination of the seats of disease. It also allowed the surgeon to open the transverse colon if the disease was on the left, or if on the right an ileo-colostomy could be performed. If the tumour was removable a second incision should be made over the tumour. In all cases the first incision should be large enough to allow of easy access, and an artificial anus in this position was favourable for cleanliness, while the rectus acted as a fairly good sphincter. The first of the three procedures—namely, colectomy—was the most favourable, but it had usually to be done secondarily. A large portion of the colon might require removal to get suitable gut for union. Absence of tension at the sutured part was a first essential. To "short circuit" meant almost invariably the junction of the ileum to the colon, and the most favourable junction was that of the ileum to the transverse colon. After such operation the tumour underwent frequently a great diminution in size and the patient's life might be prolonged for years. Colostomy was the least desirable of the operative procedures. The part of the colon to open depended on the site of the tumour but the farther from the cæcum the better, as the after-comfort of the patient depended greatly on the solidity of the fæces. In the majority of cases the gut should be opened at the time of operation. The ten operations which were performed included two colectomies, three ileo-colostomies, and five colostomies. With the two colectomies one patient lived 13 months after the operation; the other died on the fourth day from peritonitis. The tumour in the latter was at the splenic flexure and was very adherent. With the three ileo-colostomies there were two recoveries and one death on the fifth day. With the five colostomies there were four recoveries and one death in a patient 65 years of age who was operated on when very ill.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Pathological Section.

Exhibition of Specimens.

A meeting of this section was held on Feb. 19th, Dr. H. C. **Earl** the President, being in the chair.

Mr. R. F. **Tobin**, in discussing some points in the Pathology of Senile Hypertrophy of the Prostate, said that the specimens of this condition which came under examination were usually of two kinds:—One, a smooth-surfaced, easily enucleated adenoma, often of large size; the other, commonly a smaller mass with a rough surface, and looking like muscular tissue to the naked eye, and containing in its centre the prostatic urethra, torn portions of which, or of the membranous urethra, hung out at one end. He then showed some recently removed specimens with regard to one of which he said that when his finger in shelling out the adenoma had reached its posterior surface and was still between the layers of the surgical capsule, it opened into a sac in which about a hundred calculi, varying in size from that of a grain of snipe-shot to that of a swan-shot, were lying free.—Dr. W. J. **Dargan** stated that the sections shown were made from the very outermost laminated layers of what seemed to be merely a fibrous envelope to the growth They showed here and there atrophic glandular spaces lined in many cases by cubical cells, but greatly compressed and evidently undergoing involution. The presumption was that these were derived from greatly compressed prostatic tissue.—The **President** said that he agreed that senile enlargement of the prostate was of a glandular nature. He had not always been able to find glandular or muscular tissue in the fragment of tissue adhering to the prostates removed by operation. In a number of examinations he had only once found a small myoma. He mentiond a case of prostatic obstruction due to a cyst in the left lobe.

Mr. K. E. L. G. **Gunn** showed a case of Endothelioma of the Peritoneum occurring in a man aged 28 years, with extensive secondary growths in the lung, the liver, and the bronchial glands.—Mr. E H. **Bennett** asked whether the primary growth had been found, as all the growths shown seemed to be secondary.—Mr. **Gunn** replied that the most careful search for a primary lesion had failed, and, acting on the presumption that the growth had originated from the peritoneum itself, it had been labeled an endothelioma.

Mr. **Gunn** also showed a Femoral Hernia in which a distinct Secondary Ovarian Growth had occurred. The ovarian tumour had been removed 19 years ago. The hernia had been enlarging for a few months before the operation.

Dr. **Neville** exhibited a Transplantation Cyst Tumour from the scar of an old (five years) ovariotomy. The tumour shown was of about the size of an ordinary fist and consisted of a congeries of small cysts, approximating 20 in number, varying in size from that of a pea to that of a large walnut. Microscopic examination showed a marked resemblance between the peculiar epithelium lining each cyst and that constantly found in Graafian follicles, the so-called membrana granulosa, specimens of which were shown.

The **President** showed a Teratoid Tumour of the Ovary. It was taken from a young woman who died with abdominal symptoms some months after its removal. Sections taken from different parts of the tumour showed small cavities lined by epidermis and having hairs and sebaceous glands in their walls. Other cavities were found to be lined with a columnar epithelium and glands resembling Lieberkühn's crypts opened into them. Bone, cartilage, masses of pigmented cells, adipose tissue, and tissue resembling that of the central nervous system were also found as well as groups of ganglionic nerve cells.

Society for the Study of Disease in Children.—A meeting of this society was held on Feb. 19th, Mr. R. Clement Lucas being in the chair.—Dr. Robert Hutchison showed a case of Progressive Cerebral Degeneration of the Family Type. The patient was a boy, four years of age, and was healthy until 10 months old when fits occurred on and off for some weeks. Two months ago he began to stagger when walking and he next developed some spasticity of the legs with mental apathy. The optic discs were becoming atrophic. There was another child in the family who became affected in the same way and at the same age. There was no history of syphilis.—Mr. J. Howell Evans showed a case of Symmetrical Bilateral Branchial Fistulæ with Symmetrical Bilateral Helical Fistulæ and Misshapen Aural Pinnæ.—Mr. J. Jackson Clarke showed an early case of Friedreich's Disease. The patient, who was a boy aged four years, had dropping of both feet, exaggerated knee-jerks, and Babinski's sign; the parents had also noticed some weakness of the left hand. A brother of the child had rigidity of the lower limbs and wasting of the muscles of the thumb. Symptoms began in his case at the age of six years. Mr. Clarke advocated in the early stages light instrumental guidance and afterwards tendon elongation and tenotomy followed by massage.—Dr. W. A. Wills and Mr. Douglas Drew showed a specimen of Secondary Angeio-sarcoma of the Lung. Mr. Drew removed the patient's left testicle for sarcoma in April, 1902, and there was no recurrence, local or general, until December, 1903. The case was thought to be one of empyema but when a rib was resected a new growth was discovered. Mr. Drew reminded the society that in the previous November he had exhibited the child as one of cure after removal of sarcoma of the testicle. On the last occasion on which he had seen the child Dr. Parkinson had found no evidence of disease in the lungs. The primary growth was adeno-myxosarcoma. The lung tumour resembled the primary growth in part but the rest of it was of the nature of angeio-sarcoma or endothelioma.—Dr. F Parkes Weber showed a case of Anæsthesia and Recurrent Ulceration of the Gluteal Regions from Spina Bifida.—Dr. George Carpenter showed Microscopic Sections of the Heart and Kidney from a case of Acute Œdema of the Lungs and Sudden Death. The case was diagnosed during life as one of uncomplicated myocarditis.

The urine was loaded with albumin, there were no patellar reflexes, and the soft palate was thought not to move freely. There was no history of diphtheria, but taking the clinical findings into consideration the condition was thought to be diphtheritic.—Dr. C. O. Hawthorne said that cases of sudden syncope after diphtheria were well known and Dr. Carpenter's case in all probability afforded a demonstration of the manner in which these disasters were produced.—Mr. J. P. Lockhart Mummery read a paper on the Treatment of Hernia in Young Children.—Mr. Lucas alluded to the special difficulty in young children of isolating the vas deferens from the sac.—Dr. Hutchison showed the Organs from a case of Hemi-hypertrophy. The patient was a healthy well-developed boy with three small capillary nævi in the skin. The left arm and leg were hypertrophied and to some extent the trunk was also. The asymmetry of the limbs was apparently due to an increase of the subcutaneous tissues of the left side resembling a diffuse lipoma. He subsequently developed an empyema and died. The increased thickness of the left limbs was entirely owing to an increased deposit of subcutaneous fat. The bones were normal. Most of the paired organs were decidedly larger on the left side than on the right. The left lobe of the thymus was larger but the two lobes of the thyroid were symmetrical.

GLASGOW NORTHERN MEDICAL SOCIETY.—A meeting of this society was held in the Maternity Hospital on March 1st.—Dr. J. M. Munro Kerr read a paper introducing a discussion on the Diagnosis and Treatment of Contracted Pelvis. He said that exact measurement was of less importance where the degree of contraction was either very slight or very great, as in the former forceps were applied and in the latter Cæsarean section was performed, but in cases of medium deformity accurate measurement was essential. Amongst the more accurate pelvimeters those of Skutche and Faulk might be mentioned. Another point of equal importance was the size and consistence of the child's head and there were many difficulties in arriving at this. It had been said that the fœtal head was the best pelvimeter and one mode of determining suitable treatment was to determine the relation of the head to the pelvis. This might be done by combining practically the methods of Müller and Pinard. With the right hand the accoucheur took the Pawlic grip of the head and pressed the head into the pelvis, while with two fingers of the left introduced into the vagina he felt how the head engaged, and at the same time with the thumb he felt all along the brim and estimated the degree of overlapping. By this method the chances of the head passing the brim, the degree of traction required, and the consistence of the head could be estimated. Objections which might be raised to the method were that an anæsthetic was necessary and that the presentation might be breech. As a matter of fact an anæsthetic was not always necessary and a breech presentation might be converted before the thirty-sixth week by external version. Where the disparity between the size of the head and the pelvis was slight delivery might be attempted in the Walcher position. It was difficult to fix a degree of deformity below which spontaneous birth was impossible. Thus in two cases a rachitic dwarf delivered herself without assistance, the child weighing seven and a half pounds on one occasion, her conjugata vera being three and a half inches. Forceps of the Simpson or Milne Murray type were the best; Walcher's position was an advantage; an anterior parietal presentation was the most favourable and the lowest limit for forceps should be a conjugata vera of three and a half inches, and then only if the head were not too large for the pelvis. Version was more dangerous to the mother and the fœtal mortality was much higher. Induction of premature labour would be the ideal treatment if the cases were seen at a sufficiently early stage; it was undesirable to induce premature labour before the thirty-fourth week. Dr. Kerr's method of examining the relative sizes of the pelvis and the fœtal head was demonstrated on an actual case.—Dr. John Ritchie, Dr. George B. Todd, and Dr. Robert Jardine took part in the subsequent discussion.

CLINICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Feb. 16th, Dr. W. Milligan, the President, being in the chair.—Dr. A. T. Wilkinson opened a discussion on Uræmia and he applied the term as covering a group of nervous phenomena most frequently associated with definite renal disease. It was advisable to distinguish, at any rate mentally, this condition from imperfect excretion, actual or relative, of the final products of nitrogenous metabolism, urea and its allies. In other words, uræmia was not to be regarded as the culmination of urinary failure but as a variety of toxæmia which might occur with very different degrees of renal inadequacy. This view was applied in turn to acute uræmia occurring in inflammatory states of the kidney, in puerperal eclampsia, in acute uræmia with little or no urinary failure, and uræmia as it was seen in chronic Bright's disease. The key to the solution appeared to lie in the hands of those who could study puerperal eclampsia where uræmic phenomena occurred with very varied degrees of urinary failure. The morphine treatment here found efficacious might have to be modified considerably in dosage before it could be applied to all cases of uræmia, as in acute Bright's disease, when the special toxæmia was conjoined with general excretory failure. Saline injections which helped to dilute the poisons and to aid their excretion were frequently useful in the uræmia of organic disease, indeed general dropsy, if viewed as nature's treatment, authorised this method.—Dr. W. E. Fothergill said that he greatly appreciated the way in which Dr. Wilkinson had distinguished the actual effects of renal inadequacy from other nervous phenomena due to various forms of toxæmia which often occurred together with renal inadequacy. The term "uræmia" was doubtless loosely applied to both these sets of conditions, while it should strictly be limited to the former. He agreed with Dr. Wilkinson that the study of puerperal eclampsia, a condition now recognised as separate from renal disease, might in time throw valuable light upon the various conditions now known as uræmia.—Dr. E. Vipont Brown spoke of the ease and frequency with which uræmia was overlooked owing to the protean character of its manifestations. After referring briefly to several cases illustrating this point he concluded by saying that the general practitioner would do well always to bear in mind the possibility that any case he sees may be uræmic, however unlikely at first sight such a supposition may appear to be.—Mr. Burgess drew attention to the remarkable absence of symptoms of uræmia in cases of suppression of urine following upon complete obstruction of both ureters, usually by calculi—a circumstance which seemed to indicate that uræmia depended upon some other cause than merely the arrest of the excretory function of the kidney. In uræmia or threatened uræmia associated with acute nephritis, he advocated relief of the acute renal tension necessarily present therein by surgical measures—incision of the renal capsule and parenchyma followed by drainage—as a perfectly rational treatment and one destined to be much more frequently carried out in the future.—Dr. Wilkinson replied.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on March 4th, Dr. Leslie Durno, the President, being in the chair.—The President opened a discussion on Tonsillitis in which he expressed his belief in a bacterial cause and disbelief in the value of gargles.—Dr. B. G. Morison showed a Specimen and Microscopic Section of a Mammary Cyst removed from a woman, aged 80 years. The skin over the cyst was red and so operative interference became necessary. On part of the cyst wall were villous growths similar in structure to those found in the bladder.

Reviews and Notices of Books.

Bacteriology of Milk. By HAROLD SWITHINBANK and GEORGE NEWMAN, M.D., F.R.S. Edin., D.P.H. Cantab., Medical Officer of Health of the Metropolitan Borough of Finsbury and formerly Demonstrator of Bacteriology in King's College, London. With Special Chapters also by Dr. NEWMAN on the Spread of Disease by Milk and the Control of the Milk-supply. London: John Murray. 1903. Pp. 605. Price 25s. net.

THIS book, which represents the first attempt that has been made to deal comprehensively with the bacteriology of milk and with the part taken by milk in the spread of disease, is one that will fill substantially a space in the medical library which has been left vacant for too long a time. Moreover, the authors may be justly congratulated on the result of their endeavour to place at the service of medical officers of health and others who are interested in the matter a compendium of what is known at present of milk, whether as a food or as a means for the conveyance of disease. In accordance with the title the contents of the book may be considered in two sections. The first part, for which the writers are jointly responsible, deals with the chemical composition and the bacterial contents of milk, with technical details to be followed in its bacteriological examination, and with the fermentation processes which occur in milk and their economical import in industrial processes. The portion of the book for which Dr. Newman is alone responsible includes most valuable chapters on epidemics, either milk-borne or alleged with more or less reason to be so, and with the measures enforced by the State and adopted by private individuals with the object of insuring the purity of our milk-supplies. In the earlier pages of the book the writers give a detailed description of the technique which they have found most useful in the examination of milk and add the main results of their own extensive investigations into the natural rate of increase of bacteria in milk and cognate matters. A full descriptive catalogue is also given of the morphological, cultural, and other characteristics of the very numerous species of micro-organisms which are likely to be found in milk. Whilst this portion of the book is mainly for the bacteriologist, the special chapters by Dr. Newman on the influence of milk in the spreading of disease will be read with interest by all medical men and by the medical officer of health in particular. Dr. Newman deals first with the question of the conveyance of bovine tuberculosis by means of infected milk and after fully considering all the well-ascertained facts bearing on this matter he comes to the conclusion that at present it is not possible to gauge accurately the degree of danger to man arising from the use of milk from tuberculous cows, but taking a broad view of these facts he holds that "whilst tuberculosis is not chiefly spread by means of milk, there is unmistakeable evidence, derived from pathological and clinical experience, proving that tuberculous milk can, and does, set up some form of tuberculosis (bovine or human) in the bodies of man and other animals consuming the milk."

Careful consideration is next given to the question of "milk-borne" epidemics of the three important zymotic diseases—scarlet fever, typhoid fever, and diphtheria; the special characters of such outbreaks are referred to and numerous well-authenticated examples are given in detail of epidemics in which no probable cause other than a milk-supply could be found. Whilst there can be no question that such epidemics are, and not infrequently, caused by contaminated milk, the question as to whether the milk has become infected primarily because of similar disease in the cow or accidentally from some extraneous human source is one of more than merely academic interest in preventive medicine. An analysis of Dr. Newman's collection of recorded epidemics has led him to the conclusion that up to the present time the evidence forthcoming points in the direction of human rather than bovine infection and that when milk is apparently the cause of an epidemic of one or other of these diseases accidental contamination from a human source rather than disease of the cow supplying the milk is the cause which is to be sought for.

Taking the three diseases in detail we find that in 64 epidemics of typhoid fever caused by milk-supplies contamination from a human source was probable in 62, whilst in two epidemics no probable source of contamination of the milk could be found. With regard to "milk borne" epidemics of diphtheria the evidence is less conclusive. Dr. Newman quotes details of 18 outbreaks alleged to be due to a milk-supply; in these there was a probable source of human contamination in ten instances, in three instances no probable source of contamination of the milk could be found, and in the remaining five epidemics cows contributing to the milk-supply were found to be suffering from lesions of the udder. In none of the cases in which the cows were found to be suffering from lesions of the udder was there any proof that the disease was of such specific nature as to be a cause of diphtheria in man and Dr. Newman states that there are only four well-authenticated cases in which the bacillus diphtheriæ has been found in a suspected milk in spite of the very numerous occasions during the last few years on which milk which has been suspected of being the cause of an outbreak of diphtheria has been submitted to bacteriological examination. Dr. Newman gives details of 40 epidemics of scarlet fever in which suspicion was directed to the milk-supply. In 28 outbreaks there was good reason to believe that the milk might have been contaminated from a human source, in three cases no probable source of contamination of the milk could be discovered, and in the remaining nine cases the probable source of infection was held to be disease in the cow. Dr. Newman referring to the case of the classical "Hendon disease," considers that the existence of "cow scarlatina" has not as yet been definitely established. In addition to outbreaks of well-defined disease which have been attributed to milk-supplies, many instances of epidemics of "sore-throat" attributed to a similar source are quoted and the relation of milk to epidemic diarrhœa is fully discussed. Three chapters on the Control of the Milk-supply—(1) by the State, (2) by private enterprise, and (3) by the trade—conclude the volume.

In this review we have only indicated some of the more important matters dealt with by the authors but we can cordially recommend a careful perusal of the whole book to such of our readers as are specially interested in public health matters.

Disinfection and the Preservation of Food. By SAMUEL RIDEAL, D.Sc. Lond. Third Edition. London: The Sanitary Publishing Co., Limited. 1903. Pp. 494.

THE second edition of this useful and authoritative work was reviewed in THE LANCET of Dec. 31st, 1898, p. 1769. Since that time, of course, certain progress has been made in this branch of sanitary science and Dr. Rideal himself has gained considerable experience on special points, while he has been connected with researches on disinfectants and food preservatives which have yielded important results. From time to time he has communicated some of these results in our columns. We observe that the title of the present edition is "Disinfection and the Preservation of Food," instead of as heretofore "Disinfectants and Disinfection." The question of the use of preservatives in food has been brought prominently under public observation by the inquiry instituted some years ago by the departmental committee. We have expressed the opinion that the recommendations which this committee drew up were on the whole satisfactory and the delay in putting them into effect is serious and blameworthy. At present this country is without any special statute applying to the control of the use of preservatives in foods. Dr. Rideal remarks that it would seem impossible under modern conditions of life to do without some methods of keeping perishable articles of food without incurring a very large loss and it cannot be denied that with proper safeguards in some instances even chemical treatment may be desirable. The country is awaiting the action of a far too dilatory Government in order that these safeguards may be provided. The chapters dealing with the various proprietary disinfectants are of great interest and practically embody a history of the subject. The chapter on methods of analysis is of decidedly practical value and should serve as a trustworthy guide to those concerned in determining the actual germicidal value of disinfectant preparations. Here, again, it seems to us that interference by legislation is needed in regard to the control of the sale of disinfectants. There are many worthless preparations on the market possessing little or no germicidal efficiency at all. Dr. Rideal has suggested that in making a germicidal determination pure phenol might be adopted as a control standard and the strength or efficiency of the disinfectant might conveniently be expressed, he thinks, in multiples of carbolic acid performing the same work. When, for example, a dilution of the disinfectant is obtained which does the same work as the standard carbolic acid dilution, the former is divided by the latter and a ratio termed the carbolic acid coefficient is thus found. We have dealt sufficiently with this new edition of the work to show the directions in which it will serve as an undoubted guide and as a source of instruction. The subject is most important and Dr. Rideal's contribution to it will be thoroughly appreciated by all those concerned not only in broad sanitary measures but in surgical science also.

LIBRARY TABLE

The Phase Rule and its Applications By ALEXANDER FINDLAY, M.A., Ph.D., D.Sc., Lecturer and Demonstrator in Chemistry, University of Birmingham. London. Longmans, Green, and Co. 1904 Pp. 313 Price 5*s.*—Physical chemistry is growing apace and the results accruing from its study are of the most important kind. In many instances it is difficult to draw an exact line between physics and chemistry, but under the heading of physical chemistry would be included those considerations in which the laws or generalisations regarding properties of matter depend not merely on the masses or rates of motion of the objects studied but also on their composition and chemical nature. It is obvious from this definition that a very wide field for study is presented to view, a study which will be much facilitated by the issue of the series of volumes now promised by the above publishers, each of moderate compass and each dealing with one branch of the subject. Sir William Ramsay has written an admirable and historic essay and introduction to the whole series, the first of which is the book before us on Phase Rule. Next will be dealt with in future volumes, "Stoichiometry," "The Relation between Chemical Constitution and Physical Properties," "Electro-Chemistry," "Spectroscopy," "Thermodynamics," and, lastly, "Chemical Dynamics and Reactions" The publication of this series marks the first attempt to present the subject in concrete form and to consolidate the contributions regarding physico-chemical matters which are scattered throughout a number of scientific journals. In the interests of medicine we welcome this step since we must recognise the importance of physical chemistry in its relations to physiological problems. The Phase Rule deals with the study of the changes in the equilibrium existing between different substances It defines the condition of equilibrium by the relation between the number of co-existing phases (ice, water, and vapour are three phases of the same substance) and the components (hydrogen and oxygen are considered as components but not constituents when by raising temperature to a certain point a state of true equilibrium between hydrogen, oxygen, and water vapour will be possible) The Phase Rule may thus be stated (p. 16): "A system consisting of *n* components can exist in *n* + 2 phases only when the temperature, pressure, and concentration have fixed and definite values; if there are *n* components + 1 phases equilibrium can exist while one of the factors varies, and if there are only *n* phases, two of the varying factors may be arbitrarily fixed." By the application of this rule it has been not only possible to render "the grouping together of a large number of isolated phenomena but the guidance it affords has led to the discovery of new substances, has given the clue to the conditions under which these substances can exist, and has led to the recognition of otherwise unobserved resemblances existing between different systems." Dr. Findlay in the preface states that the exposition of the Phase Rule and its application given in the text have been made entirely non-mathematical. The study of this subject is not simple and the busy medical practitioner could hardly be expected to devote more time to it than, say, the study of astronomy, though the importance of the Phase Rule to medical science cannot be doubted.

The Four Epochs of Woman's Life: A Study in Hygiene. By ANNA M. GALBRAITH, M.D. With an Introductory Note by JOHN H. MUSSER, M.D., Professor of Clinical Medicine, University of Pennsylvania Second edition, revised and enlarged. London, Philadelphia, and New York: W. B. Saunders and Co. 1903. Pp. 243 Price 6*s.* 6*d.* net.—This book is designed to teach in popular form "the fundamental principles which underlie the various epochs" of woman's life (maidenhood, marriage, maternity, and the menopause) Professor Musser in a brief introductory note gladly commends the essay and says that the truths which it contains "should be known by every woman." It will be readily admitted that the subject is one which requires very delicate handling and although portions of the book are excellent there are others which might judiciously have been omitted.

The Prescriber's Pharmacopœia. Fifth edition. Bombay and London: Kemp and Co. 1904. Pp. 373.—This admirably compiled synopsis of the more recent remedies, both official and unofficial, is published by a firm of wholesale and manufacturing chemists and druggists of Bombay. The fact that it has reached a fifth edition shows that it is widely appreciated. We have carefully looked through the pages, which are well printed and arranged, and we find that the list of drugs given is very complete and in a line with recent developments. The index is particularly well done and the whole arrangement is such as to facilitate the work of reference. The preparations noted in the Indian and Colonial Addendum of the British Pharmacopœia are included. Students and practitioners of medicine in India may be congratulated upon having such a complete pharmacopœia at their disposal. It may easily take rank with English standard works on the subject.

A Guide to Urine Testing for Nurses and Others. By MARK ROBINSON, L R C.P., L R C.S. Edin. Bristol: John Wright and Co 1904 Pp 56. Price 1*s.* net.—This little book will be found very useful to the persons for whom it is written. It gives a short account of normal urine together with the various departures from the normal which may appear. Fallacies in testing are then noted, after which a description of the apparatus used in testing is given. The rest of the book is taken up with an account of the different substances to be tested for together with the methods of recognising their presence. Microscopical examination of the urine is purposely omitted as being beyond the scope of the work.

Dispensing made Easy. By W. G. SUTHERLAND, M.B. Aberd. Bristol: John Wright and Co. 1904. Pp. 102. Price 3*s* 6*d.*—Dr. Sutherland's little book if carefully studied will certainly lighten the labours of the country practitioner. It does not pretend to teach the *haute école* of dispensing, such as the making of emulsions and the coating of pills, but it is full of practical hints and of ways in which to combine economy with efficiency. It would be well, we think, in a future edition to add to "Points worth remembering" the fact that bromides and iodides dispensed with alkaloids cause these latter to precipitate.

JOURNALS AND MAGAZINES.

The Medical Magazine.—The February number of this magazine contains a sensible article by Mr. J. Foster Palmer upon the *rationale* of certain so-called drink cures. Mr. Palmer puts forward a clear classification of the various kinds of person subject to habitual drunkenness and shows in what cases there may and in what there may not be logical expectation of permanent benefit. He demonstrates the extremely transient nature of the change which is in too many instances vaunted as an example of "cure" and goes somewhat fully into the use of hypnotic suggestion as a remedy. In another article the use of Somnoform is described with various practical hints referring to methods of administration, after-effects, and cost. The author fails, however, to point out that almost identical and equally good results can be obtained by the use of pure ethyl chloride as a general anæsthetic. Ethyl chloride is the main constituent of somnoform and there is no valid reason for preferring to the pure drug a proprietary article with a fanciful name and an evil smell. In both cases there are strict limitations to be observed in the employment of the drugs for purposes of general anæsthesia, limitations which in the first attraction of a "new" and much belauded agent are apt to be overlooked.

Journal of the Irish Medical Association.—The principal contents of the March number are an account of the business transacted at the meetings of the council of the Irish Medical Association and a series of reports received from the various branches of the association. These reports are for the most part records of the work accomplished in connexion with increasing the remuneration and generally improving the position of the dispensary medical officers in the Poor-law service. It is well known that the association has frequently intervened with good effect in cases where inadequate salaries have been offered by boards of guardians and where an absence of cohesion among the members of the profession threatened to defeat efforts which were being made to obtain better terms. The editorial articles criticise recent proposals for altering the present systems of vaccination and death certification.

Analytical Records

FROM

THE LANCET LABORATORY.

PROTENE FOODS.

(THE PROTENE CO., LIMITED, 36, WELBECK-STREET, CAVENDISH-SQUARE, LONDON, W.)

THE above company was amongst the first in this country to employ the separated and dried proteid of milk in the preparation of foods by which their nutrient value was of course considerably enhanced. Some years ago we submitted several of these foods to analysis, the results showing in all cases a decidedly increased proteid value. Some important additions to the protene preparations have recently been made, samples of which have been submitted to us. We may refer to protene bread which gave us the following results of analysis: moisture, 43·48 per cent; mineral matter, 3·04 per cent.; proteid, 36·08 per cent.; and non-nitrogenous matter, 17·40 per cent. Excluding moisture the bread would thus contain over 60 per cent. of proteid. According to the iodine test this bread is free from starch; it is thus suitable for the use of patients suffering from diabetes and other persons to whom it is an advantage to eat sparingly of food rich in carbohydrate. The texture of the bread is uniform and good. We have also examined "Alma biscuits" which similarly are free from starch whilst containing less fat than some of the other special food preparations. The "Welbeck biscuit" is a well-made and palatable biscuit containing about 25 per cent. of proteid. Lastly, protene cocoa gave, according to our analysis, the following results: proteid, 41·45 per cent.; fat, 22·50 per cent.; non-nitrogenous matter, 23 55 per cent.; mineral matter, 6·50 per cent.; and moisture, 6·00 per cent. According to this analysis the cocoa consists, roughly, of equal parts of cocoa and protene.

ALGERIAN BRANDIES.

(SOUTHARD AND CO., 2, ST. DUNSTAN'S-HILL, LONDON, E.C.)

We have submitted specimens of three vintages of this brandy to analysis and the results are perfectly consistent with those yielded by genuine wine spirit. The brandy of vintage 1900 gave the following results: extractives, 0·62 per cent.; mineral matter, 0·02 per cent.; and alcohol, by weight 50·09 per cent., by volume 58·92 per cent., equal to proof spirit 101·51 per cent. As regards secondary products the following were the results expressed in grammes per 100 litres absolute alcohol present: volatile acidity reckoned as acetic acid, 40·80; aldehydes, 17·00; furfural, 1·10; ethers reckoned as ethyl acetate, 62·73; and higher alcohols, 170·00. The sample of the vintage 1901 gave the following results on analysis: extractives, 0·68 per cent; mineral matter, 0 02 per cent.; and alcohol, by weight 49·16 per cent., by volume 56·98 per cent., equal to proof spirit 99·86 per cent. The secondary products were found to be as follows given in grammes per 100 litres of absolute alcohol present: volatile acidity reckoned as acetic acid, 40·80; aldehydes, 8·50; furfural, 1·10; ethers reckoned as ethyl acetate, 47·60; and higher alcohols, 85·00. The sample of vintage 1902 gave the following results on analysis: extractives, 0·54 per cent.; mineral matter, 0·01 per cent.; and alcohol, by weight 50·52 per cent., by volume 58·36 per cent., equal to proof spirit 102·28 per cent. The secondary products given in grammes per 100 litres of absolute alcohol present were as follows: volatile acidity calculated as acetic acid, 30·60; aldehydes, 8·50; furfural, 0 85; ethers reckoned as ethyl acetate, 55·35; and higher alcohols, 85·00. These figures coincide with those obtained with genuine though somewhat young brandies. The alcoholic strength shows that all these brandies have not been reduced to a strength suitable for consumption. There is no doubt that they would improve with age and develop a finer bouquet and flavour than they exhibit at present. Compared with average Cognac brandies the ethers are decidedly low. These Algerian brandies consist of spirit derived entirely from the grape. The test, both of palate and of analysis leads to this conclusion.

"FERRUBRON" PAINT.

(THE "FERRUBRON" MANUFACTURING CO, LIMITED, 143, QUEEN VICTORIA-STREET, LONDON, E C.)

Ferrubron paint has for its basis a substance which is entirely different from lead or zinc compounds. As a matter of fact the basis consists of a native peroxide of iron. It is a glistening mineral, having the beautiful lustrous appearance of native antimony. The pigment made with it possesses good covering power and on drying leaves a uniform silvery film. It does not appear to tarnish. Of the shades submitted to us we have the most favourable opinion of the silver-grey. The paint is absolutely non-poisonous. Its permanency as regards its peculiar metallic lustre is a valuable feature of ferrubron paint. It withstands heat and may be used for radiators or for painting metal surfaces of stoves or laboratory and hospital appliances. It beautifies all metal work and should prove to be a sanitary adjunct in the hospital ward or operating theatre, for while it is durable the finished paint is washable and presents a clean and attractive appearance.

DROITWICH BRINE CRYSTALS.

(WESTON AND WESTALL, LIMITED, 41, EASTCHEAP, LONDON, E.C.)

This salt is obtained by the evaporation of Droitwich brine which, as is well known, is used in the form of a bath for the treatment of rheumatic affections. The evaporated salt occurs in small cubes and on analysis it gives the following results: sodium chloride, 96·23 per cent.; calcium chloride, 0·055 per cent.; sodium sulphate, 0·09 per cent.; and moisture, 3·60 per cent. The crystals are contained in bags holding 14 pounds. In preparing the salt bath two pounds of the salt are dissolved in each gallon of water. In addition to the use of this salt for rheumatic affections it may be advantageously used in the preparation of the artificial effervescing Nauheim bath.

SANGUINOSA.

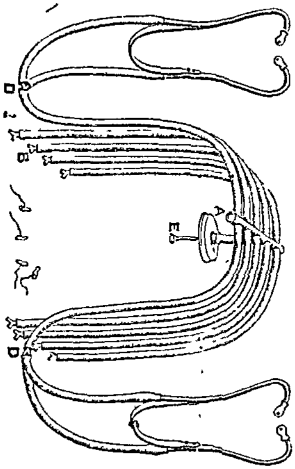
(THE SANGUINOSA CO., 79, MARK-LANE, LONDON, E.C.)

Sanguinosa is described as "The Vegetable Invigorator" and according to our analysis and examination it has the composition and character of a red wine. The analysis was as follows: alcohol, by weight 12·38 per cent., by volume 15·30 per cent., equal to proof spirit 26·82 per cent.; extractives, 2·94 per cent.; mineral matter, 0·370 per cent.; volatile acidity reckoned as acetic acid, 0·096 per cent.; fixed acidity calculated as tartaric acid, 0·20 per cent.; and sugar, 0·124 per cent. The preparation is stated to possess value as a tonic on account of the organic iron present. This iron amounted according to our analysis to 0·01 per cent. reckoned as ferric oxide. The preparation thus contains *no more iron than is found in many red wines* of the burgundy type. We doubt whether sanguinosa is of any value as regards its iron. Generally speaking, there is much nonsense talked about the value of small quantities of iron in wine when as a matter of fact there is much more iron contained in the daily average diet than in a dozen bottles of wine of the so-called *ferruginous type.*

New Inventions.

A MULTIPLE STETHOSCOPE.

THE idea of arranging a stethoscope so that several students can listen to a patient's chest at the same time is a good one; unfortunately, the contrivances hitherto introduced have not proved successful. We submitted the instrument under consideration, which has been designed by Dr. W. G. Aitchison Robertson, to a trial before a class of students but the result was not satisfactory. The sounds were not heard nearly so distinctly as by means of the ordinary binaural stethoscope. The apparatus could be improved by making the Y-shaped metal pieces which are inserted into the ends of the rubber tubes larger; the tubes attached to the students' *stethoscopes* were all too large to grasp the attachments firmly. The illustration clearly shows the construction of the stethoscope, which is made by Mr. T. Hawksley, Oxford-street, London.



A, Supporting piece for tubes. B, One of the Y-shaped pieces to which ordinary stethoscope tubes can be attached as at *D*. *E*, *Chest-piece and phonendoscope.*

AN IMPROVED PORTABLE OPERATION TABLE.

THIS table is so constructed that it can readily be adjusted to the usual positions required. It is thoroughly substantial and rigid in each position and capable of supporting a weight of 20 stones; it can be folded into a comparatively small compass for carrying in a canvas case or satchel; it always folds up accurately and there is no likelihood of its being strained or bulged. When it is in its case it is not too heavy to move about with one hand. Its mechanism is so simple that it can be placed in the desired position or folded and put away in less than two minutes. It can be made in wood, polished or enameled, or in metal, nickeled or enameled, and is comparatively inexpensive. As shown in Fig. 1, it consists of a horizontal frame hinged in the centre; the legs and struts are also hinged and the cross laths of the table are so constructed that the whole falls accurately together. The Trendelenburg position, as shown in Fig. 2, is secured by lifting the table in the centre and is maintained by a strut secured with thumbscrews. By a rack arrangement the portion corresponding to the upper position of the body can be raised to any position from the horizontal to the erect. If desired, a pair of crutches for the lithotomy position can be affixed to the lower end.

FIG. 1.

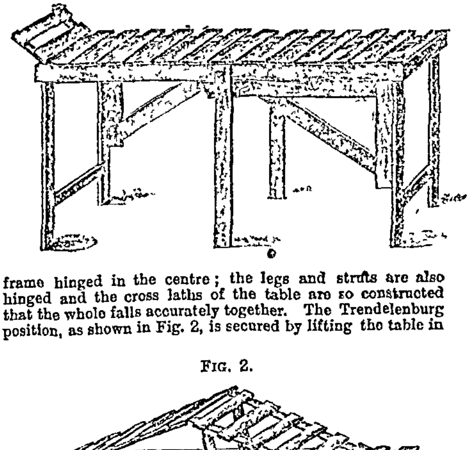
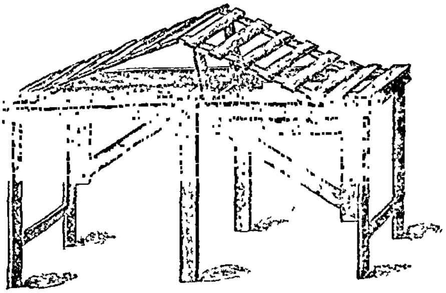


FIG. 2.



Messrs. Arnold and Sons of West Smithfield, London, E.C., have made the table at my suggestion and after 12 months' use I find it in every way satisfactory.

J. LIONEL STRETTON,
Senior Surgeon, Kidderminster Infirmary and Children's Hospital.

Kidderminster.

THE LANCET.

LONDON: SATURDAY, MARCH 12, 1904.

The Health of the Navy.

HAVING regard to our late experiences in South Africa and the striking events that have still more recently focussed public attention on the naval operations in the Far East it is no wonder that an unusual degree of interest should just now be taken in all that concerns the naval and military services of this country. The sweeping and radical reforms proposed by the War Office Reconstruction Committee and the debates in connexion with the navy and army estimates have also served to rivet public attention on these services at the present time. We are passing through a transition stage and from whatever side matters are regarded it is clear that the nation is confronted with many questions of vital importance about which it will shortly have to make up its mind. Let the political views be what they may, there is a side from which the maintenance of efficiency in both peace and war must be approached and considered—namely, that of health and hygiene. This is a matter of growing importance which can never be lost sight of and it is one, moreover, which no Government can afford to ignore. We are led to these reflections from the fact that at the present moment we have before us the Statistical Report of the Health of the Royal Navy for 1902 and that, as regards the army, we must be content to remain in ignorance of what is proposed to be done with its medical service until Part III. of the War Office Committee's report is published.

In THE LANCET of March 5th, p. 680, we briefly called attention to the Statistical Report of the Health of the Royal Navy. We may here add that, according to that report, the ratio of cases per 1000 of force for 1902 shows a reduction on all stations except the Home and the East Indies; that the invaliding ratio of the total force also shows a decrease (the highest invaliding-rate was on the Cape of Good Hope and West Coast of Africa station); and that the death-rate, which was 5·92 per 1000 for 1902, showed a slight decrease when contrasted with the last five years' ratio. The highest death-rate appears on the Pacific station, due to the unfortunate loss of the *Condor* and not to medical reasons. But it is not so much the purely statistical part of the report that will hold the medical reader's attention. Statistics can scarcely be styled a form of light literature and we do not find that even those deeply concerned in a subject are much prone to argument about arithmetical tables, however germane to the topic, but there are several interesting and significant papers in the appendix to this report for 1902 which claim consideration at the present time. There is no more difficult problem, for example, than that of the treatment of wounded in action on board a modern battleship, which forms the subject of a carefully thought out article by Fleet-Surgeon P. B. HANDYSIDE of H.M.S. *Vengeance*. Accepting the view of those familiar with the construction of a modern battleship and the requirements of modern surgery that it would not be possible during an action to remove wounded men to a place of safety below the waterline or armoured deck and there to perform surgical operations, Fleet-Surgeon HANDYSIDE proceeds to discuss very carefully and from a practical standpoint what can be done and what are the duties of medical officers before, during, and after a naval action. Of course, the object aimed at in our modern warships is to make them the most perfect fighting machines possible, but that is no reason why the attempt should not also be made to secure the best hygienic arrangements attainable in the circumstances. Moreover, we are not happily always at war and naval engagements do not last long when we are. It consequently appears to us that a naval medical officer might be usefully consulted in matters of naval construction and plans. We refer our readers to Fleet-Surgeon HANDYSIDE'S contribution to the blue-book under notice as showing the value of hearing a medical opinion upon such matters.

All who are interested in the genesis and evolution of the Royal Navy Medical Service, naval hygiene, and the internal economy of His Majesty's navy will turn to "Notes and Extracts from Journals" extending from 1793 to 1856 compiled by Deputy Inspector-General T. J. PRESTON. Like all stories worth the telling, the moral to be drawn from this paper lies on the surface, and that moral is that the navy has steadily progressed in matters medical and hygienic. We may regret that the extracts from the journals are so short and scanty, such mere samples, that they only whet the appetite for more, but sufficient evidence is marshalled to prove the proposition. The medical, bacteriological, and other papers in the appendix to the report strike us as being unusually good and the results obtained in some of the surgical cases recorded reflect great credit on the medical officers concerned. We may conclude with what we desire to emphasise—viz., the contrast which exists between the conditions affecting the Royal Navy of the present day as compared with those which obtained in 1793–1856 for example, to take the date dealt with in Deputy Inspector-General PRESTON'S interesting communication. The advances that have taken place in naval hygiene, applied medical and sanitary science, and we may say in every respect, have been great and mainly in proportion to the increased and increasing position and influence of the medical service. This is a thing worth noting by our readers, especially by those who have the education of medical students in their charge. It may be possible, indeed it may be easy, to pick holes in the Royal Navy Medical Service, but it is a service of great possibilities and promise.

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The Medical Officer of Health: His Report and his Sanitary Authority.

A RECENT meeting of the Newbiggin (Northumberland) district council has revealed a misapprehension upon the part of the council with regard to its own duties and the position and duties of its medical officer of health, which deserves some serious notice, if only to furnish arguments for those who would prevent other sanitary authorities from falling into the same error. It appears that the medical officer of health of the district, Dr. VINCENT BURROW, had at a previous meeting submitted his annual report, when the council had taken the significant step of referring it back to him in order that he might delete or alter portions with which the council did not agree. This the medical officer of health of course refused to do. At a subsequent meeting of the council held on March 2nd Dr. BURROW pointed out that it was his duty to make his report as to matters which, in his opinion, were unsatisfactory within his district and to do so without regard to the views of the council. He further pointed out that were the report to be made under the conditions which the council sought to impose upon him it would become the council's report instead of that of its medical officer and he firmly refused to forfeit his self-respect and the respect of the council by deleting or altering any portion of what he had written, since he believed that all the report was accurate and necessary. Even then the members of the council did not apparently appreciate the position in which they were placing themselves, for the subject was further discussed until the clerk of the council, on being appealed to, gave the only possible opinion that the medical officer of health was bound to submit his report and that the council had absolutely no control over it. The medical officer of health will therefore have his way and will be allowed to present his report ungarbled. So far all is well, but the episode provides food for serious reflection. The same situation has arisen in other places and it is to be hoped that a little ventilation of the matter may prevent sanitary authorities from stultifying themselves in the future in a similar way. That a local sanitary authority should apply, or should attempt to apply, pressure to the medical officer of health is, apart from the insult to him contained in the suggestion that he might be found willing to yield to such pressure, a matter of prime public importance. Newbiggin may not rank among the great English watering-places but none the less what has happened there may happen elsewhere. Newbiggin, with a population of a little over 2000 inhabitants, is under the care of an urban district council but the Acts of Parliament which govern it are the same as those which apply to other localities and its medical officer of health, no doubt, occupies a similar position to that of many others who are not independent of the necessity for private practice. That position in a small district even more than in a large one has the disadvantage that attempts to influence its occupant, which cannot be made publicly without attracting attention, can there be brought to bear in private with greater ease. The medical officer of health, as is well known, has to furnish every year primarily to the sanitary authority a report of the district under his charge but he has also to send copies of that report to the Local Government Board and to the county council. With regard to these the Local Government Act, 1888, provides that "If it appears to the county council from any such report that the Public Health Act, 1875, has not been properly put in force within the district to which the report relates or that any other matter affecting the public health of the district requires to be remedied the council may cause a representation to be made to the Local Government Board on the matter." That is to say, the report of the medical officer of health is for the *information of the* Local Government Board and county authorities and is quite useless unless it is a straightforward and ungarbled document. There are, no doubt, many sanitary authorities the members of which would be glad if the drawing-up of the report upon the hygienic plight of the community for the information of such critics as the Local Government Board and the county council were to be intrusted to them and not to the medical officer of health. The legislature has, however, thought differently and in the interest of the public has intrusted the responsibility for such reports to men who are qualified by their professional training to make them efficiently and who will uphold the traditions of their profession by making them honestly. We commend the action of the Newbiggin district council to the attention of the Northumberland county council and of the Local Government Board. The latter body must know as well as we do that attempts to persuade the medical officer of health to water down an inconveniently outspoken report have occurred before. Such a misapprehension as has arisen in one place as to the relative positions of the council and the medical officer of health may arise in another. The Local Government Board has power to prevent such recurrence by intimating to local authorities that pressure or persuasion of any kind whatever put upon medical officers of health in order to induce them to issue "faked" reports will be viewed by the Board with grave displeasure.

The Etiology of Hernia.

MR R HAMILTON RUSSELL took the Congenital Origin of Hernia as the subject of his presidential address to the Medical Society of Victoria, Australia, on Jan 6th and worked out his theory of their congenital origin more elaborately than on any previous occasion. We publish his address, but little abbreviated, on p. 707 of this issue of THE LANCET.

The question of the mode in which a hernia is formed has long exercised inquiring minds but it can hardly be said that we have yet arrived at finality. The earliest opinion held is shown by the names given in popular language to the lesion, as in English the word "rupture" expresses the idea of a breaking forth of the bowel from within the abdomen. The German word "Bruch" is of similar meaning and the same idea is found in many languages. The name seems to imply that the chief cause is excessive pressure within the abdomen and even our present knowledge justifies us in saying that whatever may be the predisposing and assisting conditions a marked increase in the intra-abdominal *pressure is probably responsible for a very* large proportion of the herniæ seen. In very many cases there is a definite history of coughing or straining having immediately preceded the development of the hernia. Yet it must be recognised that contributory conditions must be present before a hernia can be formed. The first and most obvious suggestion is that the abdominal wall has been abnormally weak at the place where the hernia appears and that this local weakness is a real adjuvant in the production of a *hernia* is seen in the formation of traumatic herniæ; for instance, a laparotomy has weakened the abdominal wall by section of its ligamentous and muscular fibres with the result that the injured tissues are unable to resist even the normal pressure existing within the abdomen and a hernia results. That weakness is probably of etiological importance in other herniæ also is shown by the fact that they occur in certain well-defined spots where there is a loss of continuity of one or more structures forming the parietes of the abdomen. At the deep inguinal ring the wall is *evidently defective for the purpose* of allowing the spermatic cord to pass through. It is true that arrangements have been apparently specially made to minimise the risk of a hernia, for the two inguinal rings are not opposite one another and the abdominal pressure tends to keep together the anterior and posterior walls of the inguinal canal. The crural ring is so patent that it seems to invite a hernia and the umbilicus, too, is evidently a weakened spot. Thus it is true of the usual forms of herniæ that they occur in sites where the abdominal parietes are for one cause or other less strong than elsewhere. This is also true of the rarer herniæ, such as obturator hernia and that occurring through Petit's triangle in the interval between the latissimus dorsi and the external oblique muscles. In spite of these important and obvious facts it must be acknowledged that the etiology of hernia is not so simple of determination as it would appear to be, for weakness of the abdominal wall, even when accompanied by an excessive pressure from within, will not suffice to explain the occurrence of the vast majority of herniæ. It is a remarkable fact that if in the dead body the abdomen is opened and an attempt is made to produce a hernia by pushing the bowel through one of the usual hernial apertures it will nearly always be found impossible to bring the bowel down sufficiently, for the mesentery is rarely long enough to permit the bowel to pass through the deep inguinal ring or the crural ring. When this fact was first observed it was thought that a great predisposing cause of hernia was an unduly long mesentery. Time has not confirmed the importance of the length of the mesentery. In the living body the extensibility of the mesentery is probably far greater than post mortem, and when other conditions are favourable the shortness of the mesentery will not serve to prevent the formation of a hernia. We may therefore put aside as comparatively unimportant the length of the mesentery. What further condition have we to offer as predisposing to the production of a hernia? It is clear that in the condition which is usually known as a "congenital inguinal hernia" a structure is present which must assist immensely in the production of hernia; we find a sac already formed, the processus vaginalis. The frequency of this variety of hernia in infants proves clearly the very great assistance that this gives in the formation of hernia. Mr. Russell accordingly advocates the idea that all, or almost all, herniæ are "congenital" in origin—that is to say, that the bowel always finds waiting for it a sac which has existed from birth. This opinion he first advanced in 1899 and in several papers since he has elaborated the idea and applied it to herniæ to which, at first, it did not seem applicable. Thus he explains femoral hernia as resulting from the existence of a sac arising at an early stage of development, when the limb buds are being formed; as a limb bud arises he suggests that a diverticulum of the pleuro-peritoneal cavity is, as it were, drawn into it. The many varieties of inguinal hernia owe their origin, according to Mr. Russell, to corresponding varieties of sacculation of the peritoneal pouch. Thus he accounts for the interstitial and properitoneal herniæ by supposing that a portion of the descending peritoneal sac has become caught by the developing abdominal wall and he looks upon the connexion of an interstitial hernia with an imperfect descent of the testis as the *associated results of a* common developmental cause.

There seems to be a difficulty in explaining a direct inguinal hernia by this theory, but Mr. Russell has met with a case in which there was a peritoneal pouch in the situation of a direct inguinal hernia though no hernia had ever been present. To express in a word Mr. Russell's theory, he maintains that "acquired hernia does not exist." There is much to be said for this theory; it would serve to explain many anomalies that we meet with and to clear up many obscurities in connexion with herniæ. The proof of the theory, if it can be proved, will apparently depend chiefly on the demonstration of the frequent existence of these peritoneal pouches apart from actual herniæ. This should not be difficult if the theory be true. Herniæ do, however, occasionally exist, as of the cæcum, which possess no sac, and therefore there must be exceptions to the explanation which Mr. Russell advances.

Annotations.

"Ne quid nimis."

ANNIVERSARY DINNER OF THE MEDICAL SOCIETY OF LONDON.

The Medical Society of London, under the chairmanship of Dr. F. de Havilland Hall, the President of the society, celebrated its 131st anniversary dinner at the Whitehall Rooms, Hôtel Métropole, on March 8th. The great banqueting hall was crowded, the exact number of guests and members present being 205. Amongst the company were the Presidents of the Royal College of Physicians of London, of the Clinical Society, of the Gynæcological Society, of the Harveian Society, of the Hunterian Society, of the Irish Medical Schools' and Graduates' Association, of the Obstetrical Society, and of the West London Medico-Chirurgical Society; Sir A. Rücker, Professor T. Clifford Allbutt, Professor Howard Marsh, Sir John Wolfe Barry, Mr. J. W. Comyns Carr, Dr. W. H. Allchin, Sir Alfred Cooper, Dr. J. K. Fowler, Mr. A. Pearce Gould, Mr. J. H. Morgan, Sir Henry F. Norbury, K.C.B., Sir H. Oakley, Sir G. S. Robertson, K.C.S.I., Mr. Mayo Robson, Mr. Edmund Owen, Sir Thomas Smith, Bart., the Mayor of St. Marylebone, Sir William Taylor, K.C.B., and Dr. S. West. The toast of the evening, that of "The Medical Society of London," was proposed by Professor Allbutt. The great size of the banqueting room somewhat marred the effect of Professor Allbutt's speech but to judge from the applause of those seated near the orator his opinions were received with great approbation. Professor Allbutt's remarks really amounted to an able denunciation of the present-day fashion of specialisation in the medical world. He contended that a stand should be made against the ever-widening division between medicine and surgery and he pointed out that the very name of the medical society implied the unity of the profession which he was so anxious to urge on the notice of his audience. The President of the Medical Society, in responding to this toast, elicited loud applause on his informing his hearers that the name of Lord Lister had been placed on the roll of honorary members of the society. Mr. Owen, in a characteristically witty speech, proposed the health of the guests. In the course of his remarks on Sir William Taylor, the Director-General of the Army Medical Department, he observed that he was a splendid recruiting officer because he was attracting to his department some of the best men from the hospitals. Sir John Wolfe Barry, who was the first to respond to this toast, remarked that although surgeons had but little choice of the materials on which they operated, nevertheless engineers were also limited in choice in regard to securing foundations for their structures. Sir William Taylor, who next spoke, made some amusing allusions to the temporary difficulties caused by the general reorganisation by which, he said, everyone at present seemed to be affected. After Mr. Comyns Carr had also replied to the toast of "The Guests," Dr. Allchin proposed "The President" and this having received a suitable acknowledgment brought the evening's proceedings to a close. The great success of the dinner was very generally acknowledged to be due to the organising talent of the registrar of the society, Mr. W. R. Hall.

THE METROPOLITAN STREET AMBULANCE ASSOCIATION.

WE are glad to be able to report that the first part of the programme undertaken by that young and very vigorous body the Metropolitan Street Ambulance Association has been accomplished with encouraging results. Of the 118 gentlemen who have just been elected upon the London County Council 104 have given satisfactory replies to the question sent by the association to them during their candidature asking, "If elected to the London County Council, will you interest yourself in securing the establishment by the Council of an efficient street ambulance service for London?" Nor do these figures tell the whole story, for the cynical may say that they do not greatly regard election pledges. But, as a matter of interesting and important fact, many of the answers received from the 118 members of the new County Council show that the writers take as warm an interest in the question of an adequate ambulance service for London as does the medical profession itself. There is, therefore, every reason to hope that the London County Council will without delay take steps to ascertain what practical course can be adopted. A detailed scheme will be prepared by a subcommittee of the Metropolitan Street Ambulance Association for presentation to the Council at an early date and much will depend upon the character of this scheme. If it is simple, economical, and practical there is no reason to doubt that the London County Council will look upon it with favour and we do not see why immediate results should not follow. It is important to remember that a body like the London County Council will be greatly strengthened in any course it may decide to pursue if it feels that it can rely on the support of the whole medical profession of London in a question of this nature. Medical men can promote the movement by sending evidence showing the lack of proper ambulance accommodation in their neighbourhoods to Dr. Arthur W. James, 69, Gloucester-terrace, Hyde Park, W., who is acting as honorary secretary of the Metropolitan Street Ambulance Association, as well as by enrolling themselves as members of the association—a proceeding for which there is no charge. As a matter of fact, not much more evidence than the endorsement of the medical profession is required to show that the needs of London for ambulances of all sorts are almost unsupplied. The lack in the metropolis of adequate provision for dealing with street accidents is deplorable, while facilities for using such supply of ambulances as we have are entirely absent. Suppose a street accident to occur within ten minutes' walk from an ambulance station—which is supposing a great deal—how long would it be before the victim was in a stretcher? A policeman must be found. When found he must stay with the injured man while another constable, or some member of the public, goes for the ambulance. And when it arrives how long will it be before the patient is in the hospital? In New York the horse ambulance system originated in 1870 and proved so valuable that many other American cities quickly adopted the same methods. In Vienna the service was established in 1881 and in Paris in 1888, while in Liverpool the horse ambulance for street accidents was first tried in 1884 and ever since has proved to be invaluable. Horse ambulances summoned by telephone have long been looked on as an indispensable feature of hospital work in Birkenhead, Manchester, Newcastle, Huddersfield, Bolton, Burnley, Hull, Sheffield, Leeds, Wolverhampton, and Ipswich. Bearing in mind the loss of time occasioned in London by the use of the hand ambulance it is not surprising that from 8000 to 10,000 street casualties have to be removed each year in cabs or in other unsuitable conveyances.

CEREBRAL SYMPTOMS AFTER ABSORPTION OF DROPSY.

AT the meeting of the Société Médicale des Hôpitaux of Paris on Jan. 15th M. Pierre Merklen and M. Jean Heitz called attention to the fact that the absorption of dropsy, whether cardiac, hepatic, or renal, may give rise to cerebral symptoms, such as coma, Cheyne-Stokes respiration, delirium, or convulsions. These may prove fatal, terminate in recovery, or cease with the return of the dropsy. This fact was observed by old writers but it appears to have passed out of notice. Graves has remarked that eclampsia sometimes is of favourable significance in regard to recovery from dropsy. Rilliet has observed that the convulsions of acute nephritis are frequently associated with diminution of the œdema. Bartels has several times seen uræmic symptoms occur when rapid absorption of renal dropsy was produced by diuretics or purgatives. Andral has described coma, from cerebral œdema, and asphyxia, from pulmonary œdema, as results of the rapid absorption of cardiac dropsy and as causes of rapid death. Eichhorst has recorded less severe consequences—somnolence, delirium, myosis, facial congestion, and deep and rapid respiration, like that of diabetic coma. The experience of M. Merklen and M. Heitz agrees with that of Eichhorst. They have observed five cases, in four of which there was cardiac disease and in the fifth renal cirrhosis. All these cases are connected by the link of renal insufficiency. The patients were aged and their kidneys were therefore probably acting insufficiently. In the cases described by M. Merklen and M. Heitz the ages varied between 56 and 71 years. Atheroma of the renal arteries was present or was suspected. The symptoms are due to defective excretion of the absorbed dropsical fluid which causes visceral œdema, especially pulmonary and cerebral. The existence of this "serous apoplexy" is not a mere hypothesis. Andral found in one case the lateral ventricles so distended that on incision fluid gushed out abundantly. Even in cases of coma recovery is possible and it often coincides with the return of the dropsy. The duration of the symptoms varies from some hours to some weeks. Treatment consists in promoting elimination by the kidneys and other organs. When the symptoms are acute and connected with insufficient diuresis bleeding may be necessary; it is indicated in eclampsia and coma. When the symptoms are less severe, such as delirium or torpor, repeated local blood-letting—wet cupping of the loins and the application of leeches to the mastoid processes—and drastic purgatives should be ordered. Fluids should be given in only very small quantities. The following is one of the cases related. A man, aged 65 years, was admitted to hospital in December, 1901. Three years previously his legs began to swell and a fortnight before admission ascites appeared. There were double pleural effusion, ascites, much œdema of the legs, and slight icterus. The urine did not contain albumin. Under treatment the œdema diminished. In April, 1902, the œdema extended to the abdominal wall and the effusions increased. The quantity of urine diminished to one litre in 24 hours and the kidneys did not excrete methylene blue administered to test their activity. From July to October paracentesis abdominis was performed thrice. On Oct. 29th the patient was somnolent and passing urine and fæces in the bed. M. Merklen and M. Heitz were surprised to find that the œdema of the legs had almost disappeared and that the ascites and pleural effusions were no longer perceptible. The liver and spleen were enlarged. On the 30th he was semi-comatose and there were general muscular rigidity, Kernig's sign, and dilated pupils. On the 31st there were deep jaundice and choluria and the coma was diminishing. With the improvement the anasarca and ascites returned and the quantity of urine increased to three litres in the 24 hours. He gradually regained his previous condition. On April 18th, 1903, he was readmitted. Until the 16th he had felt well and had gone about with his big abdomen and swollen legs. Then he suddenly became somnolent and simultaneously the swelling of the abdomen and limbs subsided. On admission he presented the symptoms found six months previously, but in a more severe form. On the 19th there were deep jaundice, vomiting, and melæna. On the 23rd he began to improve but the dropsy gradually returned. He died on May 31st. At the necropsy moderate ascites, chronic peritonitis, and atrophic cirrhosis of the liver were found. The kidneys were rather small and showed on microscopic examination chronic arteritis and subacute epithelial nephritis. There was slight left pleural effusion and the lungs were œdematous. The heart was a little dilated. There was marked effusion into the pia-arachnoid spaces.

THE WINTER'S WEATHER AT THE CONTINENTAL RESORTS.

THE following table gives a summary of the temperature and rainfall experienced at most of the principal health and pleasure resorts on the continent during the three months, December to February, of the past winter. It is permissible to speak of the winter as past in those southern latitudes, for whatever may be the case in our more northern clime spring in those favoured spots does undoubtedly commence with March. As would naturally be expected, the warmest place was Algiers, where the mean temperature was 56° F., or about equal to an average London temperature at the beginning of June. But as a drawback it will be observed that it was also the wettest. The resort with the lowest mean temperature was Florence but it was also one of the driest as regards the aggregate rainfall as well as one of the driest in the matter of days with rain. It should be said that a "day with rain" in the above table signifies a day when four-hundredths of an inch have fallen. After Algiers the places with the warmest mean temperature were Lisbon and Naples and these two cities had the advantage that their temperature was more equable than at any other spot. Lisbon's absolute maximum temperature was the lowest and its total rainfall was considerably less than that at the majority of the other stations. It had, however, with Biarritz, many more days with rain than most other places. Frost was recorded by the screened thermometer at Biarritz, Florence, Nice, and Rome. At Biarritz the thermometer descended to 32° or below on no less than 11 different nights, but at Florence the number was only six and at Nice three, while Rome had but one frost.

Stations.	Highest temperature.	Lowest temperature.	Mean daily maximum.	Mean daily minimum.	Mean of maximum and minimum.	Number of days with rain.	Total rainfall.
	Degrees F.	Degrees F.	Degrees F.	Degrees F.	Degrees F.		Inches.
Algiers ...	79	41	62	50	56·0	49	21·6
Naples ...	64	36	54	47	50·5	38	12·3
Rome ...	66	32	55	45	50·0	40	15·8
Florence ...	63	28	50	40	45·0	37	11·9
Nice	70	32	52	39	45·5	28	15·1
Biarritz ...	64	28	52	42	47·0	54	14·8
Lisbon ...	61	34	54	47	50·5	59	9 8

THE SPOROZOA IN RELATION TO DISEASE IN MAN AND ANIMALS.

Professor E. A. Minchin of the University of London delivered the first of a series of eight lectures on the sporozoa at University College, London, on Feb. 29th. During recent years the study of this important group of micro-organisms has received great attention in connexion with the etiology of such diseases as malaria, cancer, and certain tropical diseases of parasitic origin. The sporozoa, said Professor Minchin, constitute a group of protozoa widely distributed in nature and universally characterised by parasitic habits. They infest the internal organs and tissues of almost all classes of animals. There is, perhaps, no species of worm, mollusc, crustacean, insect, or vertebrate which is not liable to become the involuntary "host" of some kind of sporozoon parasite. Correlated with their wide distribution the sporozoa exhibit great diversity of anatomical characters and life-history. Yet the sporozoa as a group possess certain very characteristic features in common, peculiarities which are in direct relation with their habit of life as internal parasites. Their nutriment is always of a fluid nature—viz., the blood plasma or juices of their host, absorbed osmotically at the surface of the body of the parasite. None of the special organs for ingesting or digesting solid food, so frequent in other protozoa, are ever found in this group, while food vacuoles and contractile (excretory) vacuoles are always absent. The sporozoa are exceedingly fertile, an abundant progeny of several hundreds of motile spores (swarm spores) being formed within, and liberated from, the body of the parent. This occurs within the tissues of the host inhabited by the sporozoon. Thus the common earthworm harbours within its body a sporozoon (*monocystis agilis*) which infests the vesiculi seminales and lives (endoparasitically) within the sperm mother cells. Around the margin of these cells the spermatozoa of the earthworm develop while the parasite grows within the cell until, when it has attained full size, it is seen to be covered by a layer of spermatozoa. The growing parasite is pear-shaped and consists of a single nucleated protoplasmic body which soon issues forth from its spurious covering and leads a free life. This free parasitic stage is the "sporont" stage. Sporonts when fully grown conjugate in pairs or gametes. Each pair secretes a cyst wall within which the protoplasm and nuclei undergo segmentation into numerous small oval-shaped masses of nucleated protoplasm (zygotes). Each zygote eventually divides by repeated fission into eight smaller organisms within a single shell or covering; these are called sporozoites or falciform bodies. These zygotes undergo no further development in the body of their host the earthworm. When the latter, however, is devoured by birds the sporozoites are set free and pass out with the fæces of the latter as individual sporozoites to be again swallowed by the earthworm within the body of which the life cycle above detailed is repeated. Some sporozoa may invade the human body and produce disease at certain stages of their life-history passed within the body of man, a subject that will be fully expounded in the succeeding lectures. The second lecture delivered by Professor Minchin on March 7th discussed the life relations of two important classes of sporozoa—the coccidia and the gregarinæ. The coccidia were, he said, minute parasitic organisms which infested the intestinal canal of worms, crustaceans, and other arthropods. They were occasionally present in echinoderms but the higher vertebrates (those above the grade of amphibians and the tunicates) were free from these parasites. Abundant spore formation by fission was a characteristic feature of these organisms, the number of spores being often so great as to produce the death of the host. This phenomenon was termed death by auto-intoxication. The spores might enter and infect a suitable host in a variety of ways—e g , by being eaten with the food (casual infection) or by being inoculated into the host by a mosquito or other insect which served as an intermediate host (infection by inoculation). The *gregarinæ* were larger and more highly developed organisms than the coccidia, but their distribution as parasites included the same classes of animals as those infested by the coccidia. In a few rare cases of skin disease occurring in South America investigation has shown that the virus is a coccidium which is communicated from one person to another by contact. The sporozoa were divided into two great classes—viz , the telosporidia in which spore formation occurred only when the animal reached the adult condition (gregarinæ, coccidia, and hæmosporidia) and the neosporidia in which spore formation took place in the early stage of the life-cycle of the animal. The former class contained certain sporozoa which were pathogenic to man, including the deadly malarial parasite and others which were the probable agencies in the production of certain tropical diseases.

THE PHYSICS OF THE DAMP BED.

THE question is very commonly asked as to why it is dangerous to sleep in a damp bed. Some persons even deny that there is any risk, confidently recounting perhaps in support of their view an experience in which no harm had ensued to them, even although the mattress had been accidentally kept wet through the night by the leaking of a hot water bottle. A consideration of the physical condition of the damp bed easily accounts for its danger to health and it does not follow that while there is risk when the coverlet is damp the risk is quite the same when the mattress is superficially wet. To begin with, damp air is not only a conductor of heat, so that the warmth of the body when surrounded by it easily escapes, but it also communicates a dampness to the coverlet which destroys its non conductivity. The danger of sleeping in a damp bed, however, lies not so much in the dampness of the air as in the dampness of the clothes. The vital principle of the bed coverlet, as it is with all clothing, is that it should be as far as possible non-conducting—i.e., having the property of preventing the escape of the natural heat of the body. When clothing is damp it loses to a large extent this property and so the body loses its natural warmth, experiences a chill, and a serious illness may ensue. It is therefore conceivable that no harm would result if merely the mattress of a bed were wet so long as the upper coverings, the sheet, the blanket, and the coverlet, were perfectly dry, effectually preventing, that is, the escape of the body heat. A chill does not arise from the cold of dampness (cold and damp are not interchangeable terms) but from the facility with which damp air and clothes allow *the natural warmth to escape*. *Damp clothes, in short,* are good conductors of heat while dry clothes are insulators, and the degree at which the heat of the body is maintained in bed is a measure of the insulating value of its coverings. The risk of sleeping in damp clothes would be the same as *if copper or tin foil were used for the purpose.* It follows that the only practical and trustworthy test for a damp bed would be to place, say, a hot water bottle in it and to note how rapidly the temperature of the water falls. According to the principles just laid down the difference would be very perceptible in the case of a damp and in that of a dry or well-aired bed. The so-called damp detectors, which depend upon the stretching of a fibre or hair in dry air and its shrinking in moist air, give, in reality, no useful indication, neither does a watch glass showing the deposition of moisture

A SANATORIUM IN THE BALANCE.

IN dealing with the subject of tuberculosis we have from time to time pointed out that unless the advocates of sanatoriums were less optimistic in their prophecies as to the benefit which is to be anticipated from these admirable institutions a reaction based upon disappointment was inevitable. Unfortunately for the true interests of the consumptives this reaction has already set in and those who have preached in and out of season that solely by sanatoriums consumption could be "stamped out" are alone to blame for this regrettable result. Sanatoriums have to some extent been promoted and built upon the implied if not specific understanding that in allowing three months' residence for each patient cure might be effected and now that the necessary interval has elapsed and the prophecy has been unfulfilled the chickens of exaggeration are returning to their roost. Apparently the Heswall Sanatorium which was recently erected by the board of guardians of the city of Liverpool on a site overlooking the waters of the Dee has not passed altogether unscathed through the criticisms levelled against its first annual report. The results, in so far as they can be gauged from the figures furnished by our Liverpool correspondent last week, do not astonish us as we have never been led away by the "stamping out" will-o'-the-wisp. But apparently the Liverpool guardians, as well as one of the medical officers of the institution, thought otherwise. It seems that 56 patients were admitted during the year and of these seven died. This fact conveys little to us unless we know the precise stage of the disease on admission of the patients and the duration of stay in each case. If the cases were advanced or, perchance, moribund on admission the figures convey no information of any value and until we receive more detailed data we shall withhold comment. At the date of the report there were 21 patients in the sanatorium; 18 of these were reported to be improving and in three the disease was arrested. The chairman apparently regarded the report as disappointing but it was determined in order to give the institution a fair trial to keep it going for another 12 months and to endeavour to secure more cases in the primary stage of the disease. If early cases are secured we have little doubt that next year's report will be of a much more encouraging character. But it is nevertheless much to be regretted that apparently in consequence of the admission of unsuitable cases the public will receive a shock in connexion with the institution and a shock which may, we fear, prevent other boards of guardians from following the example of Liverpool. But whatever may be the facts with regard to the Heswall Sanatorium it cannot be doubted that professional opinion in this country is undergoing some change with respect to the functions of a sanatorium. With the over-statements of the enthusiasts, of those who had but slight knowledge of epidemiological problems and of the effect upon other diseases of hospital isolation, a "stamping-out" wave passed over the country. Now, when it is shown by experience that a stay of three months is insufficient to bring about a cure there is in no small measure a change of front and an effort is being made to erect sanatoriums for the purposes of education alone. This idea is in its turn also excellent but the application of it should, it seems to us, be approached cautiously, intelligently, and economically. But in the meantime the public will perhaps ask whether they are likely to find stability even in this educational aspect of sanatoriums and we should not be altogether surprised if they asked for some more authoritative opinion than they at present possess before they agree to sanction indefinite expenditure in this direction. Would it not be well, looking at the issues at stake, if a Royal Commission or a departmental committee were appointed thoroughly to examine the question. It is, of course, easy to refer to the practice of Germany and, disregarding the fact that the circumstances of the working classes in the two countries are essentially different, to follow the German example. But before doing this, it would be well to ascertain what influence the elaborate system of workmen's insurances in Germany plays in the battle against consumption. Moreover, it would be wise to learn in what manner sanatoriums could be most economically and expediously provided and if these institutions are to be used for educational purposes alone what is the length of stay proposed in each case and what are the benefits likely to accrue therefrom. Could, too, those benefits be procured in a less costly fashion by other means? There is probably no doubt in the mind of anyone at all conversant with the facts that sanatoriums, if properly administered, are excellent institutions, although tuberculosis will never be "stamped out" by them alone and in some cases equally good results may be attained outside the walls of such places. What it appears to us is wanted before the greatest use can be made of sanatoriums in a curative sense is some better machinery by which early cases of consumption may be recognised and brought under control and the Heswall incident is, perhaps, an apt illustration of that need.

THE AIR OF UNDERGROUND RAILWAYS IN ITS RELATION TO DISEASE.

In matters appertaining to the public health it is easy to drift into hysteria and one result of such a course is to divorce level-headed public opinion, which after all is the real controlling legislative force, from sympathy with preventive medicine. But at the present time when in London at certain periods of the day men and women of all classes, who for the most part have spent or are about to spend their day in work, are huddled together in railway carriages in a fashion somewhat suggestive of cattle on the way to the shambles, any ray of light tending to show to what extent the air of underground railways and carriages becomes polluted is worthy of consideration. The latest contribution to this subject is a report by Dr. W. Scott Tebb, the public analyst of the borough of Southwark, on the condition of the air in the City and Suburban Railway, and although the air of the tube is not fairly comparable with that of the Metropolitan Railway it is not difficult to draw certain inferences from the records of the tube. The results of Dr. Tebb's investigations are in no sense contrary to expectation but notwithstanding this they are instructive and interesting. The experiments were only quite recently performed and hence they may be taken as typical of winter conditions. Each experiment was carried out in duplicate and in presence of a control in the open air and in addition to the estimation of carbonic acid and bacteria records were taken as to the temperature, humidity, and movements of the air. The average temperature on the platform was 61° F. and that of the street at the same time 49° F.; the humidity of the air on the platform was greater than that in the street. The velocity of the air on the platform varied from one mile to eight miles an hour according to the position of the moving trains. As regards micro-organisms in the street, railway platform, and railway carriage the method adopted was to expose agar plates in duplicate for half an hour, to incubate the plates at 37° C. for 22 hours, and then to count the colonies. The results are held to afford a fairly trustworthy comparison between the air of the three sources under examination and the following table based upon averages furnishes a general idea of the conditions obtaining at the period of the experiments:—

Air of—	Number of experiments.	Micro-organisms.
Street	52	459
Railway platform ...	46	114
Carriage	8	218

But the examinations made at different periods of the day and night illustrate how markedly the number of organisms in the air is governed by agencies which promote both the formation and the movement of dust and in what manner the relative quietude of the early morning both in the street and in the tube and of the afternoon in the tube influences the situation. The following table explains itself:—

Hours.	Number of micro-organisms.	
	Street.	Tube.
2 A.M. to 6 A.M.	52	54
6 A.M. to 10 A.M.	412	249
10 A.M. to 2 P.M.	455	102
2 P.M. to 6 P.M.	427	54
6 P.M. to 10 P.M.	574	111

Turning to the carbonic acid, a very similar state of affairs was found. Outside the railway stations in Southwark the carbonic acid averaged 3·8 parts per 10,000, the amounts ranging from 3·1 between 2 A.M. and 6 A.M. to 4·3 between 2 P.M. and 6 P.M. Inside the stations the amount varied from 3·5 to 9·3 the amount increasing progressively from morning to night. As a result of his investigations the author suggests that means should be adopted to reduce the carbonic acid in the tube to 6 parts per 10,000 the usual limit of permissible impurity, and he thinks that some more efficient system of ventilation should be adopted in the carriages. No one will, we imagine, wish to quarrel with these recommendations, although it may be somewhat difficult to realise them in practice. With regard to these investigations of Dr. Tebb it has, of course, to be borne in mind that carbonic acid as such is not detrimental to health even in amounts considerably in excess of the 6 parts per 10,000 referred to above. But the carbonic acid is taken as a convenient and easily determined index of the amount of organic matter in the air. Hence the risks are greatest when an excess of carbonic acid is associated with the presence of animals or human beings capable of giving rise to this indefinite organic poison of which the carbonic acid is accepted as an index. Although Dr. Tebb's investigations and conclusions relate exclusively to the tube, they suggest certain reflections as regards the carriages on the Metropolitan Railway. For instance, it would be difficult to imagine circumstances more likely to give rise to an excess of organic matter and carbonic acid than the presence of 16 or 17 persons in a metropolitan railway carriage, more particularly when both windows and the ventilators are also closed, or when a broad-shouldered navvy or other corpulent person is blocking the window aperture. It would be of interest to estimate the carbonic acid in these circumstances between 6 and 7 P.M. in one of the Ealing trains and we might rest assured that the carbon dioxide would at least not under-estimate the amount of organic matter present. As regards the number of organisms, plates placed on the luggage rack might afford some instructive lessons; but it has to be remembered that unless there is actually coughing or loud speaking droplets are unlikely to be given off. That the overcrowding which takes place increases the risk of contracting specific disease is a self-evident proposition which is not worth discussion. If a similar overcrowding took place on the public carriages in the streets above ground the metropolitan police would soon put an end to it; the ticket collectors below ground are relatively useless except for the protection of the company. For the public their concern is small. Why not, therefore, convert the Metropolitan Railway into a "street," let the metropolitan police have access thereto, and let the cost be borne by the company? Or are we to wait until a serious railway accident by damaging or destroying the lives of those in an overcrowded train results in such heavy damages against the company that in its own monetary interest it will take the necessary steps?

THE MANAGEMENT OF THE ROYAL BERKSHIRE HOSPITAL.

THE Royal Berkshire Hospital held a special court of governors on March 1st when various proposed alterations in the rules of the institution as affecting the honorary staff and other officials of the hospital were considered. Discussion waxed rather hot and certain proposals adopted by the board of management for discussion at the special court were not carried. A committee had been appointed to inquire into the duties of the resident medical officers and had reported as follows:—

> This committee are of opinion that: 1. The resident medical staff should remain as at present constituted, but that a senior resident

> Rogers, James R. Andrew Clark.

Mr. Walters moved that a clause should be added specifically stating that the new official should not interfere with the honorary acting medical staff or with the patients under their care and this clause was agreed to and incorporated in the report. After some discussion the report was finally referred to the annual court of 1905. As the matter is in abeyance for a year or so there is plenty of time for the governors of the hospital to consider what they are doing. It seems to us that if the new official is not to be a medical man to give him jurisdiction over the resident medical officers is courting disaster. A tactful lay official might not seek to interfere with the treatment of a house surgeon or a house physician, but all persons are not tactful. Moreover, we do not think it desirable that a layman should act as registrar to a hospital. For a registrar to be of any use in a hospital he must be a medical man. With regard to the point of setting an official over the resident medical staff there is much to be said on both sides. Some of the London hospitals have a permanent resident officer who is set over the house physicians and surgeons and some have not. But wherever such an official does exist he is always a medical man. Therefore we think that the governors will be well advised to insist that if the proposed official is to exercise jurisdiction over the resident medical officers he must be a medical man. Among other proposals which came before the court was one to the effect that no one should be eligible for the post of surgeon or physician to the hospital who held a dispensary, Poor-law, or club appointment; this proposal was not carried.

FOOD IN WARM CLIMATES.

IN a pamphlet published at Santa Cruz de las Palmas Dr. Sanchez Reyes of the Spanish Army Medical Service discusses the alimentary merits of *el gofio* as a food capable of sustaining human life and strength in warm climates. *El gofio* is a generic name for various products which are manufactured from different flours, including those obtained from wheat, maize, barley, white lupine, rye, chick-peas, and beans. The descendants of the gigantic Guanches are still a herculean race and yet they subsist upon this farinaceous food almost exclusively, their only extras being milk and a little coffee. Among the wealthy a few indulge occasionally in broth but meat cannot be said to be a staple ingredient in their diet. Of course, the climate of the *μακάρων νῆσοι*, or Fortunate Islands, is not one that calls for a highly nitrogenous diet, still there are many places with as high, or even a higher, temperature where the inhabitants think it necessary to consume animal food habitually. More especially is this true with regard to certain colonies which have been peopled by emigration from inclement regions. It seems certain that a diet in which meat forms the staple ingredient cannot be suitable in such cases but as years go by the *genius loci* will no doubt assert his power by gradually introducing a more vegetable regimen. Dr. Sanchez Reyes, after a somewhat elaborate examination of the chemical and physiological values of the various flours found in *el gofio*, comes to the conclusion that, associated with milk and eggs, the compound is amply sufficient for nourishment, especially in warm climates. He recommends it strongly as a ration for soldiers and in support of his contention claims the advocacy of Galen as well as the dietetic customs of the invincible Roman armies. Dr. Sanchez Reyes's pamphlet is decidedly interesting. As a writer in a late number of the *Revue des Deux-Mondes* observes: "The determination of the sources of muscular energy is ripe for discussion; it is one of the problems engaging contemporary science."

A CLASSIFICATION OF THE INSANITIES AS A BASIS FOR THE THEORY OF CRIMINAL RESPONSIBILITY.

IN a paper which is published in the *Edinburgh Medical Journal* for January Sir John Batty Tuke and Mr. Charles Howden, barrister-at-law, deal with the question of criminal responsibility in its relation to mental disorder and furnish a scheme of classification of the insanities as a basis for the further discussion of the question of responsibility in detail and with reference to each individual group of insanity. Although in theory the provinces of law and medicine are distinct great confusion between them has arisen in practice. This state of matters is due partly to the difficulties inherent in the subjects but in part also it is due to the persistence of traditional metaphysical views of insanity and to the imperfect condition of our knowledge of mental disease. The traditional views remained practically unchanged in Europe throughout the Middle Ages and up to the beginning of the nineteenth century. With few exceptions the prevalent views of insanity were "scholastic in character and indicated no real grasp of its nature, names and stock examples were repeated from one book to another," and the treatment of the insane was as marked by ignorance and superstition as its study and observation. The scientific, humane, and rational era in the treatment of insanity followed the teachings of Pinel in the second and third decades of the nineteenth century, but the knowledge of alienists in the early half of the century did not enable them to speak with sufficient confidence as to individual cases of responsibility. Most physicians were agreed that insanity arose from morbid cerebral and bodily conditions but little was known for certain as to the constancy and character of those conditions. The prevailing psychological classification into symptomatic groups of insanity—mania, melancholia, and dementia—did much to retard the advance of knowledge and scientific investigation. "Their common characteristics were so loose and superficial that to say a case belonged to any one of them gave no further information than could be derived from superficial observation of the case itself." The gradual recognition of distinct varieties of insanity and the perfecting of our system of classification have enabled recent writers to mark out more satisfactorily the existing varieties of insanity on a combined basis of evolution of symptoms, etiology, prognosis, and pathology. Medical men have also come to recognise that organic and grave lesions of the brain may exist without mental disorder sufficient to constitute insanity, as in cases of epilepsy, alcoholism, and lead poisoning, and that in other cases of similar nature grave mental disorder may exist. Sir John Batty Tuke and Mr. Howden propound a scheme or list of the groups of insanity to be considered *seriatim* in discussing the question of responsibility in future papers. The list is given below and includes the following varieties: idiopathic or vesanic mania and melancholia; general paralysis of the insane; insanity of cerebral traumatism; insanity associated with neuroses such as epilepsy, hystero-epilepsy, and hypochondriasis; insanity of cerebral syphilis, meningitis, and sunstroke; dementia præcox, puerperal insanity, climacteric insanity, and senile insanity; paranoia; and insanity from cerebral defect such as imbecility and idiocy.

"N" RAYS IN PATHOLOGICAL CONDITIONS.

IN THE LANCET of March 5th, p. 685, Mr. A. A. Campbell Swinton, who is well known in connexion with Roentgen ray work, took occasion to call in question the views as to the occurrence of "n" rays which M. Blondlot and others have published. The criticism is welcome since it is quite possible that the enthusiasm of a discoverer has led M. Blondlot to make some erroneous deductions from the results of his experiments, but there is a steadily increasing mass of evidence in favour of the essential accuracy of the view that muscle and nerve can produce characteristic effects upon a sensitive screen in the way described in an annotation some weeks ago. A further contribution to the subject has just been made in a note by M. Gilbert Ballet, presented by M. d'Arsonval to the Académie des Sciences and entitled "De l'Émission des Rayons N dans quelques Cas Pathologiques." Having satisfied himself of the fact that the "n" rays are emitted by living muscle, M. Ballet investigated the influence exerted upon a screen, coated with calcium sulphide and fixed at the end of a tube of lead about five centimetres long, by the tissues of a number of persons suffering from various diseases involving the muscular system. In a case of primary myopathy with complete atrophy of the deltoid and partial atrophy of the muscles of the forearm the diminution of the effect produced upon the luminosity of the screen when placed near the affected muscles was directly proportional to the degree of atrophy. Cases of wasting due to toxic polyneuritis, lead palsy, and neuritis of the facial nerve, together with four cases of infantile paralysis, yielded similar results. In three cases of hemiplegia of cerebral origin in which there was contracture of the muscles these were found to emit, as tested by the screen, a larger number of the "n" rays than the corresponding healthy muscles and the same thing was observed in a patient afflicted with spastic paraplegia. The data furnished by instances of hysterical paralysis are noteworthy: in one case of monoplegia and one of hemiplegia an increased production of the "n" rays was observed. As to the significance of this last fact M. Ballet desires at present to offer no opinion; it may, however, contain the germ of important developments in regard to the nature of what are distinguished as "functional" palsies.

DANGERS OF THE TRENDELENBURG POSITION.

THE Trendelenburg position, in which the pelvis is raised, is now very extensively employed for operations on the abdomen, especially when the surgeon has to deal with the pelvis. The advantages of the position are great, for the raising of the pelvis allows the action of gravity to withdraw the intestines from the lower part of the abdominal cavity, so that the pelvic viscera become much more readily accessible. Dr. F. Jayle, however, has recently pointed out in the *Presse Médicale* that this position is not free from danger, especially if the inclination of the body is over 45°. So high a degree of inclination is not common in this country but in France it is more frequently employed. The chief dangers attributed to the Trendelenburg position are the great strain thrown on the heart and acute pulmonary congestion. The raising of the pelvis leads to a flow of blood towards the upper part of the body and thus the right heart is liable to be overfilled and a disturbance of the pulmonary circulation results, with the production of pulmonary congestion. In one case Dr. Jayle had to postpone the operation because severe dyspnœa appeared whenever the patient was placed in the Trendelenburg position. Further, if the abdominal wound is closed while the body is still inclined there is a risk of shutting up a certain amount of air in the abdominal cavity. This air may be only slowly absorbed and some is liable to escape between the layers of the anterior abdominal wall. Dr. Jayle has seen extensive surgical emphysema result from this cause and give rise to a good deal of pain. In order to avoid this emphysema he suggests that the patient should always be placed in a horizontal position before the wound is completely closed. Still another danger is pointed out. Often the patient is kept in the inclined position merely by the bent legs passing over the edge of the table; this pressure of the table is said to have led in some cases to partial paralysis of the legs. All these possible dangers should be borne in mind in employing the Trendelenburg position but its advantages far outweigh these dangers which a little care and attention to detail will do much to obviate.

RESECTION OF THE CERVICAL SYMPATHETIC GANGLION FOR GLAUCOMA.

SINCE the publication of the results obtained by Professor Jonnesco of Budapest in the treatment of glaucoma by resection of the cervical sympathetic ganglion, an account of which was given in THE LANCET[1] some years ago, much attention has been given to the prognosis and results of this form of treatment In *American Medicine* of Jan. 20th Professor William H. Wilder of Rush Medical College gives an account of seven cases of sympathectomy for glaucoma personally investigated and discusses critically the results of all cases of glaucoma treated by resection of the sympathetic ganglion in the United States of America of which he could procure records. The results obtained by Professor Wilder himself as regards recovery do not appear to be so favourable as in the series of cases of sympathectomy published by Professor Jonnesco, but so far as they go they seem to justify this method of treatment. The following is a summary of the clinical features and the results obtained in the seven cases referred to. Case 1. The patient was a man, aged 40 years, with chronic inflammatory glaucoma of the right eye which resulted in gradual and progressive loss of vision terminating in blindness. He was operated on in May, 1901, and the right superior cervical ganglion was removed. Contraction of the pupil immediately followed and a few hours later the tension of the eyeball was lowered. Vision improved moderately in both eyes and the tension remained low, the degree of recovery being partial though permanent. Case 2 The patient, a man, aged 62 years, had chronic inflammatory glaucoma of both eyes Right sympathectomy was performed and marked improvement of sight followed. This improvement, however, became masked by the subsequent development of cataract in both eyes. Case 3 The patient was a man, aged 46 years, with simple (non-inflammatory) glaucoma of both eyes. Sympathectomy was performed on the left side but without benefit. Case 4. The patient, a man, aged 75 years, had simple glaucoma of the right eye and advanced glaucoma of the left eye. Right sympathectomy was performed with marked benefit as regards improvement of vision and the alleviation of symptoms. Case 5 The patient was a man, aged 76 years, with simple glaucoma of the left eye. Sympathectomy was performed and the further progress of the disease was arrested but recovery of sight did not take place. Case 6. The patient was a woman, aged 78 years, with the same affection as in the previous case, but improvement followed upon resection of the left cervical sympathetic ganglion. Case 7 The patient was a man, aged 57 years, with simple glaucoma, more marked in the right eye than the left. Sympathectomy was performed but without benefit. The general results were improvement varying from moderate to marked degree in four cases and no improvement in three cases. The excised ganglia in four cases were hardened in formalin and suitably stained to show pathological changes. In all the specimens, says Professor Wilder, there was increased pigmentation of the ganglion cells, and in two cases "mast cells" were seen. One case showed vacuolation of the nerve cells and eccentric displacement of the nucleus, but it was impossible, says Professor Wilder, to say as regards pigmentation how far the changes were normal (senile) or abnormal.

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[1] THE LANCET, Sept. 30th, 1899, p. 899.

THE CHELSEA CLINICAL SOCIETY.

"Internal Secretion" in Disease and in Treatment was the subject of the annual clinical debate of the Chelsea Clinical Society commenced at the Chelsea Dispensary, Manor-street, King's-road, London, S.W., on March 8th. Sir Lauder Brunton, who opened the discussion, contributed a well-balanced general view of the subject and was followed by Sir Victor Horsley who dealt with the thyroid gland. He pointed out that at the present time the general idea of the internal secretion of that gland being affected by disease was simply that it came to an end, whereas, as Sir Victor Horsley proceeded to show, the gland in the process of becoming diseased poured into the circulation in addition to its normal secretion some substances of a poisonous nature. Dr. H. D. Rolleston raised the question whether the want of success in the treatment of exophthalmic goitre and acromegaly might possibly depend on the fact that two or more glands instead of one only were in each case in an abnormal condition. Dr. A. E. Wright ended the first night of this interesting debate by discussing the problems of immunity. In our next issue we shall present our readers with a report of the proceedings.

THE HEALTH OF THE KING.

His Majesty the King has now recovered from a sharp catarrhal attack. The cold, commencing as is usual in these insidious cases with irritation in the throat and mouth, was aggravated by the exertion of his visit to Cambridge where he necessarily was submitted to many changes of temperature in his conscientious inspection of the new buildings of the University. As a result on his return from Cambridge there were some fever and bronchial irritation. His Majesty was kept in rooms of a uniform temperature and the slight pulmonary symptoms soon subsided, the patient answering quickly to remedies. His Majesty's public movements have since shown that his restoration was considered complete by Sir Francis Laking who has been in attendance.

The annual meeting of the general council of King Edward's Hospital Fund for London was held on Tuesday last at Marlborough House, H R H. the Prince of Wales being in the chair. In moving the adoption of the report the Prince of Wales read a letter which he had received from a personal friend placing securities at the disposal of the Fund bringing in an income of nearly £4668 per annum if in the course of the year an increase of income from funded property amounting to £9332 in addition should be received. The figures are determined by the fact that the income of the Fund from permanent sources is £14,000 short of £50,000, this being the figure to which the generous donor wishes to raise it by contributing one-third of the deficiency. The report, which was adopted, presented many interesting features upon which we shall comment next week.

The medical officer of health of Cape Colony reports that for the week ending Feb. 13th no case of plague in human beings occurred throughout the Colony. Plague-infected rodents were found at Port Elizabeth, East London, and Queenstown, but of 175 rats examined in the Cape Town and Harbour Board area none was affected with plague. As regards the Mauritius a telegram from the Acting Governor received at the Colonial Office on March 4th states that for the week ending March 3rd there were six cases of plague and five deaths from the disease.

The King has sanctioned the following promotions in the Order of the Hospital of St. John of Jerusalem in England: Knights of Grace: Colonel (Honorary Surgeon-General) William Daniel Campbell Williams, C.B. (from Honorary Associate), and Dr George Thomson (from Honorary Assocate). Dr. William Allan Jamieson has been appointed Esquire of the Order.

The Ecclesiastical Commissioners have signified their willingness to contribute a sum of £2500 towards the King's College Hospital Removal Fund. The Commissioners expect that the poorer residents upon their property in South London will benefit by the proximity of the hospital when removed.

At the meeting of the Neurological Society of the United Kingdom, to be held at 11, Chandos-street, London, W., on Thursday next, March 17th, at 8 30 p.m., Dr. Alfred W. Campbell will read a paper on Histological Studies in Cerebral Localisation.

The King has appointed Sir Thomas R. Fraser, M.D. Edin., LL.D., to be one of His Majesty's honorary physicians in Scotland.

A meeting of the Epidemiological Society will take place at 11, Chandos-street, Cavendish-square, W., on Friday, March 18th, at 8.30 P.M., when a paper on the Epidemiology of Enteric Fever and Cholera in Hamburg will be read by Dr. Reincke, medical officer of health of the city of Hamburg.

THE POLLUTION OF TIDAL ESTUARIES.

For some years past, and more particularly since the issue in 1896 of the Local Government Board's report upon the conditions under which oysters and other molluscs are cultivated, an increasing amount of attention has been paid to the question of the pollution of our estuaries. Although there is room for legal quibbling and academic discussion upon the point, the fact remains that in practice crude sewage can, for the most part, be discharged into tidal waters with impunity, as the Rivers Pollution Acts do not apply to tidal waters unless such waters are declared by the Local Government Board, after inquiry, to be "streams" within the meaning of these Acts. In only a very few instances have inquiries of this nature been made by the Local Government Board and in fewer still have the estuaries been declared "streams."

There is, however, another method of preventing the discharge of crude sewage into estuaries, as the corporation of Chichester recently learnt to its cost when action for an injunction to prevent it from fouling the harbour was taken successfully by Lord Gifford. As further evidence of the growing interest which is being taken in this question reference may be made to the recent very important report of the Royal Commission on Sewage Disposal which dealt exclusively with tidal waters and which we noticed at length in The Lancet of Jan. 16th, p. 167, as also to the fact that three other reports, one of which is an official one, have also been recently issued.

We propose here to give a general outline of the nature and conclusions of these three reports, commencing with those which were first issued. The author of the first two is Mr. A. G. R. Foulerton, county medical officer of health to the East Sussex county council. One of them deals with the pollution of the tidal portion of the river Ouse in Sussex and with the relation of the enteric fever in the vicinity to such pollution, and the other is a report to the local fisheries committee of the Sussex Sea Fisheries District and relates to the pollution of the Shoreham and Chichester harbours and of the tidal Adur. As regards the Ouse, this river enters the sea at Newhaven and it is heavily polluted by the crude sewage of Lewes as well as, in a minor degree, by the sewage of other places. The incidence of enteric fever on the population of the town of Newhaven is exceptionally high and Mr. Foulerton, after a thorough consideration of the circumstances and conditions, topographically, chemically, and bacteriologically, as well as of the age distribution of the population, arrives at the conclusion that the endemicity of enteric fever in Newhaven is most probably ascribable to the polluted foreshore of the river Ouse as it traverses the borough. Such influence is, he thinks, exerted mainly through the agency of flies which, after settling upon the polluted foreshore at low water, turn their attention to milk and other foodstuffs of the Newhaven population. He thinks, too, that mussels taken from the same foreshore have, although in a minor degree, an influence in the same direction. His chief proposal is to ask that the Ouse should be declared a "stream" and that those who now contribute crude sewage to its waters should be made to purify it.

Mr. Foulerton's *report upon the pollution of tidal fishing waters* is a very thorough piece of work. He has carefully surveyed the harbours and estuaries in question, has taken samples of water for chemical and bacteriological examination, and has estimated, so far as the very complicated considerations involved will allow, the effect of the pollution both upon the fish and the molluscs to be found therein and upon the risk to the public of consuming such fish. We have not space to follow Mr. Foulerton in detail but we can say that he has approached the subject in a thoroughly scientific spirit and that he has held in view not only the risk to public health which may obtain from the consumption of shell-fish taken from certain points liable to pollution but he has also kept before himself the fact that a large industry is at stake and that the livelihoods of many persons are in the balance. He has, in a word, had an eye to the relative proportions of the subject. Probably much of the area covered by Mr. Foulerton's investigations may before long come beneath the jurisdiction of one of the Rivers Boards, the formation of which has been so strongly urged in both the third and fourth reports of the Royal Commission on Sewage Disposal, and the Rivers Board which secures the well-balanced advice of Mr. Foulerton will be in safe hands.

The third report to which we have referred is a voluminous and comprehensive report made to the Local Government Board of Ireland by Dr. T. J. Browne, one of its medical inspectors, and Professor E. J. McWeeney, bacteriologist to the same department. This joint report represents the results of a comprehensive inquiry into the conditions of the shell-fish layings, &c., on the Irish coast as regards their liability to contamination by sewage. To Dr. Browne was intrusted the topographical survey which was carried out much upon the same lines as those set forth in the well-known and exhaustive report made by Dr. H. T. Bulstrode to the Local Government Board of England in 1896, while to Professor McWeeney was deputed the task of examining the specimens of molluscs, water, and mud which were forwarded to him by Dr. Browne. Each observer worked independently of the other and it was only at the termination of the investigation that the results were compared. The joint report is prefaced by an able summary from the pens of Sir H. A. Robinson and Mr. T. J. Stafford of the Local Government Board of Ireland, in which they point out that the report is not to be regarded as other than a superficial examination of the foreshores in so far as they seem to be affected by sewage contamination, and, they add, with a caution bred of knowledge, that "to enable us to distinguish conclusively the layings which may be regarded as reasonably safe from those which are not far more prolonged investigations by both Dr. Browne and Professor McWeeney would be required than time and the pressure of other work has so far permitted." There is no doubt in our view that this is an eminently sound attitude. To examine each estuary thoroughly would in itself require repeated visits and a consideration of all the circumstances, perhaps, throughout a whole cycle of tides. But, this notwithstanding, both Dr. Browne and Professor McWeeney have performed in a short space of time an admirable piece of work which will furnish a sound foundation upon which they and other observers may work in future. Dr. Browne's portion of the report is illustrated by numerous maps, showing by different colours and signs the areas devoted to shell-fish (oysters, mussels, cockles, and periwinkles) culture, growth, and storage, as well as the positions of the sewer and drain outfalls. As a result of his survey Dr. Browne has made a sort of provisional classification of the beds, layings, &c., into (1) those which are apparently *free* from pollution; (2) those the purity of which must be regarded as *doubtful*; and (3) those which appear undoubtedly to be *contaminated*. This classification will prove useful for the application, cautiously, of any administrative measures which may be enacted as a consequence of the recommendations of the Royal Commission on Sewage Disposal. In this connexion it is important to note that Dr. Browne's report shows that there is a very material interchange of shell-fish between England and Ireland, and that, hence, any administrative measures to be of the greatest utility must apply to all parts of the British Isles.

Professor McWeeney in his preliminary remarks sets out fully and in interesting fashion the precise steps which he took to ascertain the presence or absence of organisms which he regards as being indicative of pollution by sewage, and we read with interest that although he attaches very considerable importance to the presence of typical bacillus coli communis he attaches but little value to the presence of the bacillus *enteritidis sporogenes*. He says, in fact, "I very much doubt the significance of the presence of B. enteritidis." This is an instructive and interesting fact having regard to the very great importance which Dr. E. Klein apparently attributes to the presence of this organism. Professor McWeeney inclines to the view that contamination may be gauged not by the mere presence of the bacillus coli but by the degree of concentration of that bacillus and his standard has apparently been the presence or absence of what he regards as typical bacillus coli in one cubic centimetre of oyster fluid or of water. But with characteristic honesty and frankness and with true scientific insight he proceeds to question his standard by stating that before the problem as to whether that standard is a fair one or not can be decided it is necessary to ascertain (*a*) whether oysters, &c., *which do not contain* the colon bacillus in one cubic centimetre can be shown to contain it in their entire *organism*; (*b*) whether the colon bacillus is ever demonstrable in small quantities (one, ten, or 100 cubic centimetres) of sea water taken far from the shore and therefore absolutely free from all possibility of contamination with sewage; and (*c*) whether there exist in the sea water of oyster beds sources of bacillus coli (*sensu stricto*) other than sewage. Here Professor McWeeney refers "to the possibility that the intestinal contents of the sea-fowl and fish may contain that organism and under certain circumstances liberate it into the water in quantities large enough to perceptibly affect its bacteriological character." These are the very points the importance of the solution of which was urged upon the Royal Commission on Sewage Disposal by Dr. Bulstrode and Dr. J. C. Thresh, and apparently the researches of Dr. A. C. Houston have enabled him to answer (*a*) in the affirmative. We must, however, await the issue of his full report before we are in a position to speak positively with regard to (*b*) and (*c*). But with reference to (*c*) we may call attention to a communication in THE LANCET of March 5th, p. 648, by Dr. J. W. H. Eyre on the Distribution of Bacillus Coli in Nature, in which he states that he has for some years past examined from time to time for bacillus coli the fæces obtained from various animals and, omitting land animals, it may be pointed out that Dr. Eyre found what he regards as typical bacilli coli in the intestinal contents of the duck, the pigeon, and the sparrow. He has also examined freshly killed sea birds, procured for him through the kindness of Dr. Bulstrode, and has isolated therefrom specimens of the bacillus coli. Fish, too, caught two miles from land in four fathoms of water at flood tide and examined for the bacillus coli were found to yield the organism in every case Dr. Eyre does not attach undue importance to these preliminary investigations but they suggest, as he observes, the desirability, indeed, we would add, the necessity, on the *grounds of common justice to the public* and to the *oyster* merchant, of clearing up this point.

But to revert briefly to Professor McWeeney's admirable report it has to be said that generally speaking his findings agreed with those of Dr. Browne. There were, however, some notable exceptions. In one of these the bacteriologist was able to correct the epidemiologist; in another the bacteriologist failed in the first instance to discover bacillus coli in oysters obtained from a source admitted presumably by the epidemi- [illegible]

the Royal Commission on Sewage Disposal as to the value of bacteriological examinations was a thoroughly sound one and in arriving at its conclusions the Commission doubtless had before it the full report of Dr. Houston, the publication of which is anxiously awaited by all epidemiologists and bacteriologists. It appears to us that the report of the Commission is exerting a wholesome effect upon the unscientific use and application of experimental work which has not yet reached such a phase of stability as to justify its application to administrative measures, and all those familiar with the real merits of the problem will, we feel sure, agree with Sir H. A. Robinson and Mr. Stafford when they say, while according every possible credit to the excellent work of Professor McWeeney, "at the same time we think it right to state that in our opinion bacterioscopic or chemical examinations of samples taken from shell-fish layings cannot be regarded as a substitute for careful and intelligent local inspection, but rather as an aid in all but obvious cases of pollution." The precise value of such aid must, we take it, depend very largely upon the answer to be given to the three provisional conditions which have been set out by Professor McWeeney and to which we have already referred.

MEDICINE AND THE LAW.

The Legal Claim for Medical and Surgical Fees

THE conditions under which an action may be brought to recover fees earned by medical men are sometimes imperfectly understood as is shown by letters written from time to time to THE LANCET with regard to them. The law on the subject is contained in the following sections of the Medical Acts, 1858 and 1886. The Act of 1858 provided for registration and also that no one should recover fees for medical or surgical attendance or for any operation unless he proved at the trial that he was duly registered. Section 31 of this Act was, and for medical men registered before June 1st, 1887, may be said still to be, as follows:—

> Every person registered under this Act shall be entitled according to his qualification or qualifications to practise medicine or surgery, or medicine and surgery, as the case may be, in any part of Her [illegible]

It will be observed that this authorised registered medical *practitioners to practise and to recover fees according to* their qualifications only, and that it permitted and contemplated the possibility of a College of Physicians prohibiting not only its Fellows but its Members, a term which would possibly cover its Licentiates, from suing in courts of law for payment. The possibility of such a regulation as to Members being passed was not unlikely to deter young men from seeking the qualification to be conferred by a College of Physicians and, in fact, it is believed to have had the effect of increasing the number of *candidates for the qualification* of L S A. The Medical Act, 1886, provided for a qualifying examination in medicine, surgery, and midwifery for all persons to be registered thereafter under the Medical Acts. Having done so it defined the scope of their practice in these terms:—

> Section 6. On and after the appointed day[1] a registered medical practitioner shall, save as in this Act mentioned, be entitled to practise medicine, surgery, and midwifery in the United Kingdom and (*subject to any local law*) in any other part of Her Majesty's dominions and to recover in due course of law in respect of such practice any expenses, charges in respect of medicaments or other appliances, or any fees to which he may be entitled, unless he is a Fellow of a College of Physicians the Fellows of which are prohibited by by-law from recovering at law their expenses, charges, or fees, in which case any such prohibitory by-law, so long as it is in force, may be pleaded in bar of any legal proceeding instituted by such Fellow for the recovery of expenses, charges, or fees.

This it will be observed entitles all registered medical practitioners, subject to exceptions which are specified in other parts of the Act, to practise medicine, surgery, and midwifery and to recover *accordingly. The section,* moreover, recognises the restrictive powers of Colleges of Physicians only in respect of their Fellows. With regard to the question recently raised of prohibiting medical men from dispensing, it may be noticed that both the sections quoted recognise the right of the medical practitioner to charge for medicines *subject* in Section 31 of the Act of 1858 to his qualification. Under that section a surgeon could only charge for medicines when he *provided them in a surgical* case as subordinate adjuncts to surgical treatment. With regard to the limited application of Section 6 of the Medical Act of 1886, Section 24 of the same Act provides that:—

> This Act shall not increase or diminish the privileges in respect of his [illegible] appointed day[2] is [illegible]

Section 28 of the same Act repeals certain Acts of Parliament then in force or parts of them, including Section 31 of the Medical Act of 1858 quoted above, but with reference to this section provides also that such repeal "shall not affect anything done or suffered, or any right or title acquired or accrued, before such repeal takes effect, or any remedy, penalty, or *proceeding* in respect thereof." The net result of these enactments is that the medical man registered before June, 1887, has to consider the nature of his qualifications appearing in the Register and the nature of the services which he has rendered before bringing an action to recover fees. The medical man registered after June, 1887, is independent of all such conditions. Only if he is a Fellow of a College of Physicians which does not permit its Fellows to sue must he treat the reward of his work as a "*honorarium*"

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[1] June 1st, 1887 (or such other day in June, 1887, as the Privy Council might appoint), Section 27.

[2] Ibid.

SANITATION IN THE BAKEHOUSE AND THE RESTAURANT KITCHEN.

IT was at the end of 1889 and the beginning of 1890 that we published a series of reports on "Bakeries and Bread-making." We first described the dangerous filth existing in underground bakeries not only in poor quarters but notably in the establishments of some fashionable London West-end confectioners and bakers. Then we alluded to the unhealthy nature of the work imposed on the journeymen bakers, the night work, the long hours, and the diseases prevalent among this section of the population. These details were followed by a description of the bakery in the Rue Scipion which provides all the bread consumed in the hospitals and which belongs to the Paris Municipality. Here there are no night work, no excessive work, good pay, and old age pensions. The bread is pure and cheap and it does not entail any expense on the ratepayer but, on the contrary, saves the public purse by providing the hospitals with wholesome food at something like cost price. We also gave an account of the coöperative bakeries of Vooruit, of Ghent, and of the Maison du Peuple of Brussels where model conditions prevail in regard to cheapness, purity, and sanitary surroundings in the making of the bread. There journeymen bakers have the eight hours day, no night work, plenty of light and ventilation, and better pay than in the ordinary bakehouses, and there is consequently much less sickness. This information gradually filtered through from our columns to the trade papers and the general press. It ultimately found an echo in proposals and speeches made in the House of Commons and the greater rigour shown in dealing with underground bakeries under the Factory and Workshop Act of 1901. Then the Factory Act of 1895 was passed forbidding the using of a "place underground" as a bakehouse unless it was so used before the passing of the Act and numerous by-laws have been issued by local authorities rendering the supervision of such places more and more severe. So there has been some improvement and the publicity which we gave to the subject has helped to bring this about.

After dealing with bread-making we published an article on Sanitation in the Kitchen,[1] in which we described the regulations issued by the Paris Municipality in regard to the restaurant kitchens. We also related how Dr. Regeard had taken action on behalf of the professonal cooks. The great prevalence of disease among them is the direct consequence of the unwholesome conditions under which they work and this was denounced by Dr. Regeard. Now to-day we find that Dr. W. Collingridge, as medical officer of health of the City of London, has issued a special report coupled with important and practical proposals in regard to the restaurant kitchens and the bakehouses of the City. The suggestion is that such establishments should have certificates given to them if their premises are in a satisfactory state. There is nothing new in the proposal. Silver is "hall-marked" and in many seaside places or other health resorts certificates are given to lodging-house keepers as to the condition of their drains, &c. Many owners of restaurants in the City have been called upon to carry out alterations and repairs and they feel that they should reap some benefit from such outlay. If they could exhibit a certificate it might attract customers. To the public, also, it would be a great advantage to know that the kitchens where the food which they eat is cooked have been examined by experts and put in order. Dr. Collingridge proposes that all the owners of kitchens and above-ground bakehouses should be told what are the requirements that would meet the necessities of the case and that if they complied with the specifications prepared by the corporation a sanitary certificate would be granted. But this is evidently not sufficient, for a place that is in a perfect state to-day may soon degenerate and become unwholesome. The inspections should be repeated from time to time and fresh certificates should be issued. It is thought that under this system the restaurant keepers and the bakers would be much more willing to carry out the requirements of the sanitary authorities and would devote more time and attention to the proper maintenance of the necessary standard of sanitary perfection. A somewhat similar way of proceeding has worked well in regard to houses let out as cheap tenements. These are exempted from the payment of inhabited house duty if the medical officer of health certifies that the tenements are kept up to the model sanitary standard established.

The sanitary requirements of tenements are, however, better known than those of bakehouses or restaurant kitchens. It will be, therefore, of practical interest to see what are the rules it is proposed to apply to the City bakehouses and restaurants. Now, in this respect, the first object is to scour and thoroughly to wash out the place. Therefore the walls and ceiling should be finished off with a hard, smooth surface made of impervious material so that it can be washed. The floor, for the same reason, should not be absolutely level but should slant slightly so that the water may easily drain away. The method suggested for dealing with damp walls is somewhat stringent. Another inner wall is to be built at least half a brick thick and separated from the damp wall by an open space also at least half a brick wide. This space is to be ventilated and drained. But such a supplementary wall would make the interior of the bakehouse smaller and the cost of space in the City will cause many to seek some other method of curing the dampness of their walls. This is the more likely as after all the remedy only masks the evil and does not in any way remove it. Of course, there are the usual stipulations as to the perfect soundness of drain-pipes and the various sanitary fittings. The bakehouses are to have a minimum height of eight feet and at least 1500 cubic feet of clear space between the ovens and any stored flour. For each person employed in the bakehouse there must be at least 400 cubic feet. As far as possible natural light should be used and when artificial illumination is necessary it should be either by electricity or by incandescent burners. Then we are told that the ventilation should insure a constant and sufficient change of air without producing draughts. It would be very interesting to know how this can be provided, for unless mechanical means are employed, with very elaborate methods of delivery and extraction of the air either the ventilation is insufficient or a draught is created. Nevertheless, we are told that the temperature must not exceed 80° F. except during the half hour after a batch of bread has been taken out of the oven. It will be more easy to ventilate, as proposed, the ovens themselves, so that the heat, steam, and sulphurous gases shall be conveyed straight to the open air instead of permeating the bakehouse, much to the injury of those employed there. Then the flour should not be stored in the bakehouse. There should be ample lavatory accommodation, but outside and well away from the bakehouse. If there are cisterns for the storage of water they should be fitted with dust-tight covers. Flour should not be put on the ground but on shelves at least 12 inches from the ground. All the dough troughs and heavy articles should stand on castors, so that they can be easily removed when the walls and floor are sluiced with the hose and jet which should be at hand. Shelves must stand out two inches from the wall and all unnecessary woodwork must be taken away.

In regard to the restaurant kitchens the same regulations apply as to the facilities for washing the floor and walls, for ventilating, for lavatories away from the kitchen, for draining, for the prevention of damp walls, for the removal of unnecessary woodwork, and so on. The minimum height of a kitchen should be eight feet and the capacity equal to 400 cubic feet for every person employed therein, and no kitchen must have less than a capacity of 1500 cubic feet. Where the kitchen is underground the inlets for ventilation must be at least 12 inches above the footway or the ground abutting upon the kitchen. Further, it is stated that when gas is used in the process of cooking means must be provided for carrying off the fumes generated and hoods must be placed over all stoves and ranges to carry off the fumes and heat Such hoods, of course, must communicate with the outer air by means of a shaft or flue. Naturally, also, the storage of food and all the scullery work, draining of plates, the shelves, &c., for saucepans and other utensils, should be provided for outside the kitchen. If this is not possible there should be a dwarf partition to separate the scullery work from the cooking. Then there must be proper bins for flour and other articles of food so placed as not to be exposed to dirt, dust, or moisture. Enamelled stoneware sinks should be provided, especially for the washing of vegetables. The metal bins for the reception of refuse must have tightly fitting covers and must be emptied every day. Great care should be taken to provide separately for each sex, near but outside the kitchen, wash-hand basins for personal ablutions. The kitchen wearing apparel should be hung up outside the kitchen and, in a word, every facility ought to be provided for maintaining the perfect cleanliness of both the kitchen and the cooks.

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[1] THE LANCET, April 26th, 1890, p. 934.

These regulations, it will be seen, evidently contemplate the continued existence of underground kitchens. For the City, considering how the houses have been built, the immense value of the land, and the extreme cost of any radical alteration, it is presumably necessary to make the best of the evil conditions that prevail. Undoubtedly the late Sir B. W. Richardson was right when he urged that it was a fundamental mistake to place the kitchens in the basement of houses; the kitchens should be in the garrets rather than in the cellars. The picture given by the above regulations of air inlets 12 inches above the footway is not encouraging. In times of epidemic it has been noticed, especially in regard to cholera, that there was a greater number of cases among those who were regularly employed in the cleaning of boots. The boots worn by pedestrians are certainly more likely to come in contact with dejecta and to become the carriers of specific germs. That is why Mahomed, who was an eminent sanitary reformer, would not allow the faithful to enter houses of prayer with their boots on. In eastern countries it is the practice to leave the shoes or boots at the door when a call is made. As a compromise in regard to this custom, Europeans in Constantinople generally wear goloshes which they take off at the door when they make a call. Here, however, we have the crowded streets of the City where thousands of feet pass and repass, ever stirring the dust of the pavement, and within 12 inches of all these boots and feet and of this dust are the intakes of air for the ventilation of the kitchens. This dust-laden air will pass over the dishes and the saucepans and sprinkle them with the heavier particles of every sort of dirt brought in from the City causeways. This street dust will then be duly eaten by the frequenters of the restaurants. If it is impossible, really impossible, to abolish the underground kitchens then the air intakes that are on the level of the street should be provided with some method of filtering or of washing the air brought in. Otherwise these air intakes should consist of shafts that would bring the air down from above the roof of the building. It is difficult to justify the giving of a certificate for sanitary excellence to a kitchen which is ventilated with the air and dust collected within a few inches of the pavement of a city street.

In Paris the suspicions which it is so natural to entertain in regard to the restaurant kitchen have been met by many restaurant proprietors in a very radical and effective manner. The celebrated Duval restaurants made their reputation by simply placing the kitchen in the restaurant itself. Just as in England the customer may watch his steak on the silver grill, so can the much more elaborate cooking of the Duval chefs be observed by the intending diner. Indeed, a large proportion of the cooking in Paris restaurants is done in the presence of the customers. It has often been a matter of surprise that there are no imitations of the Duval restaurants in this country. English people, who know little about the culinary arts, apologise for the simplicity of their food by saying that they like to know what they are eating. At the Duval restaurants they can see what they wish to eat being cooked and the fact that the customer can watch the cook is a very effective guarantee for the cleanliness of the cooking.

In any case it is very urgent that all these problems should be taken in hand and that practical action should be attempted. Dr. Collingridge therefore is to be congratulated upon his initiative. As the difficulty of obtaining the services of domestic servants grows greater and as the number of persons living in flats and chambers increases the tendency will be to reduce housekeeping to its simplest expression. For this purpose dining at the restaurant may ultimately become as much the custom in London as it is in Paris. Consequently the importance of establishing an effective control over the sanitary condition of restaurant kitchens becomes a matter of growing concern and we are therefore glad to record the measures which the City Corporation is now contemplating. Their successful application will meet with general approval and will constitute a useful example for other local authorities.

Looking Back.

FROM

THE LANCET, *SATURDAY*, March 11, 1826.

ST. BARTHOLOMEW'S HOSPITAL.

Exceedingly rare case of Intussusception, wherein upwards of a yard of intestine was removed.

In every case of intussusception that has hitherto been published in the Journals, there has always been some questionable part, some deficiency of description connected with it, so as to leave a doubt whether the portion of substance brought away was really intestine or a tube of lymph, secreted from the internal surface of the intestines; and this very circumstance has led some medical men to become so sceptical as to question whether such an occurrence, as that of a loss of a portion of gut, ever happened. It is, therefore, with no little gratification that we have it in our power to remove any existing scepticism on such an interesting and fortunately rare disease, by reporting the following case:

A woman about the middle period of life, had been for some time labouring under a constipation of the bowels, and she in consequence sent for her medical attendant, who on the second day of his visiting her, had his attention directed to a slight protrusion which had taken place *per anum*. From the appearance which it presented on a superficial examination, he was induced to think it was a portion of the rectum, and as no particular swelling of the parts had as yet supervened, the tumour was readily returned.

The constipation, however, continued, and within a day or two she was seized with severe symptoms of peritoneal inflammation; there was pain over the abdomen, accompanied with a continual state of nausea and sickness, so that every kind of nourishment that was taken was instantly rejected. Just about this time a protrusion again recurred, and to a greater extent than at the former period; this induced the [illegible] ine the condition of the parts, [illegible] ly withdrew a small portion, [illegible] he continued in this manner [illegible] *one yard and three inches* [illegible] when the last portion was [illegible] s employed. The violent and distressing symptoms which had previously harrassed and tormented the patient, now, in great measure, subsided; still, however, pain was complained of in the abdominal region, and there was an occasional recurrence of nausea and sickness. A dose of castor oil was given the patient by the attendant surgeon, and to his great surprize he had the satisfaction to find on visiting her the next day that the bowels had acted for the first time since the commencement of the attack. On examining the evacuation it was found to present the appearance of a healthy and natural secretion. Small doses of sulphate of magnesia in mint water, were occasionally administered, and in a very short time the nausea and sickness subsided. The patient went on progressively improving to the eighth day, at which time the bowels had acted three or four times, and the general state of the patient was such as to induce a favourable prognosis of the case to be given.

To use the metaphorical language of John Hunter, however, "Nature took the alarm, conscious of her inability to sustain the extensive injury that had taken place, she gave up the contest;" and at the moment when the patient appeared to be going on favourably, life ceased.

Mr. Stanley assisted in examining the body, which we need not say was done in a most careful manner. It was found that the detached intestine was a portion of the ileum which had become intussuscepted (if we might be allowed to use such an expression) within the colon, violent straining attendant on the distressing symptoms under which the patient laboured, had in all probability greatly facilitated the descent of the gut. And that it did not arise from the force which was used in extracting it is abundantly proved, from the circumstance that the solution of continuity was discoverable. An inflammatory action had taken place about the caput coli, which had occasioned a secretion of lymph, thus completely agglutinating the two portions of intestine together; and from this agglutinated part had the separated portion of intestine been detached. The ileo-colic valve was entire. The mucous coat of the transverse arch of the colon was found to be in an inflamed state, and in two or three places small ulcerated spots were discoverable. The peritoneum was also inflamed, but not in a very remarkable degree.

The portion of gut which had been removed, was brought to the museum by Mr. Stanley, who showed it to the pupils the following Saturday. There can be no doubt as to its being intestine, since the valvulæ conniventes were very apparent, and moreover the coats of the intestine were divided, and shown. The valvulæ conniventes, as is usual, were found to be more numerous towards that portion which was nearer the jejunum.

Mr. Langstaff and Mr. Welbank, with several other respectable surgeons, and we believe Dr. Latham also, have seen the preparation, and it is unnecessary to say they are all thoroughly convinced of the fact of its being a portion of gut.

SMOKE PREVENTION AT GAS WORKS.

(A NEW PROCESS OF GAS MAKING.)

AN invention has recently been brought to our notice for carbonising coal for the production of gas which promises to do away with the smoke nuisance at gas works. The inventor, Mr. T. Settle of Exeter, has been conducting investigations in this direction for a considerable time and has at last been successful in producing a form of retort in which the carbonisation of coal can be carried out at a regulated temperature and under more scientifically correct conditions than have been possible before. In the ordinary method of carbonising coal the plan has been to use horizontal retorts usually charged by hand, and while it has always been known that by working in this way the results obtained were much inferior to those which ought to be possible in theory the method has held its own for general practical utility.

Probably everyone who has visited a gas works at charging time has noticed the waste of gas and the volumes of thick black smoke which escape when the fresh charge is introduced. This seems to be unavoidable when working by the old process and though very many attempts have been made from time to time to curtail the loss and to do away with the escape of smoke and crude gas the process remains to day much the same as it was in the earliest days of gas manufacture.

In the ordinary process of gas making after the charge of coal has been carbonised the retort door is opened and the coke is "drawn" by hand with long rakes. This is an exceedingly exhausting process to the stokers and is at the same time a cause of nuisance because, while the red-hot coke is being drawn out, tar drips down from the "ascension pipe" on to the red-hot coke and produces a thick smoke with an abundance of soot. After the coke has been "drawn" the stokers proceed to charge the retort by shovelling in coal, or in some works the charge is introduced more rapidly by means of a scoop operated either by mechanical power or by hand. In either case there is a certain unavoidable escape of gas and the retort is considerably cooled by the introduction of a large body of coal. At low temperatures there is a considerable formation of tar which has at the present time very little commercial value, whereas more gas and less tar are produced when the temperature rises. In the new process the temperature is kept constant throughout and what little tar is made can at will either be obtained as such or can be returned to the retort and completely gasified. The laborious "drawing" by hand is greatly simplified, as the retort is vertical and the coke falls out with very little manual labour. The charging is most ingeniously and simply carried out without any manual labour at all. The coal, in a state of fairly fine division (being what is generally known as "slack"), is placed in a hopper above the retort and is allowed to drop into it when required. Working in this way the temperature of the retort is not much affected by the small quantities of coal introduced and can be kept at the heat which is best for the production of gas and not being exposed to great changes of temperature the retort is less liable to crack.

As the result of a very large number of experiments by different observers it has been found that the saving of the gas ordinarily lost in the old method of charging and the gain owing to the temperature being maintained at the most favourable point throughout result in an increased yield of gas of no less than 30 per cent. above that obtained by the old method. This is, of course, a very considerable saving but there is another which from a financial point of view may be even more important and that is that the new process enables "slack" or small coal to be used profitably for gas making. This is a very great achievement, as up to the present it has not been found practicable to obtain such good results with "slack" as with larger coal. There have been a good many attempts in times past to get an increased yield of gas from coal and some of them were successful from this point of view but failed in some other important point, either through the apparatus being complicated or through the coke produced being soft and unsaleable. The coke produced by the new process is in every respect equal to the best coke obtained from horizontal retorts and the yield of ammonia, which is a by-product of some importance, is equal to that obtained by the old method.

In the new process there is absolutely no escape of gas during the charging or "drawing" and hence the process will be of particular value to works situated in or near populous districts.

ASYLUM REPORTS.

London County Asylum, Claybury (Report for the year ending March 31st, 1903).—The average number of patients resident during the year was 2398, comprising 996 males and 1402 females. The admissions during the year amounted to 445—viz , 180 males and 265 females. Of these, 373 were first admissions. Dr. Robert Jones, the medical superintendent, states in his report that a higher proportion of senile cases was admitted than during the previous year and that the proportion of cases of general paralysis among the admissions was unusually high—viz., 22 per cent. 28 per cent. of the admissions had a hereditary history of insanity, while alcohol was the cause of insanity in 27 per cent. Influenza appeared also to be a "more potent but subtle factor in the etiology of insanity than is usually recognised. Especially was this the case when the attack of influenza had been a mild one." The number of patients discharged as recovered during the year amounted to 157—viz., 60 males and 97 females, or 6·5 per cent. of the average number resident. The deaths during the year amounted to 223, or 9·3 per cent. as calculated on the same basis. Of the deaths, six were due to epilepsy, seven each to renal disease and bronchitis, 18 to dysentery, 21 to cardiac disease, 26 to epilepsy, 29 to senile decay, 29 to pneumonia and broncho-pneumonia, 38 to pulmonary and other forms of tuberculosis, 39 to general paralysis of the insane, and the rest to other causes. "More senile cases," says Dr. Jones, "died this year than in any year since the opening of the asylum ten years ago." Asylum dysentery attacked 26 males and 56 females and was the direct cause of death in 18 cases. "I consider overcrowding to be," adds Dr. Jones, "one of the most potent of the causes of asylum dysentery. ...... All cases of diarrhœa not yielding to treatment in three days are now segregated in a special isolation hospital." Two female patients admitted while pregnant gave birth to infants; one has since been discharged but the state of the other is unfavourable in regard to cure. The Commissioners in Lunacy observe in their report that the asylum was in excellent order throughout, that the wards were well lighted and cheerful, that the dormitories and bedding were in a thoroughly satisfactory condition, that the patients were neat and tidy in appearance, and that the medical case-books were carefully and intelligently kept. The committee of management states in its report that the work of testing and repairing the drains of the asylum has been completed, that the Claybury Hall or building for private patients has been connected with the fire-alarm system of the main building, and that additional fire-hydrants have been fixed to give better protection in case of fire The farm accounts show a profit on the year's working of £94 10*s* The sum of £7883 has been spent during the year in repairs, additions, and alterations.

London County Asylum, Colney Hatch (Report for the year ending March 31st, 1903).—The average number of patients resident during the year was 2490, comprising 916 males and 1574 females. The admissions during the year amounted to 477—viz., 186 males and 291 females. Of these

391 were first admissions. Dr. W. J. Seward, the medical superintendent, states in his report that among the cases admitted were 19 epileptics, 259 general paralytics, and 23 patients over 70 years of age. "Among the admissions were 55 aliens, of whom 47 were Jews. The number of Jewish patients at present in the asylum is 259, which is an increase of 15 on the number for the previous year." Of the causes of insanity in the admissions hereditary predisposition was found in 23 per cent. of cases, 13 per cent. (among the males 20 per cent) were due to alcoholic intemperance, and 14 per cent. of cases were due to anxiety, overwork, and mental strain. The number of patients discharged as recovered during the year amounted to 178—viz., 58 males and 120 females, or 7·1 per cent. of the average number resident. The deaths during the year amounted to 238, or 9 5 per cent. as calculated on the same basis. Of the deaths five were due to renal disease, 19 to bronchitis, 25 to colitis, 25 to cardiac disease, 30 to senile decay, 34 to general paralysis of the insane, 40 to pulmonary and other forms of tuberculosis, and the rest to other causes. Post-mortem examinations were made in 186 cases. Referring to the late disastrous fire at the asylum Dr. Seward adds: "A very large number of both the male and female members of the staff took part in the work of rescue and I cannot speak too highly of the discipline and devotion to duty which was shown by them under such a trying ordeal. Several narrowly escaped with their lives from the suffocating effects of the smoke which rendered the work of rescue very difficult. I am deeply thankful to be able to feel assured that all the patients who lost their lives were insensible, if not dead, from suffocation long before the flames reached them. In this connexion it may be mentioned that of the 269 patients who were rescued only one sustained any severe burns." A small isolation hospital which provides accommodation for six patients is completed. The asylum was free from enteric fever for more than a year but five cases occurred during the year and one sufferer (a nurse) succumbed to the disease.

farm buildings have been relaid and brought up to date, that the sum of £10,059 has been spent on additions, alterations, improvements, and repairs, and that the farm account shows a working profit on the year of £414.

London County Asylum, Hanwell (Report for the year ending March 31st, 1903).—The average number of patients resident during the year was 2554, comprising 998 males and 1556 females. The admissions during the year amounted to 497—viz., 235 males and 262 females. Of these, 411 were first admissions. Dr. R. R. Alexander, the medical superintendent, states in his report that cases of melancholia of both sexes greatly outnumbered those of mania among the admissions and that this has been the case for many years past. Hereditary perdisposition to insanity was found in 16 per cent. of the males and 12 per cent. of the females admitted, while alcoholic intemperance was found to be the cause of insanity in 16 per cent. of males and 20 per cent of females. The smallness of these percentages, adds Dr. Alexander, is due to the infrequency of visits from friends of patients owing to the prevalence of small-pox in the institution for a considerable time, so that information as to these causes was not forthcoming. The number of patients discharged as recovered during the year amounted to 173—viz., 80 males and 93 females, or 6·8 per cent. of the average number resident. The deaths during the year amounted to 222, or 8 8 per cent. as calculated on the same basis. Of the deaths three were due to renal disease, eight to colitis, 14 to bronchitis, 16 to cardiac disease, 20 to senile decay, 28 to pulmonary and other forms of tuberculosis, 62 to general paralysis of the insane, and the rest to other causes. Post-mortem examinations were made in 210 cases. There was no suicide, serious casualty, or inquest during the year. The Commissioners in Lunacy state in their report that the asylum continues to be maintained in very good order, that the wards, dormitories, and bedding were in a very satisfactory condition, and that the medical case-books and post-mortem records were well and carefully kept. Having regard to the recent lamentable loss of life by fire at Colney Hatch Asylum the Commissioners in Lunacy devoted considerable attention to the question of the safety of the nurses and patients residing in the temporary buildings in case of fire. Many recommendations were made which the committee of management is now engaged in carrying out. The committee of management states in its report that the sum of £6219 has been spent in additions, alterations, improvements, and repairs, that many alterations have been, and are being, carried out to provide additional exits from the building in cases of fire, that a second professional fireman has been appointed who is resident at the asylum, so that a trained fireman is always on duty, and that the installation for incandescent gas-lighting for which an expenditure of £550 had been sanctioned was now practically completed with satisfactory results.

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Borough of Kingston-upon-Thames.—Mr. H. Beale Collins thinks that the coming into operation of the new Education Act is the most important event to be recorded in connexion with the public health and if the powers bestowed upon county and borough councils are administered with a due regard to the principles of preventive medicine we entirely agree. The first recommendation made to the town council of the borough is that the number of desks or places in the present schools should be reduced from 3138 to 2466, advice which we hope to see followed. Mr. Collins is clearly alive to the importance of physical training in the schools and he suggests that in addition to exercises on the Swedish system the Swedes should also be followed in the matter of the medical examination, weighing, and measuring of the children. He further advises that an assistant school attendance officer with the certificate of a sanitary inspector should be appointed. Certainly this step would be likely to insure the control of the council over infectious diseases, more especially in the case of diseases such as measles and whooping-cough, where a medical man is either not called in at all or only in the later phases of the illness. Mr. Collins thinks that the great safeguard against contracting tuberculosis is to render the body resistant to the germ by physical training, by an open-air life, and by rational food.

Chelmsford Rural District.—Dr. J. O. Thresh reports that the Local Government Board has approved certain by-laws by means of which it will now be possible under reasonable

of wood or of

districts that

nodel by-laws

somewhat inhibit building in rural districts and it will be interesting to observe whether this modified series will in fact lead to increased building in the Chelmsford rural district. The effect of the excessive rainfall in 1903 has had both a beneficial and a baneful influence in this district—beneficial in that it has replenished springs which formerly were low and baneful in that it has led to a somewhat remarkable outbreak of diarrhœa from the washing of surface pollution into an unprotected tank into which well water was pumped.[1] The incidence of the disease appears to have exerted itself almost exclusively upon the users of the Chelmsford borough water, or, rather, upon a certain section of that supply, and a considerable number of people, mainly over five years of age, were attacked. In that part of Chelmsford borough supplied by the implicated water about 1400 cases are believed to have occurred, while in the rural district to which the present

population of

were in all 14

e water-supply

		Deaths from diarrhœa during epidemic.
Chelmsford borough and Widford village.	5000 persons not using implicated water	0
	7700 persons using implicated water	14
	23,000 persons in the remainder of the union not using the implicated water	0

The outbreak had many points of interest and it is a good illustration of the dangers which are to be anticipated from the use of water liable to be fouled by surface washings. There are a sufficient number of similar outbreaks now on record to justify more attention being paid to this question

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[1] Vide THE LANCET, Nov. 28th, 1903, p. 1519.

6·0 per 1000 of the population, estimated at 4.613,812 persons in the middle of last year. In the three preceding years the rates had been 7·7, 8·9, and 9·9 per 1000 respectively. Among the various metropolitan boroughs the lowest death-rates last year were 3·8 in Stoke Newington, 3·9 in Hampstead, 4·3 in Kensington and in the City of Westminster, and 5·0 in Greenwich; the highest rates were 6·9 in St. Marylebone, 7·0 in Wandsworth, 7·1 in Bethnal Green, 8·0 in Hackney, and 10·1 in Deptford. The prevalence of small-pox in London during 1903 showed a great decline from that recorded in the preceding year; the number of new cases notified during the year was 416, against 1702 and 7798 in the two preceding years. This disease was proportionally most prevalent in the City of Westminster, St. Pancras, Poplar, Southwark, Lambeth, Battersea, and Wandsworth. The number of small-pox patients admitted into the Metropolitan Asylums Hospitals was 414, against 1788 and 8455 in the two preceding years; four cases remained under treatment at the end of the year, against 666 and 14 at the end of the two preceding years. The prevalence of scarlet fever during the year under notice was considerably less than in the preceding year; the number of new cases notified during the year being 12,531, against 13,809, 18,390, and 18,258 in the three preceding years. Among the various metropolitan boroughs scarlet fever was proportionally most prevalent in St. Marylebone, Bethnal Green, Bermondsey, Wandsworth, Deptford, Lewisham, and Woolwich. During last year 10,808 scarlet fever patients were admitted into the Metropolitan Asylums Hospitals, against 10,734, 14,959, and 15,133 in the three preceding years; the number of cases remaining under treatment at the end of the year was 1606, against 2460, 3080, and 2327 at the end of the three preceding years. The prevalence of diphtheria during last year showed a marked decrease from that in the previous year; 7738 new cases were notified, against 11,994, 12,154, and 10,735 in the three preceding years. The greatest proportional prevalence of this disease occurred in St. Pancras, Hackney, Poplar, Wandsworth, Deptford, and Greenwich. The Metropolitan Asylums hospitals contained 734 diphtheria patients at the end of last year, against 1343, 1369, and 927 at the end of the three preceding years; the new cases admitted, which had been 8777, 9090, and 7988 during the three preceding years, further declined to 6158 last year. Enteric fever showed a considerably diminished prevalence during the year under notice, 2339 cases being notified, against 4306, 3195, and 3412 in the three preceding years; among the various metropolitan boroughs this disease was proportionally most prevalent in Stoke Newington, Hackney, Holborn, Shoreditch, Stepney, and Battersea. The number of enteric fever patients admitted into the Metropolitan Asylums Hospitals during 1903 was 1247, against 2074, 1480, and 1806 in the three preceding years; 246 cases remained under treatment at the end of December last, against 403, 195, and 210 at the end of the three preceding years. Erysipelas showed the highest proportional prevalence during last year in Hackney, Holborn, Finsbury, Shoreditch, Bethnal Green, Stepney, Southwark, Bermondsey, and Deptford. The 233 cases of puerperal fever notified during the year showed a decline of 79 from the number in 1902; 21 cases belonged to Hackney, 19 to Fulham, 19 to Islington, 18 to Lambeth, 13 to Southwark, 13 to Wandsworth, and 10 to Stepney.

During the year under notice 69,737 deaths of persons belonging to London were registered, equal to an annual rate of 15 2 per 1000, against 18·6, 17·1, and 17·2 per 1000 in the three preceding years; the average rate in the ten years 1893–1902 was 18 5 per 1000. Among the various metropolitan boroughs the lowest death-rates last year were 10 0 in Hampstead, 11·1 in Lewisham, 12 4 in Wandsworth, 12·6 in Stoke Newington, 13·2 in Paddington, 13 3 in Greenwich, and 13·5 in Woolwich; while the highest rates were 18 2 in Bethnal Green and in Poplar, 18·4 in Bermondsey, 18 6 in Holborn, 19 4 in Shoreditch, and 20·3 in Finsbury. In the five groups of boroughs the rates of mortality were 13·9 in the west, 14·5 in the north and in the south, 18·3 in the east, and 19 0 in the central. To the principal infectious diseases, 8088 deaths were attributed during the year; of these, 2925 resulted from diarrhœa, 2046 from measles, 1627 from whooping-cough, 740 from diphtheria, 376 from different forms of "fever" (including three from typhus fever, 368 from enteric fever, and five from simple continued fever) 361 from scarlet fever, and 13 from small-pox. These 8088 deaths were equal to an annual rate of 1·76 per 1000; the corresponding rates in the three preceding years were 2·23, 2·22 and 2·21 per 1000 and and the decennial average 2·60 per 1000 Among the various metropolitan boroughs the death-rates from these principal infectious diseases ranged from 0·58 in Hampstead, 0 86 in the City of London, 0·96 in Lewisham, 1·00 in the City of Westminster, 1·10 in Woolwich, and 1·14 in Chelsea, to 2·24 in Bethnal Green, 2·22 in Fulham, 2·32 in Finsbury, 2·36 in Stepney, 2·90 in Shoreditch, and 2·99 in Poplar. The fatal cases of small-pox numbered 13, against an average of 200 in the ten preceding years; of these 13 cases, four belonged to Stepney, four to Lambeth, three to the City of Westminster, and two to Poplar. The 2046 deaths referred to measles showed a decline of 505 from the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in St. Pancras, Finsbury, Shoreditch, Bethnal Green, Stepney, Poplar, and Battersea. There were 361 fatal cases of scarlet fever registered last year, against an annual average of 784 in the ten preceding years; the highest death-rates from this disease were recorded in St. Marylebone, St. Pancras, Finsbury, Poplar, Bermondsey, and Deptford. The deaths from diphtheria, which had averaged 2170 in the ten preceding years, declined last year to 740; among the various metropolitan boroughs the greatest proportional mortality from this disease was recorded in St. Marylebone, Hackney, Bethnal Green, Poplar, Deptford, and Greenwich. The 1627 fatal cases of whooping-cough showed a decline of 435 from the corrected average number; this disease was proportionally most fatal in Kensington, St. Marylebone, Islington, Finsbury, Poplar, and Battersea. The 376 deaths referred to different forms of "fever" were 292 below the corrected average in the ten preceding years; among the various metropolitan boroughs the highest "fever" death-rates were recorded in Fulham, St. Marylebone, Stoke Newington, Hackney, Finsbury, the City of London, Shoreditch, Poplar, Southwark, and Battersea. The 2925 fatal cases of diarrhœa showed a decline of 754 from the corrected decennial average; the greatest proportional mortality from this disease occurred in Fulham, Shoreditch, Stepney, Poplar, and Southwark. In conclusion, it may be stated that the aggregate mortality in London last year from the principal infectious diseases in the aggregate was 32·5 per cent. below the average.

Infant mortality in London last year, measured by the proportion of deaths under one year of age to registered births, was equal to 130 per 1000, against 158, 148, and 139 in the three preceding years. The rates of infant mortality in the various metropolitan boroughs ranged from 88 in Hampstead, 92 in Lewisham, 95 in Holborn, 96 in St. Marylebone, 108 in Woolwich, and 109 in Wandsworth, to 142 in Chelsea, 145 in Kensington, 148 in Southwark, 154 in Poplar, 158 in Bermondsey, and 171 in Shoreditch.

THE SERVICES.

ROYAL ARMY MEDICAL CORPS.

THE undermentioned Majors to be Lieutenant-Colonels (dated Feb. 2nd, 1904):—R. J. Geddes, D.S.O., D. V. O'Connell, A. Dodd, G. Wilson, J. M. Reid, T. B. Winter, F. S Heuston, C M.G, G. F. Gubbin, M. O'D. Braddell, J. J. C. Donnet, and H. M. Sloggett.

Major J. Will is seconded for service under the Foreign Office (dated Feb. 20th, 1904). Captain F. S. Walker is placed on temporary half-pay on account of ill-health (dated Feb. 19th, 1904).

Lieutenant-Colonel J. G. Harwood is granted the temporary rank of Colonel whilst officiating as Principal Medical Officer of the Poona District. Lieutenant Colonel P. Mulvancy is appointed to the medical charge of the Princess Louise Hospital at Alton, Hants.

VOLUNTEER CORPS.

Rifle: 1st Roxburgh and Selkirk (The Border): George McKellar to be Surgeon-Lieutenant (dated March 5th, 1904). Brigade-Surgeon-Lieutenant-Colonel E Jones, Senior Medical Officer, Welsh Volunteer Infantry Brigade, resigns his commission and is granted the honorary rank of Surgeon-Colonel, with permission to wear the prescribed uniform (dated Jan. 22nd, 1904).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Glasgow Companies: Captain D. Christie, *from*

Argyll and Sutherland Brigade Bearer Company, to be Captain (dated March 5th, 1904). The London Companies: Lieutenant Colonel and Honorary Colonel J. E. Squire resigns his commission, with permission to retain his rank and to wear the prescribed uniform (dated March 5th, 1904) The Manchester Companies: The undermentioned gentlemen to be Lieutenants: Wilfred Edwin Rothwell (dated March 5th, 1904), and Alfred Francis Thompson (dated March 5th, 1904).

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

Sussex and Kent: Captain C. J. Jacomb-Hood is appointed to command under paragraph 55A Volunteer Regulations, vice Major J. Turton, appointed Senior Medical Officer, Sussex and Kent Volunteer Infantry Brigade (dated Feb. 3rd, 1904).

THE REPORT ON THE HEALTH OF THE NAVY FOR 1902.

Some excellent reading will be found in the present volume in an article by Deputy Inspector-General Theodore J. Preston, R.N. (retired), under the heading of a "Report on Journals of Medical Officers examined at the Public Record Office, extending from 1793 to 1856" Unfortunately, as it happens, the medical officers of those times had a distaste for clerical work but this did not arise from the want of any interesting material. The extracts are, speaking generally, very short and the information is very scanty but what there is is curious and often quaint and interesting. Taken as a whole, Deputy Inspector-General Preston's paper gives a survey of the state and progress of the naval medical service within the dates specified. As a sample there is a very brief, and therefore disappointing, reference to Admiral Nelson's gunshot wound and amputation of the right arm in the journal of the *Theseus*, July 24th and 25th, 1797, and subsequently on August 20th in the journal of the *Seahorse* In this connexion it will be remembered that THE LANCET [illegible] an interesting communication [illegible] The notes and extracts from [illegible] subjects, such as the constitution and *personnel* of the medical service, medical, surgical, and sanitary matters, epidemic and endemic diseases, food, clothing, and water-supply.

MEDICAL OFFICERS OF THE GUARDS.

A Royal Warrant has been issued to the effect that "All regulations authorising the transfer of an officer of our Royal Army Medical Corps to our regiments of Foot Guards shall be cancelled. Medical officers who have already been gazetted to our regiments of Foot Guards shall elect, within such time as may be prescribed by our Army Council, whether they will remain therein or be transferred to our Royal Army Medical Corps. Medical officers who elect to remain in our regiments of Foot Guards shall be eligible for promotion under Article 383A of the Pay Warrant up to, but not beyond, the rank of Surgeon-Lieutenant-Colonel. Those who elect to be transferred to our Royal Army Medical Corps shall take rank and seniority therein as follows:— A Brigade-Surgeon-Lieutenant-Colonel—as a Lieutenant-Colonel selected for increased pay with seniority from the date of promotion to his present rank. A Surgeon-Lieutenant Colonel—as a Lieutenant-Colonel not selected for increased pay with seniority from the date of promotion to his present rank. A Surgeon-Major—as a Major, with seniority from the date of his original promotion to the rank of Surgeon-Major or Major."

THE ARMY ESTIMATES.

Mr. Arnold-Forster must have found himself in an unusual and somewhat difficult position on the occasion of his introducing the Army Estimates in the House of Commons. The present is a period of transition, indeed, almost of revolution, so far as the army and the War Office are concerned The War Minister spoke warily, but nevertheless favourably, of the reports of the War Office Reconstruction Committee and it seems nearly certain that, so far as all the main principles are concerned, the committee's recommendations will be adopted by the Government, although strongly opposed by Sir Henry Campbell-Bannerman. Mr. Arnold-Forster added nothing to our knowledge, however, about the intentions of the Government regarding the position of the Army Medical Service under the new scheme. The Army Estimates show a reduction of some £8,000,000, attributable mainly to the expenditure on the Boer war having come to an end and, on less satisfactory grounds, to a reduction in the strength of the Foot Guards and recruiting generally.

RUSSIAN ENGINEERS' SPLENDID CONTRIBUTION TO THE RED CROSS SOCIETY.

The directors of the Putiloff Engineering Works of St. Petersburg, the Krupps of Russia, are placing a sanitary infirmary train at the disposal of the field forces in connexion with the war in the Far East. The cost of this train, says the *Novoe Vremya*, will be over 100,000 roubles (£10,000). It will consist of an engine, a tender, and ten wagons and is at the present moment being rapidly got ready in the special model factory of the firm. The latest improvements have been introduced into the fittings of the wagons for removing the seriously wounded to the smallest detail and everything in connexion therewith answers to the latest requirements of science and the exactions of clinical practice and experience. For the medical staff, dispensary, kitchen, &c, special wagons are fitted and all is arranged to yield the greatest comfort and practical use.

RUSSIAN MILITARY HOSPITAL TRAIN.

On Feb. 24th, says the *Novoe Vremya*, the Russian Empress inspected the military sanitary train No. 13 for the seat of war, consisting of 13 wagons. Of these two are reception wagons for diagnosing cases, four are fitted with "Kruger" frames for the seriously wounded, two are for the slightly wounded, and one is for officers. In one wagon there is the kitchen and there is one set apart for the servants. The train was fitted up in the Alexandrovsk factory of Nikolaevsk in five days. A senior medical officer, five sisters of mercy, and 30 field medical officers from the Nikolaevsk Military Hospital will go with the train.

Correspondence.

"Audi alteram partem."

ON PARACENTESIS AND THE USE OF THE ASPIRATOR IN PNEUMOTHORAX.

To the Editors of THE LANCET.

SIRS,—In a short article on the above subject which appeared in a recent issue of THE LANCET several important questions are raised upon which, as my name is there referred to, I should like to make some comment.

Strange as it may seem, pneumothorax is not always attended by urgent symptoms. The urgent symptoms are not merely mechanical in origin but depend chiefly upon the embarrassment and physiological disturbance in both the respiration and the circulation in the lungs, for though the mechanical conditions remain the same the urgent symptoms gradually subside if the lungs and heart have time to adjust themselves to the altered conditions. The greater the disturbance the more severe the embarrassment and the more severe the symptoms. Thus the paradox is explained that the symptoms of pneumothorax are the more severe the more healthy the patient has previously been. *Per contra*, in phthisis, for example, pneumothorax is not altogether uncommonly discovered by accident, as there may be no symptoms to mark its occurrence, for it makes but little difference to the condition of respiration whether the one lung be useless because it is tuberculous or because it is collapsed Yet even in persons apparently healthy pneumothorax may be latent—i.e., it may occur without marked symptoms.

In traumatic pneumothorax, with which especially the article referred to dealt, the symptoms are almost invariably severe, but then the diagnosis is not so easy. Rupture of the diaphragm may permit the passage of some of the abdominal viscera, the intestines, of course, chiefly, into the pleural cavity and will give rise to the same mechanical conditions and similar symptoms as pneumothorax. The diagnosis could only be made by careful physical examination of the chest and abdomen but usually the patients are too ill to stand much investigation.

When pneumothorax occurs not only is the one lung completely collapsed, but owing to the displacement of the mediastinum and heart the other lung, too, is partly collapsed, so that the total respiratory capacity [illegible] be reduced to about one-third of the normal. With [illegible] may be the [illegible] difference [illegible] sturbance is [illegible] is due to [illegible] so sudden, while in pleuritic effusion it takes place gradually, so that the rest of the lung has time to adjust itself to the change of conditions.

Again, we know that the great danger in pneumothorax is in the first few hours. Some patients die at once—from shock as it were; others die after some few hours of intense suffering. But the longer life is maintained the greater is the chance that the urgency of the symptoms may subside. With each hour of continued life the prospects improve. After the first 24 hours the dangers to life are not so much those of dyspnœa as of the complications which are likely to arise, chiefly serous or purulent effusions.

When pneumothorax occurs the lung on the affected side contracts by virtue of its own elasticity and theoretically the contraction may continue till the one lung is completely collapsed and lies like a flattened pancake round its root, while the contraction of the other lung will draw the mediastinum far over into the non-affected side. However, in those cases in which the air is admitted to the pleura by a free incision through the chest walls we see that this does not in fact occur. On the contrary, owing to the cough and expiratory efforts the lung on the incised side is kept moderately expanded or may even nearly reach the chest walls and in these circumstances we know that no urgent symptoms arise. Otherwise the opening of the pleura would be a very serious affair. Hence it would be quite justifiable in cases where life was in danger from the severity of the symptoms to relieve them by laying the side freely open, thus giving the air in the pleura free vent and permitting the lung partially to re expand.

Hesitation would rightly be felt before resorting to this heroic expedient on account of the risk of an empyema resulting and preference would be given in the first place to paracentesis. The object of paracentesis is to give the mechanical relief required, but it often happens that the relief is only temporary. The symptoms soon become urgent again. A second paracentesis has to be performed. It may be also a third or fourth. As a rule the relief becomes greater each time and more lasting and in the end the symptoms lose all urgency until perhaps after some days effusion forms and dyspnœa returns, but even then the dyspnœa is of gradual onset and the symptoms are not urgent. Where one paracentesis is not sufficient the cause is to be found in the fact that the opening in the lung is still patent. When it has closed no more air will enter the pleura and the relief given by paracentesis will be permanent till fluid forms. This shows at once the undesirability of employing the aspirator. The suction employed will stretch the lung and put a strain on the weak spot which may have just closed. This would then be reopened and air would reaccumulate in the pleura immediately the needle was removed. Beside this there is the risk of the suction of the aspirator drawing into the pleura some infective secretion from the lung and thus increasing materially the risk of empyema. For these two reasons the aspirator should never be used in simple pneumothorax; it is unnecessary and, more than that, dangerous. If repeated paracentesis fail it would be safer to proceed to incision. Practical experience shows, however, that incision hardly ever becomes necessary and simple paracentesis, repeated if required, is almost always sufficient.—I am, Sirs, yours faithfully,

SAMUEL WEST, M.D. Oxon., F.R.C.P. Lond.,
Physician to, and Lecturer on Medicine at, St. Bartholomew's Hospital.
Wimpole-street, W., March 5th, 1904.

MALIGNANT GROWTHS AND NORMAL REPRODUCTIVE TISSUES.

To the Editors of THE LANCET.

SIRS,—Professor J B. Farmer and Mr. F. Cavers, B.Sc. Lond., lecturer in biology at the Technical School, Plymouth, inform me that parthenogenesis is known in plant tissues that have undergone a "reducing division." That the phenomenon of self-fertilisation may prove to be connected with the powers of a metastatic growth to mimic the primary is speculation and may merit observation. The heterotypical cell divisions observed by Professor Farmer and his colleagues and Dr. E. F. Bashford and Dr. J. A. Murray (and which can be seen without difficulty in sarcomata and carcinomata by appropriate methods of fixation and staining) indicate that there is a structural change common to all malignant (atypical) neoplasms at one period of their existence. This is not known in innocent (typical) tumours. I submit that there is also clear microscopic evidence of the transition of sarcomatous forms of cells to those of epithelial forms. In support I mention two instances of growths in which such cell transitions are obvious to me in a careful examination of several sections. The one was a sarcoma of the breast in a woman, aged 52 years, under the care of Mr. C. Whipple at the South Devon Hospital. There were many intracystic growths the columnar cells of which in places were continuous and passed by gradual transitions into large sarcomatous elements. It was the "adenocystosarcoma" of Erichsen, Beck, and Raymond Johnson. Again in a huge diffuse melanotic sarcoma of the liver in a woman, aged 52 years, under the care of Mr. W. L. Woollcombe, the spaces between the hepatic cells were stuffed with rounded pigmented cells of varying sizes. A pigmented mole over the seventh right intercostal space showed pigmented cells in the cutis similar to the smaller ones seen in the liver. I regard the cells in the liver as showing transition from small endothelial to large sarcomatous elements (I place pigmented moles of this nature under the group of endotheliomata on the same grounds that Raymond Johnson and Lawrence place "parotid tumours" under this heading, and remembering the faculty of the liver of intercepting and nourishing new growth I look on the mole as primary). Similarly, H. D. Rolleston and O. Grünbaum note on a perithelioma of the cheek "striking features are the transition from cells of a sarcomatous type to cells exactly resembling columnar epithelium" (this was despite the use of selective "epithelial" stains[1]).

This second link in the chain of atypical growths is not a true metaplasia (defined by S. G. Shattock and C. A. Ballance, quoting Virchow, as the transformation of one normal tissue to another). It is a feature, to my mind, to which attention has been insufficiently directed and appears analogous to those powers by which epithelial and sarcomatous tissue are formed from "indifferent" tissue (e g., in carcino-sarcoma, in cylindroma carcinomatode, in adeno-sarcoma—the group of tumours excellently designated by H. Snow and C. P. White as blastomata.[2] It approaches in nature true heterology (Virchow). What bearing has it, if any, on the nature of the mitoses? Special observations of such growths are necessary before the question can be answered, but it appears to indicate a previous "sexual" change, thus allowing the succeeding generations of cells to be atypical, under certain stimuli. The heterotype mitoses may be merely terminal phases in the "life cycle of cancer cells" (Bashford) or of sexual cells (Farmer), as in plants and animals. May it not be that cancer is an exhibition of sexual and asexual phases in its life cycle, dependent on environment and intrinsic potentialities, as is the case with protozoa (e.g., malaria), to a colony of which it is compared? The sexual stage may be reinforced by parthenogenesis, nuclear conjugation, &c. We are as yet unaware of the forces (? chemical) which must determine and limit orderly cell growth and which are presumably neutralised in malignant tumours.[3] In a knowledge of these may lie the secret of prevention and remedy.

I am, Sirs, yours faithfully,

F. BUSHNELL, M D Lond, D.P.H. Cantab,
Honorary Pathologist in Charge of the Clinical Laboratory,
Feb. 27th, 1904. South Devon Hospital, Plymouth.

"FILARIA PERSTANS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 5th Dr. H. C. Bastian contributes a paper on the anatomical characters of the so-called filaria perstans and on the mode of infection thereby, part of this being a reply to my paper of Feb. 13th, where I discussed the suggestion that this filaria belonged to the genus tylenchus. There are several points in Dr. Bastian's paper I am sorry to say I cannot again agree with, and as they are of some importance I make this an excuse for again taking up the subject. Dr. Bastian states that I have supposed the figures of tylenchus obtusus in his former article were embryonic forms; this, however, is not the case. What I stated was "that the author had fallen into a misconception respecting the anatomy of the adult and embryonic forms of this filaria," by this meaning *filaria perstans*, and that he was comparing the adult forms of his tylenchus with the embryonic or larval forms of filaria perstans which to my mind was not permissible.

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[1] Transactions of the Pathological Society of London, vol. liv. p. 353; vol. xlvii., 1896, p. 259; THE LANCET, May 31st, 1902, p. 1562.

[2] THE LANCET, Feb. 15th, 1902.

[3] Adami: Yale Medical Journal, 1901.

The points, however, which I specially wish to lay stress on are: (1) the statement that the information that exists concerning the anatomy of filaria perstans is scanty; and (2) the remarks regarding the mode of infection. As regards the first Dr. Bastian states: "In order to ascertain the genus to which a nematode belongs we want descriptions of the adult worms containing, in addition to mere size and external form, particulars as to the nature of the mouth and pharynx, the relative length of the œsophagus and the number of swellings, if any, in its course, together with the situation of the anus, the character of the ovarian tubes, the situation of the vulva, the shape of the male spicules and accessory pieces, as well as any other details that may be recognisable"

I have already[1] described the adult and embryonic forms of filaria perstans in detail and anyone who wishes to read this description may refer to that paper. It will be sufficient here to state that the information relative to the anatomy of this filaria is well known and the answers which I shall now give to Dr. Bastian's queries show this. The mouth of the adult filaria perstans is simple and circular, there are no papillæ nor is there a spine. (The fang or spine was not mentioned in my original paper as there is no such thing in the adult.)

Similarly the pharynx and œsophagus were not specially mentioned as there is nothing peculiar about them. They form a simple tube which merges insensibly into the intestine. There are no swellings on either of them. The course and termination of the intestine were described as follows: it extends almost throughout the entire length of the worm, ending on the concavity of the curve of the tail, in the female at the apex of a slight bulge on the cuticle, in the male at the general level of the cuticle, with four pairs of pre anal papillæ in front and one pair behind, with two unequal spicules, distant respectively from the tip of the tail 0 160 millimetre for the female and 0 120 millimetre for the male. The ovarian tubes were also described and the situation of the vulva accurately given—e.g., 1·22 millimetres from head. This brief *résumé*, I think, disproves the statement "that almost all internal anatomical details concerning the adult forms of filaria perstans appear up to the present to remain unknown." The anatomy of the embryo is equally well known. At the extremity of the head is the little spine or fang which in the living forms may be seen alternately pushed out and then retracted, it measures under 1 μ in length and naturally requires a high magnification to demonstrate it. The other anatomical features are described in my original paper.

As regards the mode of infection and the question of an intermediate host Dr. Bastian is peculiarly unfortunate in his statement that the embryos of filaria nocturna may live and advance slightly in development in the mosquito up to the fourth or fifth day, when the insect then dies and liberates them into the water. Surely the writer has studied the recent work on the life-history of mosquitoes and that on the metamorphosis of the filaria and its escape from the proboscis of the mosquito. This recent literature is so fresh in the minds of everyone that it would only be wasting valuable space going over it all again. It will be sufficient to pass to conclusions, then, and sum up as follows. 1. The anatomy of filaria perstans (adults and embryos) is well known. It is a typical filaria, resembling filaria nocturna and filaria demarquaii. 2 From the analogy of the metamorphosis of filaria nocturna in culex fatigans and other mosquitoes, filaria immitis in anopheles maculipennis (Grassi) and in culex ciliaris (Bancroft), and filaria recondita in pulex serraticeps (Grassi), it is exceedingly probable that the embryos of filaria perstans also find their way into some suitable blood sucking insect where they undergo a metamorphosis and then eventually pass to a fresh host.

I am, Sirs, yours faithfully,

GEORGE C. LOW, M.A., M.B., C.M. Edin,
Superintendent, London School of Tropical Medicine.

Albert Docks, E., March 7th, 1904.

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[1] Brit. Med. Jour., March 28th, 1903.

THE BEARING OF THE WAR OFFICE CHANGES ON THE FUTURE OF THE ROYAL ARMY MEDICAL CORPS.

To the Editors of THE LANCET.

SIRS,—There can be no doubt in the minds of those conversant with the medical wants of the army of the importance of the point you raise in the leading article in THE LANCET of Feb. 27th, p. 588, under the heading of War Office Changes, on the future status of the Director-General in the new Army Council. So far as the present indications go, it seems probable that this official will be deprived of the position he now holds in the Army Board under Mr. Brodrick's scheme, yet until we have Part 3 of the new army scheme, which will embrace the position of the Army Medical Services, before us, and which "will shortly be ready for submission" by the committee, we cannot be certain of the full intentions respecting him. The ruling principle of this committee seems to be to bring the Army Council as far as possible into conformity with the Naval Board and should this principle hold good for the medical service there is every probability of a grave retrogressive step being taken. One prominent and potent defect in the Army Medical Department in the past was that it was placed under the Commander-in Chief with a Director General selected practically by him and to all intents his agent in military medical affairs, the department thus being but a subordinate section of the combatant branch of the army and having but little voice and less power in its own organisation, working and needs; and the resultant of this anomalous arrangement was shown in the condition to which it was brought prior to the formation of the existent Royal Army Medical Corps, the responsibility for the defects observable in the South African war, with all their sad attendant outcomes, lying beyond all reasonable doubt at the door of the officials filling the posts of Commander-in Chief and Adjutant-General The formation of the Medical Advisory Board by Mr. Brodrick and the improved status of the Director General through his inclusion in the higher army councils gave strong grounds to the inference that at last the medical needs of the army had obtained a power of expression and a prospect of practical support hitherto denied them, but should the retrogressive change now outlined be carried out it is apparent that the Royal Army Medical Corps, placed under one or other head of the new Army Council, will be again relegated to the miserably weak and subordinate position previously occupied by it. A belief in a capacity to organise and administer such a professional body as an Army Medical Corps, irrespective of guidance by those who have both professional ability and practical experience of army needs, seems a fixed ingredient in the minds of War Ministers and military officers, and the apparently proposed step of the present committee will do much to still further confirm this idea to the detriment of the service in question. So far the parallelism in the course taken after the Crimean war and the more recent South African war is complete—the same outburst of public indignation, the same exposure of medical deficiencies to meet army field needs, the same undeserved blame falling on the department and its professional head these being made the scapegoat for War Office and military incompetency to properly administer that which they had undertaken, the same official inquiry followed by schemes to rectify defects and to promote improvements, similar expressions of intentions of War Ministers to make the future state of this service all that was desirable, improvements of conditions for attracting a better professional class leading also to an actual competition for posts offered, though not to the same degree as in 1861, the same initiation of changes not suggestive of progress from the adopted scheme on change of the War Minister, and now apparently the same prospective intention to renew the subordination of the professional head to the military section. To those older ones among us who were led into the adoption of a military career by the improvements wrought after the Crimean war and the inducements then held out, and who subsequently found all their hopes frustrated and the ground of advancement cut from under their feet by the whittling away process put into operation by the military authorities and the apathy or impotence of their professional head, the marked importance of prevention of any further extension of this parallelism is self evident; and as in the past the main help in extracting the department from the "slough of despond" has come from the general professional body, so now the Corps must look to it, and especially the professional members in Parliament and the civil members of the Advisory Board, to present a strong front against the retrograde innovation which is apparently threatened in the composition of the new Army Council by the exclusion from it of the professional head, the Corps itself being markedly curtailed in its power of expression by the conditions under which it exists.

I am, Sirs, yours faithfully,
FRANCIS H. WELCH,
Surgeon-Colonel (retired) M.S.
Lee, Feb. 29th, 1904.

THE IRISH BRANCH OF THE BRITISH DENTAL ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—A careful study of the judgment given in the Court of King's Bench, Ireland, in the test case of "O'Duffy *v.* Jaffe" will convince any thoughtful man that there are principles and rules therein laid down the importance of which it would be indeed hard to exaggerate. Not alone are existing laws shown to be totally inadequate for the protection of the public from the danger and fraud of unqualified practice (whether dental or medical), but the road is clearly demonstrated by which, if it be not blocked by the Legislature, trickery and deception may even further invade the realm of public interests in professional life.

Briefly stated, the case was as follows. The Irish branch of the British Dental Association determined to bring to an issue the question, which had long been let go by default, whether the restrictions and penalties imposed by the Dentists Act of 1878 upon "persons" using the title of "dentist"—i e., without being registered—did or did not apply equally to a company or corporation as to individuals; and to obtain instead of "counsels' opinion," which had up to then been considered conclusive, a definite and binding legal pronouncement. They accordingly, as a test case, prosecuted for taking and using the title "Surgeon Dentists," and thus infringing the Dentists Act, "Jaffe, Surgeon Dentists, Ltd.," a company which consisted of two drapers, four married women, and a dental mechanic, none of whom possessed any dental qualification whatever. The case was heard by the local bench at Limerick in May last and, being dismissed, was carried by the plaintiff to the King's Bench. We send you herewith an official copy of the arguments advanced by counsel on both sides and the judgment delivered by the court after some three weeks' deliberation upholding the magistrates' decision.

We would invite a careful consideration of this judgment under three headings. 1. The court unanimously held that the word "person" in the Dentists Act did not include a company or corporation, and a company or corporation can therefore assume with impunity a misleading title, announcing a professional qualification the assumption of which by an individual would subject him to a penalty of £20. The grounds of the decision appear also to apply just as much to the Medical Act and the veterinary surgeons are also affected by it. The public, ever gullible, can thus be legally imposed upon by a company with a high sounding name which an individual (without six "dummies" behind him) would only assume at his peril. Further, not only can a company formed "*ad hoc*" play these pranks with the public but any existing company whose memorandum does not preclude such a thing may boldly assume any medical or dental title; for instance, the Army and Navy Stores would not come within the penal provisions of these Acts by assuming the description of physicians, surgeons, or dentists.

The second point in the case to which we desire to invite attention is this: counsel for "Jaffe, Surgeon Dentists, Ltd.," ingeniously put forward a further line of defence. The point raised was this: "The defendants have added nothing to their name; 'Jaffe, Surgeon Dentists, Ltd.,' is their name." How this argument impressed the court was shown by the Lord Chief Justice asking the following question: "If a man be born with the name 'Dentist' can he be prosecuted under this Act for using his name?—e.g., 'John Dentist'"? The significance of the defence was, therefore, not lost sight of and in the formal judgment of the court the point was decided as follows:—

The Lord Chief Justice (Lord O'Brien) said: "Person, I think, means a person who having one name takes another name or description, that is a natural person who has his own name and adds to it another name or description. It would seem to me not to include a company which comes into being with a name and adds nothing to it." Judge Gibson said: "The question before us is, whether a company, part of whose registered name is 'Surgeon Dentists,' by using that name committed an offence under Section 3 of this Act. The Act was never designed to apply to a corporation at all or to prevent a limited company from using its own proper name in which it was registered." Judge Madden agreed in the judgment of the court without specially referring to this point.

The case being on the criminal side of the court no appeal could be taken from the decision. This, then, being the law it appears that any fraud or deception on the public by a company, involving the assumption of a false or misleading title or name as of doctor or dentist, can be, and is, legalised by the irresponsible action of the Board of Trade in registering as a company, without question, any such name, title, or description which is presented to it; for, be it understood, the Board of Trade has no power to question or refuse any title brought to it for registration as a company saving only when such title has been already appropriated by some other company, and this registered title, though knowingly and wilfully intended to deceive by those who form the company, becomes forthwith the "proper name" under which the company "came into being"; its right to the use of which is as clear and indisputable as the right of Lord O'Brien's supposititious "John Dentist" to the use of his own patronymic. The hall porter from the hospital may then, should he desire it, rest secure in the name of "Sir Peter Smith, Doctor and Surgeon," and the bottle-washer in the pharmacy may undisturbed prey upon the public as "Sir Ebenezer Dodd, M.D. Lond." An individual would be liable to penalties and imprisonment, but on constituting himself a "company" by virtue of six "dummy" names behind him, under the ægis of the Board of Trade, the company or the individuals who compose it are beyond the reach of all penalties. In fact, anyone may gull the credulous under a name, with the addition of doctor, physician, surgeon, dentist, veterinary surgeon, or any other "proper name" which may suit his purposes, and under which he may elect to "come into being." To the lay mind there is some difficulty in seeing where the line is to be drawn or what limit exists to the assumption of titles by a "one man company." All one has got to do is to form himself into a "one man company."

The third important point in the judgment is the outspoken opinion of the court on the position as it stands and the judicial suggestion of a remedy. "Before, as well as since, the Dentists Act," said Lord O'Brien, "the Legislature has not infrequently failed in its policy and object owing to the inappropriateness and inadequacy of the language it employed. The ingenious have often invented, and I daresay will often invent, devices to get out of Acts of Parliament. ...... We cannot import the words which are necessary to hit the device and reach the mischief."

Judge Madden says: "If the general intention of the Legislature in regard to the protection of the public has been frustrated, and I believe it has, this is a necessary consequence of the language that has been employed." Further on he speaks of "the mischief against which the present prosecution is directed," and finally crystallises the suggestion of himself and his colleagues in these words: "The Legislature, if it thinks fit, can pass a statute specially directed against the mischief which has recently come into existence."

The importance of enlisting the aid of your valuable journal in rousing public opinion amongst professional men and also amongst your colleagues of the lay press, and drawing attention to the incalculable effect of this judgment of the Irish Court of King's Bench, must be our apology for making such a large demand upon your space, and we feel convinced that when the facts come to be widely known to the profession and the public such pressure will be brought to bear upon Parliament as will insure the effectual ending of this anomalous condition. We are advised that a short Act of Parliament providing that the penal clauses of the Medical, Dental, and Veterinary Surgeons Acts, under which unqualified persons are prevented from taking or using [illegible] veterinary surgeon, &c., [illegible] e the effect of putting an [illegible] ncreasing fraud not only on professional men but on the public.

We are, Sirs, yours faithfully,
HERBERT WILLIAMS,
President.
A. W. W. BAKER, M.D. Dub., F.R.C.S.I.,
Past President Irish Branch B D.A.
GEO. M. P. MURRAY, F.R.C.S.I.,
Past President Irish Branch B D.A.
KEVIN E O'DUFFY,
Honorary Secretary.
Dublin, March 3rd, 1904.

⁂ The decision of the King's Bench Division in Dublin is exceedingly to be regretted, particularly as further appeal in the Irish courts is impossible.—ED. L.

PREVENTION OF INFECTIOUS DISEASE IN BATH.

To the Editors of THE LANCET.

SIRS,—The notes under the above heading from your Wales and Western Counties correspondent in THE LANCET of Feb. 27th, p. 614, seem likely to give a wrong impression of the relations existing between the medical officer of health and the sanitary committee of this city. As I am the councillor to whom allusion is made I hope you will allow me space for a few remarks.

In the first place, I should like to say that the committee as a whole, and especially I myself, fully recognise that in Dr. W. H. Symons we have got a most efficient and energetic medical officer of health. Sometimes, however, his energy and anxiety for the city's welfare seem to outrun his discretion, and this, it appeared to me, was so in the case especially alluded to by your correspondent. I inclose you two notices lately sent out by Dr. Symons. In the one dealing with measles and whooping cough I took exception to the paragraph on the first page which speaks of a penalty of £5 to which a person is liable for exposing himself while infected in the streets. Your correspondent says I "expressed the opinion that Section 126" of the Public Health Act of 1875 "only applied to those diseases which were scheduled" and not to measles and whooping-cough. I would point out to him that this is not a question of *opinion* at all; it is simply a matter of fact: the section does only apply to scheduled diseases. At a subsequent meeting to that referred to, I offered to support Dr. Symons if he wished to have measles and whooping-cough included in the schedule. While, however, he did not advise our doing this, he was still of opinion that the clause, which I claimed was misleading to the public, should be retained since, among other reasons, "it was done elsewhere." Two cases had recently come to my knowledge in one of which the mother of a child suffering from whooping-cough was afraid of bringing her child to the hospital for treatment; and in the other was afraid of going out to earn her living because of the penalties to which she thought, from reading this notice, she was rendering herself liable.

The other notice I inclose you was sent to all the medical men practising here. In it you will see we are reminded that it is *illegal* to remove patients suffering from notifiable diseases in public carriages, although Section 127 of the Public Health Act especially provides for what is to be done in the event of patients being so removed. That it is most undesirable for public carriages to be used for this purpose everyone will allow, and luckily here in Bath with our ambulance accommodation it is not necessary, but why tell the profession that what an Act of Parliament especially provides for is illegal? As I said at the beginning I have great respect for Dr. Symons's energy and ability, but I cannot support him in the issue of notices that are incorrect and misleading, simply from a mistaken desire of doing good thereby. "Bluff" may succeed in other matters, but it is neither politic nor dignified in the administrator of public health.

As to the bacteriological examination in suspected diphtheria, to which your correspondent also alludes, seeing that in this case the reporter had found Hoffmann's bacilli, which he especially said were not regarded by the "Cambridge school" as pathogenic, I said that, whilst not wishing to hamper Dr. Symons in any way, I hoped he would use discretion in sending cases for examination. I am entirely at variance with your correspondent as to excluding the press from the ordinary meetings of the committee. The health of our city is so good that we have nothing to keep dark, but if his advice were followed there would not be the same public confidence that this was so.

I am, Sirs, yours faithfully,
Bath, Feb. 29th, 1904. PRESTON KING, M.D. Cantab.

EYESTRAIN AND ITS REFLEXES DEPENDENT UPON LOW ERRORS OF REFRACTION.

To the Editors of THE LANCET.

SIRS,—Will you pardon me a few words of reply to your courteous editorial concerning eyestrain, in your issue of Feb. 6th, just at hand? The essential point in the controversy is entirely omitted by your writer and this is that the low errors of refraction are the cause of the reflex troubles which you think I exaggerate as due to eyestrain. This I have emphasised all through my writings and prove every day in private practice. And not only myself but hundreds of other American oculists. The very condition of success in curing these patients is, we contend, the very thing you frankly ignore. There is no more clearly demonstrated fallacy, no greater scientific error than that exhibited in your own quotation from Donders as to the unimportance of errors of less than a dioptre. These small errors of astigmatism are the causes of the troubles of the patients, reports of whose cases I have published, and of thousands in private practice. The statements as to the care and accuracy of most English and continental ophthalmologists are erroneous and the editorial demonstrates this. The low errors, the low degrees of unsymmetric astigmatism which cause migraine, are ignored in the editorial which is, you say, made up from the opinions of London oculists. It is a perfectly simple matter to demonstrate the truth of my contention. A good oculist by correcting the low errors (those below a dioptre) will cure many or most of the migrainous patients excluded from your oculists' offices by "a clean bill of health" as regards their eyes. Conversely, if those who give the clean bill of health will wear a pair of spectacles *producing* artificially such low errors of astigmatism they will have a most convincing migraine very speedily. It is *not* fair to my argument to ignore entirely the low error of refraction which repeatedly, emphatically, and continuously I have said is the cause of the sufferings *due to* ocular conditions. Nor does it seem fair not to present another fundamental argument of both volumes of my "Biographic Clinics": the fact that every one of the 14 patients whose histories are there described suffered because of *near* use of his eyes, and got immediate relief only by stopping reading and writing, when exercising out of doors, &c. A thousand quotations demonstrate this fact. Can it be explained on any other theory than eyestrain? Why is there such a strange disinclination of reviewers, critics, and editorial writers to mention this fact which is the substance of the mass of quotations of both books?

Respectfully yours,
GEORGE M. GOULD.
Philadelphia, Pa., U S A, Feb 23rd, 1904.

⁂ We publish Dr. Gould's letter with pleasure, but we remain of the same opinion. It is not correct to suggest that our ophthalmologists are ignorant of the possible constitutional trouble that will follow slight errors of refraction; while we are certain that the results of these errors have been exaggerated.—ED. L.

BILHARZIA HÆMATOBIA.

To the Editors of THE LANCET.

SIRS,—In reply to Mr. E. H Worth I desire to state that a patient of mine who is suffering from this disease contracted it in the Komati Poort Valley of the Transvaal, where he was severely wounded in the disaster to Colonel Benson's column. Whilst in the military hospital he tells me that he took (?) a solution of boric acid, but said "that he always felt worse afterwards and lost more blood." I have found that his hæmaturia has almost disappeared, the lumbar pain has been banished, and his health proportionately improved whilst he has been taking the following: one drachm of sodium salicylate, two drachms of compound tincture of gentian, one drachm of tincture of strophanthus, two drachms of chloric ether, and infusion of buchu to one ounce.

I am, Sirs, yours faithfully,

PERCY RENDALL, M.D.

Ewell, Surrey, March 2nd, 1904.

THE BATTLE OF THE CLUBS AT SOUTHAMPTON.

To the Editors of THE LANCET.

SIRS,—With reference to the article in THE LANCET of Feb. 13th respecting the battle of clubs in Southampton I beg to say that it is a tissue of false and erroneous statements all the way through. Your informant is evidently very ignorant of what he is writing about. In the first place, he states that the Dock Provident Society *imported* a medical man. This is untrue, as I had taken a house in Southampton before I knew of the existence of the society and it was some days after that I saw the advertisement for a surgeon in the local paper. I replied to this and was duly elected by the committee. As to the society being the means of founding the Medical Federation in the town, this is false, as the society has nothing to do with the federation and never had. So far from not having sufficient work to do I may say that I had a very busy year as this being one of the oldest registered societies in the town it led up to many others, and I may say that with a very few exceptions I have met with nothing but expressions of gratitude and many acts of kindness from all the members. With regard to the London and Manchester and the National Medical Aid I have never had anything to do with them. I believe the latter society was bought up by one of the medical officers of the federation. With regard to the female O. F. they pay the same rate as the males; if it pays the medical officer for one why not for the other? They are all young women and seldom trouble one. From what I hear many of the medical men who stuck out for 6*s.* 6*d.* are now offering to take them for 5*s.* per annum *if they can get them.* It appears to me these men have acted like a set of schoolboys instead of business men. The federation is an amalgamation of various clubs, is exceedingly well managed, and is rapidly increasing in numbers. I inclose a cutting from the local paper respecting the club question. The Southampton Provident Medical Association has attacked the smaller clubs but is afraid to attack the larger societies, which in my opinion shows its weakness. The numbers which your correspondent states have joined the association are not correct.

I am, Sirs, yours faithfully,

ARTHUR GRAHAM,
Surgeon to the Dock Provident Society; Surgeon to the Medical Federation, Southampton.

Southampton, Feb. 23rd, 1904.

PS.—I wish to state that I have always been opposed to well-to-do tradespeople deriving benefit from these clubs.

⁂ We were informed that Mr. Graham applied for the post under the Dock Provident Society from an address in London, which certainly pointed to importation. He has since told us that he had already arranged to take a house in Southampton before receiving the appointment, a circumstance which alters the position. Our information does not bear out his statements that the Dock Provident Society has nothing to do with the federation and that the federation is rapidly increasing in numbers. With regard to the number of adherents to the Southampton Provident Medical Association the figures were obtained from a source that ought to be trustworthy and a general statement that they are not correct does not impress us. Our correspondent must point out the error in detail when, if he is right, we shall be happy to say so.—ED. L.

MISTLETOE.

To the Editors of THE LANCET.

SIRS,—It has occurred to me that the following note may be of interest to your readers in connexion with the annotation on the subject of mistletoe which appeared in THE LANCET of Jan. 9th, p. 111. The substance of the note is translated from a well-known work in Persian on Materia Medica, the *Makhzanu l-Adwiya* (Storehouse of Medicines), compiled by one Muhammad Husain Khān in the year 1185 of the Hijra, corresponding to 1771 A.D. His statements concerning the mistletoe may be regarded as embodying the opinions of all the oriental authorities up to the date of his work. It will be seen that mistletoe was looked upon as injurious to the heart rather than beneficial. The author writes as follows:—

"*Dibq,*[1] called also *qusūs*, and in Persian *Mawizak-i-'Asah'* (the honey-creeper) and *Kishmish i-káwaliyá* (the Cábuli raisin), is a berry smaller than the chick-pea, of a greenish colour, and when it dries its skin shrivels and turns black. It contains in its interior a glutinous moisture and the seeds are of the size of poppy seeds. The plant grows on the pear and other trees, several twigs shooting from one point. The leaves resemble somewhat those of the múrd[2] and the pomegranate; they are delicate in texture and greyish green. The best kind when fresh are smooth and round. Their colour inside is like that of the leek and the outside inclining to greenness, blackness, and redness. Their constitution is hot in the extreme of the second degree and dry in the first degree, possessing an excess of moisture which is not glutinous. Certain authorities consider it hot and dry in the third degree. Its properties are compounded of the essence of aerial heat and aqueous coolness, with a slight admixture of earthy astringency, and after being ingested by anyone its special effects are (speedily) manifested.

Its special action and properties.—It is attenuant, discutient, and laxative—efficacious in dispersing thin and gross humours and absorbing them from the depths of the body. When it is macerated in warm water and the skin and seed are separated from the juice by squeezing, and the pure juice mixed with the kernels of the walnut or with the pulp of the fruit of the *Bidanjīr*[3] (which is the usual way of drinking it), it is effectual in purging away the black bile and mucous humours; also useful as a deobstruent and in sciatica, fistulous sinuses, and cold abscesses. An ointment compounded with it ripens and melts down and collects the matter in swellings and allays cold pains, while with turpentine and wax it is used for the ripening of boils, pustular eruptions of mucous origin, and phlegmatic tumours, also for softening the joints. Mixed with *zarnīkh*[4] it is also used for the last three purposes and with gummastich it is used for malignant ulcers and with arsenic and pitch it is used to extract the nails. With quicklime and grape juice and honey it is used to make the nails grow again. With henna[5] it is used in the treatment of impetigo and dandruff, also with oil of roses for making the hair grow long. A decoction of it in lime water is useful in removing swellings of the spleen, while a paste of it made with lime is a means of removing induration of the spleen and is also useful in drawing out gross humours from the depths of the body. It is injurious to the heart, the corrector of this influence being the *Bādranjbūyah.*[6]

The quantity to be taken [? of this decoction] is up to one *misqāl*[7]; a larger quantity causes gripes and vertigo with heaviness of the limbs. In lieu of it, as an equivalent in discutient power, is half its weight of juniper berries and four *dángs*[8] of almonds, and in all cases half its weight of *Agir karhā.*[9] When mistletoe berries are cooked with honey, syrup of dates, and *sapistán*,[10] and made into long fine threads, it is put on the surface of trees, when any bird that settles sticks to the tree and is caught. When it is mixed with *Qirmuz*[11] it intensifies its (crimson) colour. It forms an ingredient also in many other colours."

With apologies for the length of this note,

I am, Sirs, yours faithfully,

GEORGE RANKING, M.D. Cantab.,
Lieutenant-Colonel, I.M.S.

Calcutta, Feb. 6th, 1904.

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[1] Viscum album.

[2] Múrd, Myrica Gale.

[3] Ricinus communis.

[4] Zarnīkh is the name for arsenic (= azzarnīkh) in all its forms. It is probably yellow orpiment which is here intended to be used.

[5] Lawsonia inermis.

[6] There is a little uncertainty as to what is meant by this name. By Abdullah Shírází, court physician to the Emperor Sháhjehán. it is said to be the sweet basil, called in Hindī Julsī (Ocymum sanctum). That author also includes it in his list of cardiac tonics (Alfázi Adwiyah).

[7] The *misqāl* was equivalent to 96 barleycorns in weight.

[8] The *dáng* was equivalent to 16 barleycorns in weight.

[9] Agirgarhá, Anthemis pyrethrum.

[10] The fruit of cordia myxæ (cordia sebestana).

[11] Kermes, coccus baphica.

THE IRISH MEDICAL DEGREE PRIOR TO 1858.

To the Editors of THE LANCET.

SIRS,—In a book lately published by Mr. R. Brudenell Carter entitled "Doctors and Their Work," the following statement occurs (p. 8): "While such was the state of things in England (i.e., prior to the Medical Act of 1858) it had been from time immemorial the custom of Scottish and Irish universities to confer degrees in medicine after examinations which were mainly medical in their scope, and which could not be held to establish more than a modest amount of acquirement in scholarship or general knowledge. In these divisions of the Kingdom, therefore, the degree and title of 'Dr.,' instead of being confined to the highest grade of the profession, belonged of right to the great body of general [illegible] ntially different [illegible]"

As far as Ireland is concerned nothing could be more remote from the truth. The University of Trinity College, which up to 1852 was the only university in Ireland, has [illegible] nemo admittatur qui prius Baccalaureatum in Artibus non susceperit." Not only so, but of all British universities Trinity College is (with the comparatively unimportant exception of Oxford) the only one all of whose graduates in medicine are also of necessity graduates in arts. It is true that at the time of which Mr. Carter speaks there were many general practitioners and apothecaries in Dublin styling themselves "Dr.," but they invariably had Scottish qualifications. Mr. Carter has promised to correct the error should his book reach a second edition.

I am, Sirs, yours faithfully,
T. K. ABBOTT,
Senior Fellow and Senior Proctor, Trinity College, Dublin.

OPIUM AND PNEUMONIA.

To the Editors of THE LANCET.

SIRS,—I was much interested in your leader in a late number on the subject of "Opium and Pneumonia" because I have been convinced for the past 15 years that that drug has a deal to answer for in the mortality from the disease. Let us consider what is the condition at the moment of crisis of that grave disorder. The lung is occluded with a thick tenacious slime almost impossible to throw off. The right heart is battling to get the blood through this occluded lung. And what is done by giving opium or any of its derivatives? The tenacity and thickness of the slime is increased and at the same time the heart's power is enfeebled and bewildered, also that of the respiratory centre. Could any therapeutic power be less well directed? We enfeeble and shackle the cardiac and respiratory powers at the very time their utmost strength is required and at the same time add to the obstructive power, the tenacity and dryness of the slime Surely this is clear, but what is the excuse for such a mode of treatment? Oh, it dulls and stills pain and restlessness and the patient "feels better." Better? Yes. Euthanasia! The necessary pain and restlessness must not be dulled; they are requisite for recovery. *Excessive* pain may be relieved by other means—a few leeches, an ice bag, &c., or even a minute hypodermic dose of morphia not sufficient to have a constitutional effect. Aconite, too, is a most dangerous drug in pneumonia, given to "lower the temperature." But, alas, it paralyses the cardiac centre. Such drugs as digitalis and strychnine must also be given with great discretion, for though they may increase the cardiac power it must be remembered that they also increase the muscular tone of the arteries and therefore resistance to that power.

Now it is universally admitted that pneumonia is due to a microbe and its toxins. It appears to me that treatment should be directed to the destruction of that microbe and its effects and that symptomatic treatment should be entirely secondary. With that view I have now for many years prescribed salicylate of soda with liquor ammoniæ acetatis and in suitable cases (threatened heart failure) spiritus ammoniæ aromaticus. The salicylate not only helps to arrest the rapid multiplication of microbes but it rapidly throws off the toxic products through the kidneys. The acetate of ammonia not only counteracts any cardiac depression (though I have never noticed any as especially due to the salicylate) but also liquefies and loosens the thick "slime" in the lung and makes it the more easy to expectorate it. If we cannot be sure we are giving the right drug let us stand aside. Nature alone will do better than we. Let us be sure we do not add the last straw to the burden in the terrible crisis.

Influenced by these views I have in later years only used the drugs I have mentioned in this dire disorder and the result has been that I have never lost a case. I have had most serious cases, one in delirium tremens where another medical authority thought there was no hope, but the patient rapidly got well. Within the last few months I have had two cases of pleuro-pneumonia in aged people the results of which are striking. The one, aged 69 years, a very healthy life previously, declined to take the salicylate, as he said it made him feel sick. He recovered from the immediate attack but developed an empyema which, after repeated aspirations (the pneumococcus abundant in every specimen of the pus), killed him by developing complications elsewhere (operation was declined). The other, aged 76 years, an equally severe attack, took the salicylates readily, had a copious serous effusion in the pleura, but has recovered completely.—I am, Sirs, yours faithfully,

Lancaster, March 6th, 1904. C. A. RAYNE, M D. Lond., &c.

THE SETON IN MÉNIÈRE'S DISEASE.

To the Editors of THE LANCET.

SIRS,—Referring to Dr. T. Wilson Parry's very interesting communication, may I be permitted to point out that I described a case of Ménière's disease successfully treated by the seton in the *British Medical Journal* of March 29th, 1902, p. 806? It was suggested to me by Mr. Walter Whitehead's remarkable success in the treatment of migraine. I am, Sirs, yours faithfully,

Southport, March 8th, 1904. COLIN CAMPBELL.

THE ADULTERATION OF COD-LIVER OIL.

To the Editors of THE LANCET.

SIRS,—I am perfectly in agreement with Mr. E. J. Parry in his contention that the value of cod liver oil is due to the facility with which it is digested and absorbed and not to any active principle. In this sense his use of the word "traditional" is justified and therefore possibly other fats have not had their fair share of consideration. Virol, to which he refers, the fatty portion of which is chiefly supplied by bone-marrow, is a substance which we have largely used at the Children's Hospital here with excellent results, young children taking it with facility and advantage. Possibly it would be well, remembering how scarce and expensive cod-liver oil has become, if we were to investigate the whole subject of the value of the various available animal fats *de novo* and determine their relative advantages on their merits alone, eliminating any element of tradition.

I am, Sirs, yours faithfully,
L. A. PARRY, M.D. Lond., F.R.C.S. Eng.

Hove, Sussex, March 8th, 1904.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Vaccination amongst Ancient Hindus.—Increase of Plague.

A POINT of immense historical interest has lately been referred to by a writer in the *Madras Mail* It practically consists in the discovery that vaccination as we know it, and not merely inoculation for small-pox, was practised in ancient Hindu days. In the "Sactaya Grantham," an ancient treatise attributed to Dhanwantri, the writer after describing nine species of small-pox lays down rules for the practice of inoculation (? vaccination). The translation of the passage is as follows: "Take the fluid of the pock on the udder of a cow or on the arm between the shoulder and elbow of a human subject on the point of a lancet and lance with it the arms between the shoulders and elbow until the blood appears; then mixing the fluid with the blood the fever of the small pox will be produced." Again, "The small-pox produced by the fluid from the udder of a cow will be of the same gentle nature as the original disease, not attended by fear, not requiring medicine; the diet may be according to the pleasure ot the patient who may be inoculated once only or two, three, four, five, or six times. The pock when perfect should be of a good colour, filled with a clear liquid and surrounded by a circle of red; there will be no fear of the small-pox as long as life endures. When inoculated with the fluid from the udder of a cow some will have a slight fever for one, two, or three days, and with the fever there will sometimes be a slight cold fit; the fever will also be attended by a round swelling in the armpits and the other symptoms of small-pox but all of a very mild nature. There will be no danger and the whole will disappear in three days." These extracts are taken from the *Madras Courier* of Jan. 12th, 1819. Maclean, in the Manual of Administration, referring to Dhanwantri, says that Sanskrit treatises on medicine bear his name and I am also informed that there is a Tamil medical work which has been printed known as Dhanwantri Cauvyam and which is a treatise on Hindu medicine. I have not yet been able to verify these quotations but the writer in the *Madras Mail* has kindly furnished me with the above references and translations.

The plague epidemic is steadily increasing with ominous signs in certain districts. In Central India the deaths are over 1000 a week, whereas last year they were numbered in tens. In the United Provinces the plague mortality is nearly double that of last year and there is a marked increase also in the Punjab. The disease seems to be declining in the Bombay districts but is developing rapidly in Bombay city. A recrudescence is also showing itself in Calcutta.

Feb. 18th.

CHOLERA IN THE TURKISH EMPIRE.

(FROM THE BRITISH DELEGATE ON THE OTTOMAN BOARD OF HEALTH.)

SINCE the date of my last letter on this subject (which appeared in THE LANCET of Jan. 23rd, p. 255) cholera has not been very active in any part of the Turkish empire. The infection has, however, reached the important town of Basra, at a short distance from the head of the Persian Gulf, and occasional cases are—or were till quite recently—reported from Syria. It is clear, therefore, that the cholera infection is still present over a very wide area, though showing no great intensity in any part of that area.

In Bagdad the disease appears to have died out, as no case has been reported from there since Jan. 7th. The same statement holds for Kerbela, where no case has been observed since Jan 12th. The extent of the outbreaks in these places will probably never be known. The sanitary officer of Bagdad states that there, and still more in Kerbela, a large number of cases occurred which never came to the knowledge of the authorities. In Kerbela he thinks the cases were at least double those reported officially. In Diarbekir the last known case occurred on Jan 9th and in Mossoul on Jan. 6th. At Hindieh, near Kerbela, it was reported as late as Jan. 30th by a medical officer who had just visited the place that cases were probably occurring among the nomad tribes in the neighbourhood without their coming to the knowledge of the authorities.

The outbreak at Basra seems to have begun on Feb. 6th though the cases were not seen by the sanitary officer until the 8th. On the latter date he telegraphed that he had seen two women and a child, inhabiting different houses and different quarters of the town, all of whom had fallen ill on the 6th and all presenting the symptoms of cholera. The source of infection in these cases has not been determined. The further course of the disease here has been as follows From Feb. 6th to 12th there were seven cases with four deaths, from the 13th to the 20th there were six cases with six deaths, and from the 21st to the 28th there have been as many as 13 cases with 19 deaths. The least satisfactory feature in the later reports has been the fact that so many of the cases have only been discovered after death. On Feb. 9th the Board of Health imposed five days' quarantine on arrivals from Basra. For persons ascending the river from Basra to Bagdad a temporary lazaret was established at Kermet-Ali, a place about two hours' distance from Basra. On the 17th a case of cholera was observed among the passengers of the s.s. *Mossoul* which had arrived at the lazaret from Basra on the 15th. The patient died in the lazaret two days later. On the 20th another case developed among the passengers of the same ship and a third case among the crew of a sailing ship undergoing quarantine. A fourth case was observed in the lazaret on the 21st. All of these cases ended fatally. Up to the 28th the total cases of cholera in the town of Basra and the lazaret of Kermet-Ali together have been 30 and the deaths 33.

To-day news has been received of the occurrence of a "suspected" case of the disease at Korna, a village at the junction of the Tigris and Euphrates. No details of this case have as yet been made known.

In the Aleppo vilayet cholera has been almost, though not quite, extinct during the months of January and February. It will be recalled that a single case of the disease was observed in Aleppo itself on Jan. 5th. Another was reported on the 24th of the same month. No other case has been since reported. At Aintab, to the north of Aleppo, a fatal case was observed on Jan. 19th. Both of these cases (in Aleppo and Aintab) were spoken of as "suspected" only, but all measures were taken as for undoubted cholera cases.

In the Syria vilayet no cases of cholera have been officially reported since the beginning of the year, but on the first day of the year news was received of the appearance of the disease at Nibe and at Inebe, two places in the district of the Hauran. Mention must also be made of a "suspected" case at Latakia on Jan. 3rd. The Hauran district suffered considerably from cholera last year. Whether the disease is still active there or not it is impossible to say as no definite news has been received from there since Jan. 1st, but it is to be noted that in successive reports from the medical officer on special mission at Damascus it is stated that news from the Hauran, and particularly from the Ajloun district, is "far from precise" or "disquieting" or that the presence of cholera is rumoured there.

The total number of cases of cholera in the Turkish empire from March of last year to Feb. 22nd of this year is put down at 7652 and of deaths at 6550. The estimate I made in my last letter as to the extent to which the official totals may be believed to differ from the actual totals has been thought by many to be far too moderate. Some would place the true figures at double or even treble the reported figures.

Constantinople, Feb. 29th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Health Committee.

AT the last meeting of the city council the resignation of Mr. John Parker, inspector of nuisances, was received and accepted. Mr. Parker had been in the service of the corporation for a period of 22 years, first as an assistant inspector and since 1885 as inspector; he has always been a most active officer and great regret was expressed that the committee was losing his services. On the recommendation of the health committee, which advised that in a city of the size of Birmingham there was need for the services of an assistant medical officer of health, the council created that post and appointed thereto Dr. J. Doig McCrindle. This gentleman was also appointed inspector of nuisances of the city at a salary of £300 per annum. Dr. McCrindle has been in the service of the health department since June, 1902, first as medical superintendent of the small-pox hospital and recently, since the decline of the disease, he has been assisting the medical officer of health. In his new appointment he will be responsible for all measures taken for the prevention of infectious diseases and will have charge of the disinfecting staff and apparatus. The milk-shop inspector, the lodging-house inspectors (two men), and the canal-boat inspector will also be under his charge. Mr. Frank Thompson, who has acted as chief inspector of nuisances since 1898, has now been appointed inspector of nuisances and will be responsible for all matters relating thereto, such as the conversion of pan-privies into water-closets, the repair of defective drains, yards, &c He will have under his charge the 19 district inspectors, four smoke inspectors, and the court cleaners. The health committee has advised the council that, in addition to the two male inspectors who carry out duties under the Factory and Workshops Act, 1901, there ought to be a woman inspector whose duty it should be to supervise the workshops in Birmingham where female labour is employed. There are over 10,000 workshops and workplaces in Birmingham, including a large number of places where food is prepared for sale, and in addition to these there is a large number of shops which require occasional inspection under the Shop Hours Acts and the Seats for Shop Assistants Act. During the past year 1927 cases of chicken-pox were notified at a cost to the city of about £230. The object of adding chicken-pox to the list of notifiable diseases was to enable any doubtful cases to be visited immediately by the medical superintendent of the small-pox hospital. In practice, however, it has been found necessary to visit only those cases to which the medical men directed special attention as being doubtful. On the recommendation of the committee the order for notification of chicken-pox has been rescinded and it is to be left to medical practitioners to call the attention of the health department, as they are now doing, to any case in which they would like the diagnosis verified. Alderman Cook, in moving the adoption of the recommendations of the committee, stated that small pox had passed away from the city and that the small-pox hospital was entirely empty. It had not been absolutely closed because there were still cases at Leicester and other places not far from Birmingham, and they might any day have a case in the city, but they were only retaining the staff necessary for keeping the hospital in proper order. The members of the committee had had an anxious time with regard to the disease but they claimed that they had been successful in preventing it spreading. As a rule the cases appeared in tramps found in lodging houses or the workhouse and they were still seeing that every supervision was exercised so that they might deal with the first case that made its appearance. The council would see how infinitely important this supervision was when he told them that during the past year their inspectors found no fewer than 28 persons in lodging houses who on medical examination were proved to have small-pox.

Rural Depopulation.

Mr. A. Lane, of Broom Court, a well-known Warwickshire farmer, has issued a new scheme for the formation of an association to prevent the migration of so many of the agricultural labourers to the towns. His idea is that an association should be formed connected with the Bidford Flower Show and Sports, to provide for young men, who have hitherto earned their wages on the land for a certain number of years, a bounty when they marry and settle down in the district. The scheme was discussed at a meeting of subscribers to the flower show. The ideal to which Mr. Lane aspired was a cottage occupied by a young and healthy couple, with a garden attached to be well stocked with vegetables and fruits. He suggested that members should pay, perhaps, 2*s.* a year for a period of five years and in return should receive a sum of £10 towards furnishing a cottage when they desired to marry. He thought that it would be a great advantage to the district as it would encourage labour, especially in the growing of fruit and vegetables. There was a difficulty about the providing of cottages, but he thought that the landlords would be encouraged to help in this if they saw the labourers doing their part to make the scheme work. He suggested, too, that the Government might grant loans to the owners of land for the purpose of building cottages. He proposed that the subscribers to the show should form themselves into an association for the purpose of helping young men who had already worked on the land and were desirous of settling there. The scheme was also advocated by the Rev. R. P. Ridsdall. Mr. G. H. Fosbroke, medical officer of health of Worcestershire, said that he was going to give evidence before the Commission on Physical Deterioration and his evidence would be to the effect that the labourers must have greater facilities and the power and opportunity to become actual owners of land and houses. The Worcestershire county council had put the Small Holdings Act of 1902 into force with great success and he asked why the same could not be done in Warwickshire. He suggested that the Warwickshire county council should be approached to assist labourers to acquire land and to build houses. He feared that Mr. Lane's proposal would not give the labourers sufficient interest to remain in the country and landlords could not build houses now except at a loss. A committee was appointed to consider Mr. Lane's scheme and to report to a future meeting.

The Dean of Worcester on Vivisection.

The Dean of Worcester recently presided at the annual meeting of the Worcester branch of the Society for the Prevention of Cruelty to Animals. The report recorded a prosperous year's work and that the society was in a flourishing condition. The committee felt very strongly on the subject of vivisection that no case should ever be performed by any but licensed and experienced professors and always under the influence of an anæsthetic and that the animal should be destroyed immediately afterwards. The Dean expressed his agreement with the views of the committee on the subject of vivisection. He had recently been asked to sign a petition and to speak in Birmingham against vivisection but had declined to do so as he believed in it. He thought that there was a good deal of ignorance in the public mind as to such experiments; cruelty was not permitted by the regulations and people should remember the benefits conferred on the human race by vivisection. He protested against the caging of singing birds and the destruction of larks to make a dish and of other birds solely for the purpose of ornamentation. Canon Cresswell Strange expressed his dissent from the opinions of the Dean on the subject of vivisection, to which the Dean replied that if the society was opposed to his views on this subject he should feel compelled to withdraw from the presidency.

Birmingham Sanatorium.

The Lord Mayor presided at the thirty eighth annual meeting of the subscribers to the Birmingham and Midland Counties Sanatorium held recently. In its annual report the committee announced that it had received a draft order from the Charity Commissioners approving the scheme [illegible]am by the aid of Colonel J. H. [illegible] the property at Sutton Coldfield. [illegible] be commenced as soon as the [illegible]anged. The alterations comprise the removal of the present kitchen and the erection in its place of a handsome dining hall capable of seating 110 patients; also of a new kitchen, servants' sitting room, larder, and scullery on a portion of the yard adjoining the building and an additional dormitory over each wing of the original structure. The system of drainage is to be remodelled. It was estimated that the alterations would absorb the whole of the proceeds of the property at Sutton Coldfield. The statistical tables for the year showed a slight falling off in the number of patients admitted, there being 1418 in 1903, against 1482 in 1902, while the number of days' stay was 25,592, compared with 26,867 in the previous year. The average stay was nearly one day longer. The average number of patients in the institution was 70·1, against 73 5. The difference arose partly from the decision of the committee not to admit consumptive patients and partly from the smaller number of special tickets purchased by the committee of the Hospital Sunday Fund and by the trustees of the Ronakes Charity. The total of the subscriptions was £1825 15*s.*, as compared with £1908 8*s.* 9*d.*, and the subscriptions carried forward amounted to £998 17*s.* 6*d.*, against £1031 8*s* 6*d.* The cost of maintenance remained the same as in previous years, but the yearly expenses per bed had increased by £2 11*s* This increase was attributable to the special expenditure in fire appliances and to the cost of renovating the whole of the mattresses.

March 9th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The late Mr. John Thomson.

BY the death after a short illness of Mr. John Thomson, chairman of the Manchester Royal Infirmary board, Manchester has lost one of her most valuable citizens. For a long period he was a member of the old infirmary board but on the long debated question of the removal or of the rebuilding of the infirmary on the Piccadilly site he favoured the removal. When the trustees at a meeting in 1902 decided to rebuild on the Stanley-grove site the greater number, including the much respected chairman, Mr. Edward Heywood, resigned their seats and Mr. Thomson was elected chairman of the new board. From that time to the date of his fatal illness he rendered invaluable service to the institution. His conciliatory bearing, the outcome in his case of genuine kindness of heart, combined with his great business capacity, was most helpful in overcoming difficulties and smoothing down differences. The loss of him will long be felt. One of the honorary staff said the other day that it was irreparable and another spoke warmly of the great interest which he showed in the medical school and also in the students over whom his influence was all that was good. He was a member of many of the important commercial institutions of the city and as chairman of the Bankers' Institute he advocated the establishment of a faculty of commerce at the Owens College. In 1901 he was president of the Chamber of Commerce. He was, moreover, actively interested in most of the philanthropic work in the city and for over 25 years he left his pleasant home at Bowdon every Sunday and Wednesday to conduct a Bible class in Hulme. He was a Liberal but did not take any very active part in politics till the last few years, and last autumn he was chosen as the Liberal candidate for one of the divisions of Manchester. He was broad-minded and tolerant and his friendships were not narrowed by his politics. As regards recreation he was fond of outdoor sports, was a good shot, and a capital angler. His funeral was marked by indications of widespread respect and regard.

Manchester Royal Infirmary.

The infirmary board held a special meeting yesterday to receive the report of Mr. J. J. Burnet of Glasgow, the assessor appointed to consider the plans for the new infirmary in Stanley-grove. 12 firms of architects were invited to prepare plans and those selected were found to be the work of Mr. Edwin T. Hall and Mr. John Brooke of London and Manchester, who were yesterday appointed by the board the architects for the building of the new infirmary. The surveyor of the board reports that the plans will entail an expenditure of £324,000, with an additional £16,500 if the full 600 beds are provided. All the designs submitted to the assessor will be exhibited in the course of the next few weeks at the City Art Gallery. The board reserves the right to alter or to vary the plans and before they are finally approved a meeting of the trustees must be held for the purpose of endorsing the action of the board.

Cremation for Paupers.

At the meeting of the Manchester board of guardians on March 2nd the question of cremation for paupers, which had been before it previously, was again referred to. At the previous meeting it was decided that the cost (£5) would be too great. A letter was read by the clerk stating that the directors of the crematorium "were willing to take into consideration the cremation of paupers at a cost of somewhere about 10*s*. each, which would include the use of the crematorium chapel, the decoration of the same with plants, and the use of the pall." On sanitary grounds no doubt cremation is unobjectionable, if not, indeed, distinctly desirable, and one gentleman thought that it should be carefully considered both on sanitary and economical grounds but that it could be carried out only when there were no relatives to claim the bodies. Another said that they ought to have some regard for the sentiment of the poor for there were many to whom cremation would be repugnant. There is no reason to fear that the Manchester guardians will deal harshly in the matter.

Anthrax in Manchester.

On Saturday last, March 5th, a man was admitted to the Manchester Infirmary from Levenshulme suffering from anthrax. It was supposed that he had been inoculated (in the arm) from a beast which he had killed. While arrangements were being made for his removal to the Monsall Hospital, for it was not a case to be kept at the infirmary, he left the building and does not appear to have been traced. Yesterday a young man from Sandbach was admitted also suffering from anthrax and it came out that he had dressed the beast which the first man had killed. He was at once sent to the Monsall Hospital.

March 8th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Small-pox in Cardiff.

A CASE of small-pox was reported in Cardiff on March 1st, the patient being a dock labourer. The whole of Wales has been singularly free from the disease for many months. In Cardiff during the second quarter of 1903 there were 45 cases notified and two deaths occurred, both of persons over 25 years of age. In the second half of the year not a single case came under the notice of the medical officer of health.

Death of Mr. Denis Nyhan, L.R.C.P. & S. Edin., L.F.P.S. Glasg.

Through the death of Mr. Denis Nyhan on March 1st at the early age of 32 years a very promising career has been cut short. He succumbed to an attack of pneumonia after an illness lasting only five days. He was a native of co. Cork and received his medical education at Queen's College, Cork, taking his diplomas at Edinburgh and Glasgow in 1897 and almost immediately settling in Brynmawr, Breconshire, where at the time of his death he held the positions of medical officer of health and certifying factory surgeon.

Tredegar Health Report.

In the annual review for the year 1902 of the sanitary condition of the county of Monmouth the sanitary committee of the county council animadverted upon the condition of Tredegar, the criticisms apparently having reference to the high death-rate—22 9 per 1000—and to the prevalence of typhoid fever. The annual report of the medical officer of health of Tredegar (Mr. G. A. Brown), which has been recently issued, shows that very different conditions prevailed in 1903 when the adjusted death rate from all causes was only 17 per 1000 or lower than any death-rate recorded in the district during the previous ten years and there were only 11 cases of typhoid fever notified compared with 42 in 1902, while a still more satisfactory feature of the report is to be found in the decreased rate of infantile mortality which in 1903 was 127 per 1000 births compared with an average rate in the previous ten years of 160 per 1000. This result is in some degree, no doubt, due to the excessive amount of rain which fell, the rainfall for the year having been 83 inches, whereas the average for the preceding 22 years was 58 inches. The district is not well sewered and the river which flows through it, though at times a raging torrent, is sometimes a mere brook and little better than a stagnant sewer.

The Recent County Council Elections in the West of England and South Wales.

Mr. John Meredith, M.D. Edin., has been returned for the Wellington district of the Somerset county council. Mr. E. J. Parry, M.D. R U.I., has been returned for the Garw Valley district of the Glamorganshire county council. Mr. R. L. Thomas, L.S.A., has been returned for the St. Clears district of the Carmarthenshire county council. Mr. Howell T. Evans, M.R.C.S. Eng., D.P.H. Cantab., has been returned for the Bedwellty district of the Monmouthshire county council. Mr. W. Dyne Steel, M.D., C.M. Aberd., has been returned for the Abergavenny district of the Monmouthshire county council. Mr. T. Hall Redwood, M.D., M.S. Durh., has been returned for the Rhymney district of the Monmouthshire county council.

Health of Torquay.

The medical officer of health of Torquay (Dr. T. Dunlop) in his annual report for 1903 states that the area of the borough is 3858 acres, the estimated population being 33,800. The crude death-rate was 13·4 per 1000, against an average of 15·9 per 1000 for the previous eight years; the corrected death-rate was 13 3 per 1000, as compared with 14 4 per 1000 for the preceding eight years. Excluding visitors the death-rate was 11·5 per 1000. The zymotic death-rate was 0 35 per 1000. The birth-rate was only 15 8 per 1000 but Torquay contains a higher population of persons at the more advanced periods of life than obtains in the population of the country as a whole. Referring to deaths from phthisis Dr. Dunlop states that when deaths occur in private houses a notice is forwarded to the householder offering to fumigate the rooms with formalin free of cost, but this offer has only been accepted in a small percentage of cases. Dr. Dunlop adds that he believes a word from the medical attendant advising such fumigation would have more effect than any number of notices.

March 7th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Annual Dinner of the Edinburgh Royal Medical Society.

THE annual dinner of the Edinburgh Royal Medical Society was held on March 3rd. Owing to the illness of Dr. Shaw, the senior president, Dr. D. O. Ll. Fitzwilliams presided.

Sir William Turner, K.C.B., was the guest of the evening, whilst among the other guests present were the Lord Provost, Colonel Trevor, R.A.M.C., Sir John Batty Tuke, M.P., and the Rev. Dr. Cameron Lees. The toast of "The Guest" was given by the chairman in felicitous terms and was responded to by Sir William Turner in a most interesting and kindly manner.

Appointment of a King's Physician in Scotland.

The intimation that Professor Sir Thomas Fraser has been honoured by being appointed one of His Majesty's physicians in Scotland, has given rise to much satisfaction in university circles. The last holder of this honour in Edinburgh was Dr. George W. Balfour.

Small-pox in Edinburgh.

While there has been no alarming increase in the number of cases of small-pox reported in Edinburgh, fresh cases keep appearing at the rate of two or three each week and enough to keep the public health authorities actively on the *alert*.

Royal Edinburgh Asylum for the Insane.

The annual meeting of the corporation of the Royal Edinburgh Asylum for the Insane was held on Feb. 29th. The annual report of the managers showed that the daily average number of patients of all classes during the year 1903 had been 917, a decrease of 30 as compared with the preceding year. This decrease was mainly in the rate-paying patients who had numbered 542, as against 566 in the preceding year. In addition to the rate-paid patients accommodated in the asylum the managers had to find accommodation in other asylums for 153 patients from the Edinburgh city parish. The number of voluntary patients under treatment had been 25. The ordinary revenue amounted to £58,762 12*s.* 2*d.* and the ordinary expenditure to £53,868 5*s.* 8*d.*, leaving a surplus of £4894 6*s.* 6*d.* From this surplus the sum of £1970 was deducted as the annual instalment towards the liquidation of the debt on the West House, leaving a free surplus of £2924. The report of Dr. T. S. Clouston, the physician-superintendent, stated that the admissions last year numbered 411, of whom 196 were men and 215 were women. The total number of patients under treatment during the year had been 1361. The number of patients discharged had been 313, of whom 145 were men and 168 were women. The deaths numbered 119, of which 64 occurred in men and 55 in women. The majority of the deaths had resulted from one of four diseases—viz., general paralysis of the insane, senile decay with brain disease, tuberculosis, and apoplexy and ordinary brain softening. With regard to tuberculosis there had only been three deaths from that disease in Craig House since it was opened nine years ago and all three cases had been imported. In the West House there had been a considerable amount of tuberculosis and during the last ten years—the *years of overcrowding—there had been a decided increase* in the number of cases of that disease. Dr. Clouston then commented at some length on the increase of insanity and especially on the increase of alcoholic insanity. He suggested that the epidemic of influenza of 1890 by lowering the nervous tone might have tended to set up a craving for the stimulus of alcohol. Dr. Clouston concluded by making a plea to the general public to take a more rational view of mental disease which should be simply regarded as a disease of the brain and looked on in the same way as other diseases.

March 7th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Private Entrée at Dublin Castle.

THE private entrée at Dublin Castle has been restored to the President of the Royal College of Physicians of Ireland and the President of the Royal College of Surgeons in Ireland.

Small-pox on Achill Island.

A serious outbreak of small-pox has recently occurred on Achill Island, where between 20 and 30 cases are now being treated. It is said that the disease was imported from Glasgow in which city it is now prevalent. Mr. D. Edgar Flinn, one of the medical inspectors of the Local Government Board, visited the island with a view to advising as to the best means of preventing the spread of the affection. A temporary isolation hospital has been opened by the district council under the superintendence of Mr. T. H. Croly, the dispensary medical officer of the island, and the services of trained nurses have been obtained. A large proportion of the island population live under housing conditions which are most unhealthy, while the sanitary state of some of the congested villages is very bad.

Public Health of Dublin.

In connexion with the approaching visit of His Majesty the King it is satisfactory to note that the death rate of the city of Dublin is lower than usual. At a meeting of the public health committee held on March 1st Sir Charles Cameron reported that the death-rate from all causes for the week ending Feb. 27th, 1904, was 28·1 per 1000 persons living, the mean death-rate in a corresponding period of the previous ten years being 35·3. The death-rate for the Dublin registration area for 1903 was the lowest recorded, being 22·8 per 1000. The zymotic death-rate was also the lowest on record, being only 1·5, as against a mean rate of 2·8 for the previous ten years.

Health of Belfast.

From the report presented at the meeting of the city corporation on March 1st it appears that the number of cases of typhoid fever and the deaths therefrom have been very few and the disease seems to be dying out. The deaths from whooping-cough (there is at present a widespread epidemic) are still very numerous. During the month eight cases of small-pox were notified. The public health committee wish measles, whooping-cough, and phthisis all to be included amongst the notifiable diseases. It is unfortunate that the existence of small-pox is being concealed in the houses and the efforts of the sanitary officers to remove patients to the small-pox hospital are being resisted. It has been decided to grant £250 per annum for three years to deal with the foreshore nuisance at Cultra. 162 cases of zymotic disease have been notified between Jan. 24th and Feb. 20th—viz., 47 cases of scarlet fever, 40 of erysipelas, 26 of typhoid fever, 18 of diphtheria, 17 of simple continued fever, eight of small-pox, and three each of puerperal fever and membranous croup.

Queen's College, Belfast.

The Misses Riddel, who recently gave a munificent gift of £12,000 to the Royal Victoria Hospital, have presented £5000 to Queen's College, Belfast, for the purpose of founding a "Riddel demonstratorship in pathology and bacteriology" in connexion with the Musgrave chair of pathology founded by their cousin, Sir James Musgrave, Bart., D.L., in 1901. This endowment will secure a permanent assistant in the pathological laboratory.

Royal Victoria Hospital, Belfast.

At the bi-monthly meeting of the board of management of this hospital on March 2nd the Right Hon. W. J. Pirrie, on behalf of Mrs. Pirrie, handed over cash and securities to the value of more than £48,000, raised by her as an endowment fund for the hospital. This sum, together with the donation just mentioned of the Misses Riddel and £1000 given by the Right Hon. Thomas Sinclair and his family, brings the endowment fund up to £60,000, a sum in addition to £100,000 collected by Mrs. Pirrie for the building and equipment of the hospital. The following motion, which was proposed by the chairman, seconded by the Dean of Connor, and supported by Professor J. W. Byers on behalf of the medical staff was then passed by acclamation:—

[illegible]

Mrs. Pirrie, who was much affected, said that the work had been to her a labour of love and her one hope was that the hospital which was so near to her heart would prove a real boon to those for whose benefit it had been erected. The annual meeting, at which Mr. Pirrie is to preside, will be held on March 22nd.

The Lectureship on Medical Jurisprudence in Queen's College, Belfast.

No better selection or more popular appointment could have been made than that of Dr. Thomas Houston as joint lecturer on medical jurisprudence in Queen's College, Belfast.

March 7th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Cancer.

AT the meeting of the Academy of Medicine held on Feb. 25th M. Doyen read a paper in which he reminded the meeting that he had previously notified the existence of a microbe peculiar to cancerous tissues—namely, the micrococcus neoformans. This microbe when injected into animals had caused the formation of various tumours. Since 1901 he had treated 126 cases of malignant growth with injections either of cultures of the microbe of variable virulence or of its toxins. Of these 126 cases 58 had not benefited in any way, 47 were still under observation, and 21 might be considered as cured. Of the 47 cases under observation 29 had not so far shown definite enough signs one way or the other for an opinion to be arrived at, but they had improved at least temporarily. The remaining 18, although they had manifestly improved, were not included among the cures, for the new growths, although they were being absorbed, had not yet completely disappeared. The remaining 21 patients in whom the new growths had completely disappeared M. Doyen reckoned as cured. The tumours comprised lymphadenoma of the testicle with secondary growths in the groin, sarcoma of the muscles of the thigh, cancer of the stomach, cancer of the uterus with secondary growths in the pelvis, cancer of the tongue, epithelioma of the face with affection of the lymphatic glands, sarcoma of the tonsil, and epithelioma of the breast.

The "Femme Tuberculeuse."

A new department of social hygiene has just been set on foot in Paris under the name of "La femme tuberculeuse." Its object is to protect the young girl, the mother, and the child from tuberculosis by offering those who are menaced by the disease an opportunity of living in wholesome air during the period of enforced rest which may be considered necessary for the repair of their constitutions. The society has opened a dispensary in the Rue Carpeaux where mothers are taught how they should bring up their infants and where they can obtain milk of good quality so that they can give up suckling. The dispensary will also look after the disinfection of the lodgings and clothing of the tuberculous and will help the sick to live as hygienically as possible. Housewives and young girls can also be taught the elements of housekeeping at the dispensary which will be open on holidays. A house which has been leased in the suburbs will serve for a house of rest and in it there will be room for 120 pensioners. Finally, a convalescent home will be established in the centre of France where pensioners will be able to stay for six months in fresh air. The administrative council and the committee of patronage comprise various well-known medical men, such as Dr. Bouchard, Dr. Brouardel, Dr. Budin, Dr. Armand Gautier, and Dr. Pozzi. The subscription may be as low as one franc per annum.

Acid Medication of the Duodenum.

At the meeting of the Academy of Medicine held on Feb. 16th M. Enriquez read a paper in which he recalled the researches of Hallion, Delezenne, Frouin, and himself upon the above subject. He considered that the therapeutic problem was how to bring an acid in contact with the duodenal mucous membrane For his own part he had had recourse to capsules of tartaric acid. The capsule was made of gluten, a material which is refractory to the action of the gastric juice in an acid medium but which is easily attacked in an alkaline medium. He had treated in this way 16 patients in the wards under the charge of M. Brissaud and M. Ballet. In seven of these who suffered from marked constipation the bowels became regular. In five patients who suffered from constipation and muco-membranous colitis there was a rapid improvement in the symptoms. In three cases of nervous motor dyspepsia the treatment had a markedly favourable influence upon the subjective symptoms, such as feelings of weight, sleepiness, and swelling. It would appear therefore that acid medication of the duodenum exerts a special influence upon the secretory functions in man.

Limitation of the Dietetic Use of Chloride of Sodium in Hyperchlorhydria.

Now that the importance of the proportion of chloride of sodium present in the fluids of the body is recognised, and in consequence also of the researches of M. Widal on the subject of "déchloruration," attention is being given to the relation which an increased quantity of chloride of sodium in the fluids bears to hyperchlorhydria. Chloride of sodium is the only inorganic alimentary principle which is insufficiently represented in ordinary food and consequently has to be added specially thereto. It is somewhat singular that the desire for chloride of sodium which everyone experiences varies a good deal with the nature of the food. The carnivora can do without it very well but it is indispensable to the herbivora. It is certain that those who live in towns and are meat-eaters to a great extent take only a fourth of the quantity of chloride of sodium used by the peasantry who eat a larger proportion of vegetables. Some persons, however, take an excessive amount of chloride of sodium, even as much as three quarters of an ounce or an ounce per day. The kidneys, which are the organs of elimination, are thereby overworked and it is thought that many cases of nephritis originate in this way. At any rate, patients suffering from nephritis very soon improve when they are placed on a dietary decidedly poor in salt and in them it is possible to cause œdema and swelling of the legs to disappear and to reappear at will by withholding salt in the one case and supplying it in the other. The relations of chloride of sodium to disease of the stomach are not less singular. It is reasonable to suppose that the hydrochloric acid of the gastric secretion is formed at the expense of the chloride of sodium. Persons who take little salt have weak stomachs and in tropical countries, where much salt is eliminated by the perspiration, the functions of the stomach are impaired, whilst on the other hand those who take large quantities of salt without the justification afforded by a diet mainly vegetable suffer from overacidity of the gastric juice and some degree of interference with the action of the kidneys. It has therefore been proposed to treat hyperchlorhydria by restricting the ingestion of salt as in the case of nephritis. The subject was discussed not long ago by M. Linossier at a meeting of the Society of Biology and at the same meeting M. Laufer said that in cases of obstinate hyperchlorhydria with occasional exacerbations and vomiting the patients improved considerably when taking ordinary mixed diet without the addition of salt, but every time that they took two or three grammes (30 or 40 grains) of salt with their food the pain returned.

The Budget of the Assistance Publique for 1904.

The budget of the Assistance ·Publique for 1904 has reached the sum of nearly 64,000,000 francs. Despite various economies which have been carried out the expenses of the year 1903 have exceeded the estimates by over 1,200,000 francs. Food and drink are responsible for 655,000 francs of this excess and the consumption of milk goes up every year, the yearly sums expended for this beverage having risen from 482,000 francs in 1891 to 1,189,000 francs in 1903. It must not be thought that the number of patients has increased in this proportion, for the patients have only increased by 15 per cent. and the consumption of wine has not proportionately diminished. Expenses due to extra comforts supplied to nurses have also increased, while the surgeons have exceeded the estimates for dressings, instruments, and apparatus by 80,000 francs.

March 8th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

A New Remedy against Sea-sickness.

ANÆSTHESIN, which was recommended by Professor von Noorden in the treatment of cases of gastric hyperæsthesia, nervous dyspepsia, and gastric ulcer, has also proved efficacious in sea-sickness. Dr. Schliep formerly a medical officer of a passenger steamer, writing to the *Deutsche Medicinische Wochenschrift*, says that on his voyages to America, Australia, and the Pacific he used to administer anæsthesin as a prophylactic to passengers who on previous voyages had suffered from sea-sickness. From three to four half-gramme powders were given during the first few hours at sea and were repeated on the following day, the result being that the majority of those passengers were not sea-sick. The remedy proved efficacious even after the first symptoms such as giddiness and loss of appetite had made their appearance, but no benefit was obtained when sea-sickness had fully set in, the patients being as a rule too much overcome by their sensations to swallow any medicine at all. It is essential to administer full doses of from two to three grammes a day from the beginning. The use of the drug is not attended with any risk or danger. Dr. Schliep recommends, therefore, that anæsthesin should form part of the stock of medicines carried on board ship.

Dentition and Tuberculosis.

In a paper read before the Berlin Medical Society Dr. Westenhoeffer gave an account of some experiments on the occurrence of tuberculous infection in early life. He made subcutaneous injections of tuberculous material in the lumbar region of 120 guinea-pigs, 30 rabbits, and three calves The small animals died after two or three months and the calves were killed after that time. At the necropsies caseous changes were found at the site of the injection and in the inguinal, retroperitoneal, and in some cases the mesenteric and perirenal glands. The spleen and the liver were often tuberculous, whilst tuberculosis of the lungs was rather rare. Tuberculous infection might obviously spread through the lymphatic vessels. In 12 cases where the bronchial glands were tuberculous miliary tuberculosis o[illegible] an observation in accordance [illegible] views. Dr. Westenhoeffer found [illegible] sometimes the course of the tuberculous infection was rather irregular, not always going along the lymphatic vessels, so that glands of distant regions were affected whilst intermediate glands were still healthy. Attention was drawn to the fact that tuberculosis was never present in children under three months of age and is rather frequent after the first year. Dr. Westenhoeffer was of opinion that the frequency of glandular tuberculosis in that period is in connexion with dentition, during which the mucosa of the mouth becomes swollen and somewhat inflamed so that infection may easily occur. Similar conditions exist in the lower animals. Nearly all mammals are either born with teeth or get them within the first fortnight after birth. The only exception is the pig, in which animal the teeth are late in making their appearance. It was remarkable that tuberculosis developed in pigs after dentition and that the lymphatic glands of the neck became swollen first just as in the scrofula of children. Dr. Westenhoeffer said that the frequency of tuberculosis of the lymphatic glands in the poorer classes was principally due to the uncleanly state of their homes. Children during dentition were inclined to put things in their mouths, a practice which is not free from risk in insanitary surroundings. Alluding to Professor Behring's theory as to the propagation of tuberculous infection through the intestines he said that the alleged permeability of the intestinal mucosa only existed in the first two days of life; the intestines of children and of adults did not differ as to their liability to tuberculosis. He agreed with Professor Behring that the struggle against tuberculosis must begin in childhood, although the points of view from which they regarded the general question of tuberculous infection were different in some respects.

March 7th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

The First Successful Ovariotomy performed in Switzerland.

THE following details may be of interest to the medical profession in England. In December, 1903, a clergyman's widow died at Zürich at the ripe age of 83 years, succumbing to senile marasmus aggravated by broncho-pneumonia. Nearly 40 years ago she suffered from an abdominal tumour which threatened her life. After various methods employed to prevent the rapid growth of the tumour had all signally failed her medical attendants and Professor Breslau, who at that time occupied the chair of obstetric medicine at the University of Zürich, called i[illegible] Wells of London who perform[illegible] 1865, and removed an ovarian [illegible] 56 pounds (25 kilogrammes). [illegible] and outlived most of her medical attendants. It may be mentioned here that a Dr. Carl Gustav Jung performed the first laparotomy (which, however, was unsuccessful) in Basle as early as 1851.

Attendance at Medical Schools in Switzerland.

The number of medical students entered at the five Swiss universities during this winter term, 1903-04, amounted to 1654, a slight decrease as compared with 1696 in the corresponding period a year ago. The fair sex still preponderates, there being 891 lady students (874 of whom are foreigners) and 763 male students; of the ladies five are studying at Basle, 151 at Geneva, 177 at Zürich, 181 at Lausanne, and 377 at Berne. The total number of medical students at each of the five universities is as follows: 140 at Basle, 275 at Lausanne, 307 at Geneva, 388 at Zürich, and 544 at Berne. The establishment of a medical school reserved for lady students is being seriously discussed in the lay and medical press.

Fulminant Hæmorrhagic Purpura.

Dr A. von Lerber has published an account of a rare case of purpura terminating fatally in 12 hours. The patient was a healthy girl 13 months old, one of a healthy but slightly neurotic family. The child had not been ill except once when she had a slight attack of bronchitis which did not call for medical treatment. During the night of Jan. 5th she became restless and seemed very collapsed at 6 A.M., so that a medical man was called in. At 7 A.M. on the 5th he found the child quietly taking food. Distributed over the chest, arms, and legs he observed a number of hæmorrhagic spots of a bluish-red colour of about the size of lentils and even larger. The pulse was quick but there was no pyrexia He prescribed a warm bath. Called in again at 9 30 A M he found numerous similar spots coming out all over the face and body, some as large as a five-shilling piece. At 11 30 A.M. the temperature was 99° F., the respirations were 60 per minute, and the pulse could not be counted. The child became comatose and passed away quietly at 1 P M. A post-mortem examination was not permitted. Dr. von Lerber remarks that a sister of the patient died four years previously from broncho-pneumonia at the age of two years after a skin eruption which may have been either measles or a "similar skin affection," as the mother called it.

Zurich, Feb. 29th

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

American Nurses for the Japanese Army.

THE United States is to aid in nursing the wounded and sick Japanese soldiers. Dr Anita Newcomb McGee, who organised a corps of nurses during the Spanish-American war in 1898, first in Cuba and afterwards in the Philippines, has offered to fit out a nursing staff for service with the Japanese army. The Japanese Minister in Washington has accepted the offer on behalf of his Government and Dr. McGee will leave in the early part of March with several nurses to establish a field hospital in Japan. There are to be formed committees of women in different parts of the country to raise funds for the support of the nurses. More nurses will follow if the subscriptions are large enough to cover expenses.

Typhoid Fever and Diphtheria at the University of Minnesota.

[illegible] that somewhat [illegible] or exist at the se[illegible] ably close for St[illegible] has publicly the balance of [illegible] warned the students against the city water. A further outbreak of typhoid fever is feared. A faculty health committee has been appointed to fight the contagion.

Consolidation of the Medical Society of the State of New York and the New York branch of the American Medical Association.

The consolidation of the two medical organisations of New York State is, at the time of writing, practically an accomplished fact. For many years there have been more or less serious differences between these two bodies, but at length the hatchet has been buried and a satisfactory agreement has been reached. This result has been mainly due to the [illegible] profession [illegible] organisations to an agreement. The question upon which the societies were divided was one of ethics, the Medical Society of the State of New York making a stand against professional sectarianism and declaring against ethical differences of opinion among legally licensed practitioners of other schools. At the annual meeting of the Medical Society of the State of New York, held in Albany on Jan. 26th, the following motions were unanimously adopted:—

> Resolved, that the report of the joint committee of conference be accepted and that the proposed agreement for the consolidation of the Medical Society of the State of New York and the New York State Medical Association be and the same is hereby approved, and the president of the society is hereby authorised and directed to execute the same in the name and behalf of the society, and the secretary is hereby authorised and directed to affix the corporate seal thereto; and be it further resolved that the committee of the society heretofore appointed for the purpose of bringing about the consolidation—namely, Dr. Henry L. Elsner, Dr. A. Jacobi, Dr. A. Vanderbeor, Dr George Ryerson Fowler, and Dr. Frank Van Fleet—be and they are hereby continued as such committee with full power and authority to do whatever may be necessary to carry the agreement into effect.

Action on the adoption of the report of the joint committee of conference, together with the proposal of motions ratifying the action of the State society, will be taken at the stated meeting of the Medical Society of the State of New York to be held on Monday, Feb. 29th.

Tenement Children and Tuberculosis.

At a recent meeting of the Association for Improving the Condition of the Poor an appropriation of $15,000 (£3000) was made for the maintenance at the seaside of 50 New York tenement children suffering from non-pulmonary forms of tuberculosis. The association wishes to educate the general public to a knowledge of the fact that a large percentage of children known merely as cripples are suffering from tuberculosis and can be cured. Dr. Hermann Biggs of the New York Health Department declares that there are in the New York tenements alone from 3000 to 4000 children under 15 years of age suffering from scrofula and tuberculosis of the bones, the joints, and the lymphatic glands. It is, of course, a well-known fact that tuberculosis of the lungs affects but a relatively small number of children under 15 years of age.

Surgeon wanted on the Panama Commission.

The committee on medical legislation of the American Medical Association has requested President Roosevelt to appoint on the Panama Canal Commission a member of the medical profession and has suggested that Colonel William C. Gorgas is well qualified for the position. Colonel Gorgas is a surgeon in the army and is widely known for his researches in Cuba into the causes of yellow fever. The fact is urged that—

> Under both the French administrations at the Isthmus the engineering problems themselves, to the chagrin of the medical profession of the world, failed of accomplishment largely through the frightful mortality among officers and labourers consequent upon lack of authority on the part of medical officers intrusted with the work of sanitation; that the same conditions of insalubrity exist now that existed then and that consequently the sanitary problems are to be recognised as second in importance, if second at all, only to those connected with the engineering department.

New York Eye and Ear Infirmary.

The board of directors of the New York Eye and Ear Infirmary has decided to curtail the scope of the work of that institution after May 1st in the event of sufficient funds for its maintenance not being collected. Even after March 1st no patients will be received in the part of the hospital known as Platt Pavilion in which contagious diseases of the eye are treated. The closing of this wing of the hospital would be a misfortune for many infants living in the very poor districts of the east side. The infirmary has been in existence for 86 years and is considered to be the foremost institution of its kind in the United States.

Feb. 27th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Quarantine against Small-pox.

IN consequence of an outbreak of small-pox in Christchurch, New Zealand, the various boards of health in Australia have declared New Zealand to be infected and all vessels from New Zealand ports will be quarantined and no passengers allowed to land for 15 days unless successfully vaccinated within the last two years or until *pratique* is granted by the health authorities. The necessity of placing quarantine regulations under Federal control as speedily as possible is again made manifest by the different adopted by the several States in this instance. The vessel to arrive from New Zealand at Australian after notification of the outbreak was the *Mocraki* Hobart. She was allowed to berth and to unship and ship cargo but all passengers were prohibited from landing. The Tasmanian passengers were therefore taken to Melbourne, the next port of call. On arrival at Phillip Heads the *Mocraki* was boarded by two medic officers of the Board of Health. The passengers wer examined and it was found that all who had come fro Christchurch or had passed through that city during the tim of the outbreak of small-pox had been successfully vac cinated within the last two years. The names and addresse of all the passengers were taken and on their giving assu ances to report to the Board of Health in case of illne they were allowed to land. The 50 passengers for Hoba can now return there by way of Launceston. The Board Health of New South Wales is quarant [illegible] Christchurch only. In Queensland a [illegible] issued ordering that all vessels from N [illegible] quarantined until granted *pratique* by the health authoritie Some uniformity of action is obviously necessary.

Bubonic Plague.

Some time ago the Government of West Australia co missioned Dr. Anderson to visit India and to inquire into t occurrence and treatment of bubonic plague. Dr. Anders has sent in a report in which he states that plague is not in a great majority of cases a contagious disease as ordinarily understood and that the discovery of a case in a general hospital need not necessitate the quarantine of the whole institution. A case of supposed bubonic plague was discovered in a coloured seaman on board a steamer at Williamstown, Melbourne. The steamer was placed in quarantine pending inquiries, the result of which was that the case was not plague.

Tuberculosis.

The Victorian Year-book for 1902, which has just made its belated appearance, includes a contribution by Dr. D. Astley Gresswell, chairman of the Board of Public Health, entitled "The Presence of Tuberculosis in Victoria." He mentions that from 1863 to 1887 the death-rate from phthisis and other tuberculous diseases remained fairly constant. In the triennial period commencing at the latter year the average yearly rate per 100 000 inhabitants for the metropolitan districts was 283 and for the extra-metropolitan 119 A steady improvement then set in and during the triennial period 1899–1901 in the metropolitan districts the average yearly deaths from phthisis were 144 per 100,000 and those from other tuberculous diseases were 42 per 100,000. Some few months ago, as mentioned at the time, the Board of Health of Victoria made tuberculosis a notifiable disease under the provisions of the Health Act. This procedure has been much opposed by many members of the medical profession. In his annual report to the Board of Health, Dr. Wilkinson, health officer of Preston, referred to the subject and observed that from a long experience in an isolated district with a settled population he was satisfied of the small risk of contagion and had never seen a case of its occurrence, although for over 20 years he had watched the other members of households where one had been attacked with tubercle. On the other hand, the reporting and segregating of such cases would have inflicted great hardship. Dr. D. Turner, who as examining medical officer to the sanatorium for consumptives in Victoria has had exceptional opportunities for observation, has forcibly expressed his dissent from the action of the Board of Health. He records numerous instances of the hardship inflicted by the opinions now promulgated as to the contagiousness of tubercle—opinions which his experience shows to be exaggerated greatly. The plans for the new "Kronheimer" wing for consumptives at the Austin Hospital have been approved. The building will accommodate 30 beds on each floor, making the total number for consumptives 102 The new wing will not be utilised, however, until the question of its maintenance has been settled. Like the infectious diseases hospital the building will lie idle unless the Government comes to the assistance of the committee which at present it absolutely declines to do.

Preservatives in Food.

As previously stated in this column[1] the manager of a concentrated milk company in Sydney was charged with an offence against the regulations of the Board of Health in [illegible] [illegible]ic acid in a proportion exceeding [illegible] The defendant contended that [illegible] d on the ground that the regulation was invalid, because unreasonable, and that the provision made did not "regulate" as required by the Health Act but for practical purposes prohibited the use of boric acid as a preservative. The magistrate decided that the regulation was not unreasonable, convicted the defendant, and fined him in the sum of £2, in default seven days' imprisonment with hard labour.

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[1] THE LANCET, Feb. 27th, 1904, p. 618.

Infantile Mortality.

The Victorian Year-book gives some figures respecting infantile mortality in Australia. The average deaths under one year of age to 100 births for the period 1891–1901 is: Western Australia, 14 5; New South Wales, 11·2; Victoria, 11·1; South Australia, 10·5; Queensland, 10·3; and Tasmania, 9 6. Figures have been published showing the percentage of children who died before reaching the age of 12 months in Victoria during a series of years. From 1866 to 1902 the two highest percentages were 12·91 during the period 1866–70 and 13 41 in 1898, while the two lowest were 10 23 in 1895 and 9 53 in 1900.

Medical Society of Victoria.

The annual meeting of the Medical Society of Victoria was held on Jan. 13th. The report stated that there were 290 members and that 23 new members had been elected during the year. The average attendance at meetings was 36. The following officers were elected for the year 1904:—President: Dr. G. T. Howard. Vice-Presidents: Mr. M. U. O'Sullivan and Dr. A. J. Wood Treasurer: Dr. C. H. Mollison. Secretary: Dr. L. J. Balfour. Librarians: Mr. A. W. F. Noyes and Dr. H. D. Stephens. Committee: Dr. P. Bennie, Dr. W. Boyd, Dr. Buchanan, Dr. Gault, Dr. Lawrence, Dr. Moore, Mr. F. W. W. Morton, Mr. R. Hamilton Russell, Mr. W. Beattie Smith, and Dr. R. R. Stawell. The retiring president, Mr. Russell, read the annual address, taking a somewhat unusual course by dealing with the special subject of the Congenital Origin of Hernia, a subject which he has discussed on several occasions during the last five years.[1]

Hospital Affairs.

The sixteenth annual report of the Royal North Shore Hospital, Sydney, stated that the first portion of the new hospital had been opened and that the institution had remained practically full ever since. During the 12 months there were 153 patients treated in the old hospital, of whom 120 were discharged cured and nine died, while nine were removed to the new building. In the new hospital 340 patients had been treated, of whom 239 were discharged cured, and 30 died, leaving 42 under treatment at the end of the year. The average daily number resident in the old hospital was 21·65 and in the new 39. The total number of deaths (of which eight occurred within 24 hours of admission) was 39, being 8·05 per cent.—The annual report of the Balmain Hospital stated that the number of patients treated in the institution last year had been 339 in the indoor department and 2395 in the outdoor, as against 341 and 2193 respectively for 1902. The mortality on the year's cases had been 5 8 per cent.—By the will of the late Mr. Felton, senior partner in the firm of Felton, Grimwade and Co, wholesale druggists, Melbourne, the hospitals of Melbourne will be very largely benefited. He left between £400,000 and £450,000 to be invested by trustees and half the income is to be devoted to charities and half to the purchase of works of art "calculated to raise or improve the public taste." With regard to the bequest for the charities the testator said:

> [illegible]

[illegible] staff of the Melbourne Hospital [illegible] of the committee of management [illegible] aiming that under the Hospital [illegible] placed under the physicians and surgeons who were to be elected by the subscribers. The specialists already appointed by the committee are dermatologist, ophthalmologist, aurist, skiagraphist, medical electricians, and anæsthetists. The committee has now obtained counsel's opinion on the subject which is that the committee has not the right to appoint specialists.

New Border Medical Association.

A conference of medical practitioners from Albury, Corowa, Wodonga, Rutherglen, Chiltern, and Wangarratta was recently held, when it was decided to form a "Border Medical Association." Dr. Andrews was elected President, Dr. C. F. Harkin Vice-President, and Dr. Lang secretary. Chiltern was selected as the meeting place. It is proposed later to affiliate the association with the New South Wales branch of the British Medical Association.

Appointments.

Dr. C. W. Reid, senior medical officer of the Department of Lunacy, at present acting as port health officer at Sydney, and visiting medical officer to the Shaftesbury Reformatory, has been appointed port health officer of Sydney in the place of Dr. William Peirce who has retired. —Dr. Charles MacLaurin has been appointed a member of the Police Medical Board, New South Wales, in the room of Sir H. Normand MacLaurin, M L C.

A Brave Medical Man.

At a recent serious fire at the Wallaroo Mines, South Australia, heroic work was performed by Dr. H. R. Letcher. Finding that the lives of the men underground were endangered through want of medical aid Dr. Letcher went down and worked in the poisonous air for hours until he was utterly exhausted.

Obituary.

Dr. J. G. Carstairs, one of the oldest practitioners of Geelong, Victoria, died on Jan 13th. Dr Carstairs was a son of the late Surgeon W. Carstairs of the East India Company's service and was born at Poonah, in the Bombay Presidency, India, on June 28th, 1829. He studied medicine at the University of Edinburgh where he graduated as M.D. in 1850. He commenced practice in Moorabool-street, Geelong, in February, 1854, and soon acquired a large practice. He was universally respected and was especially good to the poor. For many years he was health officer of the city and took a great interest in epidemiological questions, contributing many papers to the local medical societies on influenza, measles, and like subjects, the occurrences of which he believed were influenced by the amount of ozone in the atmosphere.

Feb 2nd.

Obituary.

ALEXANDER DAVIDSON, M.A., M.D. EDIN., F.R C.P. LOND.,

CONSULTING PHYSICIAN TO THE LIVERPOOL ROYAL INFIRMARY.

IT is with much regret that we have to record the death of Dr. Alexander Davidson, at the age of 66 years, which event took place on March 3rd at his residence at 2, Gambier-terrace, Liverpool. He had been in failing health for some time and in October of last year was confined to his room. He recovered sufficiently to enable him to resume a part of his professional work but apparently the exertion was more than he was able to endure as a serious relapse occurred about four weeks ago from which he never rallied. Dr. Davidson was born in Edinburgh in 1838, being the son of the late Rev. Dr. Davidson of that city. He graduated as Bachelor of Medicine at the University of Edinburgh in 1863 and as Doctor of Medicine in 1872. He was elected a Fellow of the Royal College of Physicians of London in 1885, having been admitted to its Membership in 1874. He was formerly assistant physician to the Liverpool Infirmary for Children and honorary physician to the Liverpool Northern Hospital and in 1876 was appointed honorary physician to the Liverpool Royal Infirmary, from which post he retired in the spring of 1897 and was then appointed consulting physician. He took a leading part in the reconstruction of the old Liverpool Royal Infirmary School of Medicine which in 1881 became the medical faculty of University College, Liverpool, and is now the medical faculty of the University of Liverpool. He was the first lecturer on pathology and when the old school of medicine was merged into University College he was promoted to the rank of professor. Upon resigning that post some years ago he was honoured with the title of emeritus professor and within the last few months was elected to a seat on the medical faculty of the University of Liverpool *honoris causâ*. His clinical teaching was highly valued for its thoroughness by the students of the Royal Infirmary and great confidence was placed in his judgment by his professional brethren. His reputation as a physician was not confined to Liverpool but extended to the surrounding districts and North Wales. During his term of office at the Royal Infirmary, which occupied nearly 21 years, his advice and guidance in matters affecting the general interests of the hospital were eagerly sought by the chairman and members of the managing committee, his singleness of purpose and his integrity of character being so fully acknowledged. He also gave valuable assistance to the building committee of the new Royal Infirmary in matters connected with its sanitary and other requirements. At one time Dr. Davidson took a large interest in the Lancashire and Cheshire branch of the British Medical Association, of which he had been honorary secretary and president. He also took a great interest in the nurses' home and training school for nurses in connexion with the Royal Infirmary and in the Queen Victoria District Nursing Association. He was always ready to attend the sick nurses and by them he will be sadly missed. Some few years ago he was offered the presidentship of the Liverpool Medical Institution but he declined the honour for reasons of health. The profession of Liverpool esteemed him as a model of uprightness and single dealing and his example will not soon be forgotten by his numerous friends and former students. He leaves a widow and a son who is an undergraduate at Trinity College, Oxford.

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[1] Mr. Russell's address is published in full on p. 707 of our present issue.—ED. L.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced: Dr. A. Gross, *privat-docent* of internal medicine in the University of Kiel.—Dr. Magnus Blix, professor of physiology in the University of Lund, at the age of 55 years. He graduated in Upsala and was for some years assistant to the professor of medical physics there. He published numerous papers on the Physiology of Muscles and especially on that of flight in birds.—Dr. Hermann Emminghaus, formerly professor of mental diseases in the University of Freiburg. He was born in Weimar in 1845 and studied in Göttingen, Jena, Vienna, and Leipsic. He was *privat-docent* in Würzburg and professor in Dorpat (Iurieff) before being offered the chair in Freiburg in 1886. He wrote various monographs on Mental Diseases and the portion of Penzoldt and Stintzing's "Handbook of Therapeutics" dealing with these.

Medical News.

UNIVERSITY OF CAMBRIDGE.—Dr. J. G. Adami and Professor H. T. Bovey, F R S, of Montreal will represent the University at the jubilee festivities of the University of Wisconsin to be celebrated in June next.—At the Congregation held on March 5th medical degrees were conferred as follows:—

Doctors of Medicine.—S. H. A. Lambert, St. John's; and W. M. Willoughby, Gonville and Caius.
Bachelor of Medicine and Bachelor of Surgery.—G. S. Haynes, King's.
Bachelors of Medicine.—R. S. Drew and C. M. Murray, Pembroke; and P. Hardy, Trinity Hall.

FOREIGN UNIVERSITY INTELLIGENCE.—*Basle:* Dr. Emil Villinger has been recognised as *privat-docent* of Neurology and Neuro-pathology.—*Berlin:* Dr. Heinrich Haike has been recognised as *privat-docent* of Otology.—*Bonn:* Dr. Karl Reifferscheid has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Bordeaux:* Dr. Verger and Dr. Abadie have been appointed, after *concours*, *agrégés* of Medicine.—*Copenhagen:* Dr. Oskar Bloch has been transferred from the chair of Clinical Surgery to that of Operative Surgery. Dr. Thorkild Rovsing has been appointed to the chair thus vacated.—*Florence:* Dr. Giuseppe Levi has been recognised as *privat-docent* of Anatomy.—*Halle:* Dr. Siegert of Strasburg has been offered the Extraordinary Professorship of Children's Diseases vacant through the death of Dr. Pott. Dr. Alfred Hoche of Freiburg has been offered the chair of Psychiatry vacated by Dr. Ziehen who goes to Berlin but he has declined it.—*Heidelberg:* Dr. Karl Bonhöffer of Königsberg has been appointed to the chair of Psychiatry.—*Iurieff (Dorpat):* Dr. Druzhinin has been allowed to retire from the chair of Surgery on account of the infirm state of his health. Dr. Rostoffsteff has been appointed Extraordinary Professor of Operative Surgery.—*Lille:* Dr. Verdun has been appointed Professor of Medical Zoology and Pharmacy; Dr. Fockeu, Professor of Materia Medica and Botany; and Dr. Inglerans, after *concours*, *agrégé* of Medicine.—*Lemberg:* Dr. Anton Jurasz of Heidelberg has been offered the newly created Professorship of Ear and Throat Diseases.—*Lyons:* Dr. Nicolas and Dr. Charvet have been appointed *agrégés* of Medicine.—*Montpellier:* Dr. Ardin-Delteil has been appointed, after *concours*, *agrégé* of Medicine.—*Nancy:* Dr. Richon and Dr. Hoche have been appointed, after *concours*, *agrégés* of Medicine.—*Naples:* Dr. Francesco Vigorita has been recognised as *privat-docent* of Materia Medica and Experimental Pharmacology.—*Paris:* Dr. P. Carnot, Dr. Claude, Dr. Balthazard, Dr. E. M. Labbé, and Dr. Macaigne have been appointed, after *concours*, *agrégés* of Medicine.—*Pisa:* Dr. Luigi Adolfo Oliver has been recognised as *privat docent* of Midwifery and Gynæcology.

THE IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.—The festival dinner of this association will take place at the Trocadéro Restaurant, Piccadilly-circus, London, W., on St. Patrick's Day, March 17th, at 7.15 P.M. Tickets may be obtained by members from Mr. E. Canny Ryall, 30, Harley-street, W.

COTTAGES *v.* TENEMENTS.—The sanitary committee of the city council of Manchester is engaged in a perpetual warfare against overcrowding and insanitary dwellings. One of the chief difficulties is to make provision for those displaced by the closing of the latter, an instance of which was given by one of the aldermen at the meeting of the council on March 2nd. Sometimes land cannot be obtained where it is most wanted and however unsavoury the locality may be those accustomed to live in it seem unwilling to go elsewhere. Large sums have been spent by the corporation in tenement dwellings, large buildings of several storeys with various conveniences as to water-supply, &c., but they are not very popular. The architect has to make his plans so as to utilise every inch of space and the result is a collection of tenements, one storey above the other, like the combs in a wasps' nest, and partaking more or less of the doll's-house character. The sanitary committee recommended at the same meeting the erection of 16 cottages and 144 tenements in three storeys in Bradford-road, but an amendment was moved in favour of occupying the whole of the site with cottages. This would reduce the accommodation for tenants from 533 persons to 328 and one gentleman said there would be an annual loss of at least £200 The "barrack" dwellings are not popular; people do not like the want of privacy or the noise of "children clattering over their heads," and one speaker said that the woes of the tenement dweller were described in a song with the refrain, "I live underneath." There can be no question that it is better to distribute people over a wide area than to put more on an acre by piling storey on storey, but unfortunately it is more costly. How far this may be recouped by the better health of those living in the cottages is an interesting question. However this may be, the amendment was carried.

ROYAL DENTAL HOSPITAL.—The annual general meeting of governors was held at the hospital on March 10th, Mr. Richard Winch, Vice President of the institution, being in the chair. The committee of management reported a total of 97,830 cases receiving attention during the year, being 8495 more than in 1902. Anæsthetics were given in 35,619 of the cases, 3998 more than in the previous year. Two paid house anæsthetists have been appointed in addition to the honorary staff, while the increase of work, although gratifying to the committee and staff, brings with it additional responsibilities, and they earnestly appeal for greater support from the public to enable them to carry on the work of the hospital satisfactorily and at the same time to pay the yearly sum of £3000 for interest and part repayment of loan for building the new hospital A legacy of £300 has been received from the executors of the late Mr. Richard Bishop and has been used towards the reduction of the debt. In answer to the appeal made last year to pay for the new operating chairs £962 2*s.* 6*d.* have been received, leaving

£414 13s. still owing. Donors of chairs (15 guineas each) become life governors of the hospital and are entitled to the usual privileges and to have their names affixed to the chairs presented. New annual subscriptions and donations will be gratefully received by the bankers, Messrs. Barclay and Co., 1, Pall Mall East, S.W., by the treasurer, Mr. F. A. Bevan, and by the secretary, Mr. J. F. Pink, at the hospital.

CHILDREN'S COUNTRY HOLIDAY FUND.—CHANGE OF TREASURER.—The Earl of Arran has consented to be treasurer of the Children's Country Holiday Fund, a post which the Right Honourable Alfred Lyttelton felt obliged to resign on accepting office as Secretary of State for the Colonies.

PROVINCIAL HOSPITAL, PORT ELIZABETH.—The forty-eighth annual report of the Provincial Hospital, Port Elizabeth, South Africa, dealing with the events of the year ended Dec. 31st, 1903, shows that during that time 1640 in-patients were treated, as compared with 1670 in 1902. Of this number 996 were Europeans and 644 were coloured persons and natives. There were 182 deaths—namely, 72 of Europeans and 110 of coloured persons; 106 patients remained under treatment at the end of the year. There were 8991 attendances of out-patients. The following are a few of the principal diseases for which patients were admitted: enteric fever, 99 cases, with 21 deaths; phthisis, 73 cases, with 49 deaths; venereal disease, 63 cases, with one death; alcoholism, 124 cases, with 12 deaths; and 421 cases the result of violence (including fractures), with 12 deaths.

UNIVERSITY OF LIVERPOOL: FACULTY OF MEDICINE.—A diploma in veterinary hygiene has been instituted to provide training, and recognition of such training, for veterinary surgeons upon parallel lines to that required for the diploma in public health so that veterinarians may adequately coöperate with public health officers in the carrying out of hygienic reform. The diploma is to be granted only to qualified veterinary practitioners after a thorough course of practical training in the university veterinary school in the subjects of veterinary hygiene, comparative pathology and bacteriology, parasitology, veterinary toxicology and jurisprudence, sanitary law, administration, and reporting. An advertisement of the diploma and the conditions under which it is granted appears in our present issue. The regulations for the recently established diploma in tropical medicine of the University of Liverpool only permit the granting of the diploma to men taught in the university school, that is, only to those for whose thorough training the university can be answerable. Particulars with regard to the diploma and the regulations for it will be found in our advertisement columns.

NEW HOSPITAL FOR WOMEN, EUSTON-ROAD, N.W.—The annual meeting of the subscribers to this hospital was held on March 8th, Adeline, Duchess of Bedford, presiding. During the last year 612 in-patients had been treated and the number of new out-patients had been 7629. There were 7879 out patients who renewed their letters and the total attendances during the year amounted to 35,122. The receipts for the year, apart from legacies, &c., amounted to £5758. The expenditure account showed an adverse balance of £35 and, in addition, the unpaid bills amounted to £354. Only 52 beds were available and the pressure on the out-patient department called for further accommodation. A special small ward for minor operations was also needed. Sir William H. Broadbent said that the hospital was doing excellent work. It was not only a hospital for women but it was also a valuable training ground for students. The committee announced with deep regret the retirement of Mrs. E. Garrett Anderson, M.D., from the committee of management of the hospital and her work was highly commended. She would, however, remain on the consulting staff. Her place on the committee will be taken by Mrs. M. A. D. Scharlieb, M.D.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Nurses and Private Nursing Homes Bill.

THE Bill to provide for the better training and registration of nurses and for the voluntary registration of private nursing homes, to which reference was made in a previous issue of THE LANCET, has now been presented. Its nominal promoter, the Hon. Claude Hay, has obtained the support of Mr. Bignold, Mr. H. D. Greene, Major Bagot, Lord Cecil Manners, and Mr. Ian Malcolm.

Opposition to the Pharmacy Bill.

Mr. Harwood has given notice of his intention to move the rejection of the Pharmacy Bill, the leading provisions of which were explained in a note last week. It is understood that the point upon which most controversy is likely to arise is the clause which seeks to make it obligatory that the directors of companies which sell patent medicines should be qualified chemists. This is described by Mr. Harwood and others as an effort to make the selling of drugs "a close corporation"—in other words, to force the trade in patent medicines into the hands of the druggists.

The Medical Members of Parliament.

A meeting of Members of Parliament who are also members of the medical profession was held at the House of Commons on Tuesday last. Dr. Farquharson presided and among those present were Sir Michael Foster, Sir John Batty Tuke, and Dr. C. F. Hutchinson. It has been felt by medical Members of the House that when the medical side of public questions comes up for discussion good service could be done by concerted action on their part and a committee has now been formed with that object in view. Sir Michael Foster has agreed to act as honorary secretary of the committee.

HOUSE OF COMMONS.

THURSDAY, MARCH 3RD.

Accidental Suffocation of Infants.

Captain NORTON asked the Home Secretary whether he could furnish a return for the last five years of the number of infants accidentally suffocated in bed with the proportion of such deaths in London, Liverpool, and Manchester and with the number of cases that occur in December and January compared with any other two months.—Mr. AKERS-DOUGLAS, in reply, said: I scarcely think that this is a

A Galway Hospital Case.

Mr. DUFFY asked the Chief Secretary to the Lord Lieutenant of

held the jury condemned the governing body of the Galway Hospital and held that this young man lost his life through their action in

observation.

person wearing
for enlistment
edical question
ound teeth and

Nurses' Certificates.

asked the Irish Chief Secretary whether the Local

MONDAY, MARCH 7TH.

Glycerinated Calf Lymph.

Mr. WEIR asked the Secretary for Scotland whether the proposal to the preparation of glycerinated calf
and, if so, whether he would state the
t.—Mr. GRAHAM MURRAY replied: So
now existing between England and
e no necessity for adopting the course

Mr. EUGENE WA
officers and men
been inoculated

enteric inoculation has been
of special interest and will on no account be neglected. If at a late

stage I can give the hon. Member the information he asks for I will do so.

Small-pox in Scotland.

Mr. JOSEPH DEVLIN asked the Secretary for Scotland whether his attention had been directed to the increase of small-pox in Greenock, whether he was aware that the hospital accommodation was insufficient and the buildings were overcrowded, whether patients were detained sufficiently long to avert danger of their spreading the disease after discharge, whether the reception house was well situated and sufficiently commodious for the proper isolation of all "contacts," and what steps he proposed to take to insure the provision of adequate hospital and reception-house accommodation by the local authority.—Mr. GRAHAM MURRAY replied: The hospital accommodation for small-pox in Greenock has been extended from time to time during the progress of the epidemic and steps are being taken for the erection of another additional pavilion. The circumstances attending the occurrence of every case are reported to the Board and there is nothing in these reports to suggest that patients are prematurely discharged. The existing reception house is suitable for the purpose but has not been equal to the demands arising from the epidemic. The Board has called upon the local authority to provide additional accommodation. It understands that great difficulty is experienced in acquiring proper premises.

Whisky Blending.

Mr. BLACK asked the Secretary to the Board of Trade whether he was aware that revenue officials, with the knowledge that a false description was taking place, did not prevent grain and foreign spirits being mixed with malt whisky and labeled as pure malt whisky in warehouses under Government supervision, and, if so, whether he would state what steps he proposed to take in the matter.—The CHANCELLOR of the EXCHEQUER replied: There are many reasons which make it undesirable to employ revenue officials in an attempt to regulate the trade descriptions that are placed upon goods in bond, the strongest of all being that any such regulation would be perfectly futile, as it would only result in postponing the application of descriptions until after the goods had passed out of bond and would afford no real protection to the public.

Portsmouth Lunatic Asylum Case.

Sir ALBERT ROLLIT asked the President of the Local Government Board whether he would state what steps would be taken to carry into effect the rider of the jury in the case of the inquest held on Feb. 25th upon the four female patients in Portsmouth Lunatic Asylum who died from the effects of careless dispensing, and whether the Local Government Board would cause regulations to be made requiring all dispensaries in public institutions to be in charge of persons registered under the Pharmacy Acts.—Mr. AKERS-DOUGLAS, who answered, said: There are several difficult points involved in this case and for the present I can only say that I am in communication with the Commissioners in Lunacy and that the matter shall be thoroughly considered.

TUESDAY, MARCH 8TH.

Royal Commission on Tuberculosis.

Mr. BATTY LANGLEY asked the President of the Local Government Board when the report of the Royal Commission on Tuberculosis would be available for members.—Mr. GRANT LAWSON replied: I understand that considerable progress has been made by the Royal Commission with its investigation but that the necessity for making the report as far as possible conclusive involves a very wide series of experiments. These experiments are being carried out on an extensive scale by the Commission and I am informed that it is impossible to state at present when the report will be issued.

In Praise of the Army Medical Department.

In the course of the general discussion on the Army Estimates Dr. FARQUHARSON made a reference to the condition of the Army Medical Department. He thought the House would learn with satisfaction that the department was now in an excellent state. Before the new regulations were introduced an examination was announced for which not a single candidate came forward, but he was informed that at the last examination there were nearly three times as many candidates as there were appointments to give away. It was equally gratifying that the men were all of the highest class and of great distinction in their education. Not only that but one or two of the examiners for promotion had stated that they had hardly ever known examination papers written with such ability. The army medical officers now got excellent pay and also "study leave" which would enable them to rub off the rust of foreign service by going to the centres of medical education and learning what had been happening in the civil world of medicine and surgery. There was only one word of warning. The arrangement of the department was excellent as it stood but he earnestly hoped that no attempt would be made to interfere with its success by the imposition of restrictions or by any other unnecessary interference.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, 19, Rue Hautefeuille, Paris.

Les Intoxications. Par P. Brouardel, Doyen Honoraire et Professeur de Medecine Légale de la Faculté de Médecine de l Université de Paris. Price Fr.12.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent-garden, W.C.

Diseases of the Gall-bladder and Bile ducts, including Gall-stones. By A. W. Mayo Robson, F.R C S., Hunterian Professor of Surgery and Pathology, 1897, 1899, and 1903, and Vice-President Royal College of Surgeons of England, 1902; assisted by J. F. Dobson, M.S Lond., F.R C S., lately Resident Surgeon to the General Infirmary at Leeds. Third edition. Price 15s. net.

Lectures, Chiefly Clinical and Practical, on Diseases of the Lungs and the Heart. By James Alexander Lindsay, M.D., F R.C.P. Lond., M.A., Professor of Medicine, Queen's College, Belfast. Price 9s. net.

BRYCE, WILLIAM, 54 and 54A, Lothian-street, Edinburgh.

Materia Medica and Therapeutics. Answers to Professional Examination Questions set at Edinburgh University. With a Complete Table of the Important Doses. Price 1s. net.

DEPARTMENT OF PUBLIC HEALTH AND CHARITIES, 395, City Hall, Philadelphia, U.S A.

Philadelphia Hospital Reports, Vol. V. Price not stated.

DORNAN, WILLIAM, J., Philadelphia.

Transactions of the [illegible] twenty-first. Edit[illegible] Association. Price not stated.

Transactions of the American Gynecological Society. Vol. XXVIII. For the year 1903. Price not stated.

DOUGLAS, WILLIAM, AND SONS, LIMITED, Putney, S.W.

Refrigeration in the Dairy. A Short Illustrated Treatise on the Application of Refrigerating Machinery to Modern Dairy Practice. *By Loudon M. Douglas, A.M.I. Mech.E. Price 2s.*

FISCHER, GUSTAV, Jena.

Die Neutrophilen Weissen Blutkörperchen bei Infektions Krankheiten. Von Dr. Joseph Arneth, Privatdozent und I. Assistenzarzt der Medizinischen Klinik am Kgl. Juliushospitale zu Wurzburg. Price M.10.

Klinisches Jahrbuch. Herausgegeben von Prof. Dr. Freih. v. Eiselsberg, Prof. Dr. Flügge, Prof. Dr. Freih. v. Mering, und Prof. Dr. Werth. Zwölfter Band. Erstes Heft. Price M.6.

Toxine und Antitoxine. Von Dr. phil. et med. Carl Oppenheimer, Assistent am tierphys. Institute d. Landw. Hochschule, Berlin. Price M.6.

Ueber Psychosen bei Militärgefangenen nebst Reformvorschlägen. Eine klinische Studie. Von Prof. Dr. Ernst Schultze, Oberarzt der Provinzial-Heil- und Pflege-Anstalt in Bonn. Price M.6.

FLAMMARION, ERNEST, 26, Rue Racine, Paris.

Les Frontières de la Maladie. Maladies Latentes et Maladies Atténuées. Par Dr. J. Héricourt. Price Fr.3.50.

GRIFFIN, CHARLES, AND COMPANY, Limited, Exeter-street, Strand, W C.

Physiology an[illegible] of the Urine, with Methods for its Examination [illegible] D., F.R C.P, Physician to the Salford [illegible] of Forensic Medicine in the Victoria [illegible] Price 8s. 6d. net.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.

Sehproben-Tafeln. Mit [illegible] Berücksichtigung des militärärztlichen Gebrauchs. [illegible] Generalarzt und Subdirektor der Kaise[illegible] das militärärzt[illegible] lz, Oberstabsarzt [illegible] des Vorpommerschen Feldartillerie- [illegible] With six sheets of test-types in cardboard [illegible]

J. B. LIPPINCOTT COMPANY, 5, Henrietta-street, Covent-garden, W.C.

Blood-pressure in Surgery. An Experimental and Clinical Research. The Cartwright Prize Essay for 1903. By George W Crile, A M., M.D., Professor of Clinical Surgery, Western Reserve Medical College. Price 18s net.

Diseases of the Nervous System. By H. Oppenheim, M D., Professor at the University of Berlin. Translated and edited by Edward E Mayer, A M., M.D., Pittsburg, Pa. Second American edition, revised and enlarged. Price 21s. net.

International Clinics. Edited by A. O. J. Kelly, A.M., M.D., Philadelphia, U.S.A., with Collaboration. Volume IV. Thirteenth Series, 1904. Price not stated.

LANE, JOHN, The Bodley Head, Vigo-street, W.

New Poems. By Ronald Campbell Macfie. Price 5s. net.

MACMILLAN AND CO., LIMITED, London.

The Eye: its Refraction and Diseases. By Edward B. Gibbons, M.D., Assistant Surgeon of the Presbyterian Eye, Ear, and Throat Hospital, Baltimore. Price 21s. net.

OFFICES OF "THE CHEMIST AND DRUGGIST," 42, Cannon-street, E.C.

Pharmaceutical Formulas. Being a Supplementary Volume comprising a Consolidation of the Medicine stamp Acts (with Historical Notes), Formulas for Known, Admitted, and Approved Remedies, an Australian Hospitals Formulary, and Many Other Recipes. Vol. II. Price not stated.

OFFICES OF "THE MUNICIPAL JOURNAL," EDWARD LLOYD, LIMITED, Salisbury-square, E.C.

The Municipal Year Book of the United Kingdom for 1904. Edited by Robert Donald, Editor of "The Municipal Journal," and "The London Manual." *Price 3s. 6d. net.*

PENTLAND, YOUNG J., Edinburgh and London.

Manual of Operative Surgery. By H. J. Waring, M.S., M.B., B Sc. Lond., F.R.C S., Assistant Surgeon, Lecturer on Surgical Anatomy, and Demonstrator of Practical Surgery, St. Bartholomew's Hospital. Second edition. Price not stated.

REIMER, GEORG, W.35. Lützowstrasse, 107/8, Berlin.

Die Behandlung der Lungenschwindsucht durch Bekämpfung der Mischinfektion. Von Dr. A. Menzer, Stabsarzt in Halle a S. Price M.3.

SCIENTIFIC PRESS, LIMITED, 28 and 29, Southampton-street, W.C.

Modern Nursing in Private Practice. By Sir William Bennett, K.C.V.O., F.R.C.S. (Reprinted from the *Hospital*, Jan. 16th and 23rd, 1904.) Price 6d. net.

Senn, Nicholas, Chicago.
Surgical Notes from Four Continents and the West Indies. By Nicholas Senn, M.D., Ph.D., LL.D., Head of the Department of Surgery, Rush Medical College, in affiliation with the University of Chicago. Price not stated.

Smith, Elder, and Co., 15, Waterloo-place, S.W.
Saint Bartholomew's Hospital Reports. Edited by A. E. Garrod, M.D., and W. McAdam Eccles, M.S., F.R.C.S. Vol. XXXIX. Price to subscribers, 6s.; to non-subscribers, 8s. 6d.

Steinheil, G., 2, Rue Casimir-Delavigne, Paris.
Eléments de Pathologie et de
Léon Moynac (de Bayonne).
Paris Ancien Professeur Lib
Huitième édition. Three volumes. Price not stated.
La
Lariboisière.) Price Fr.15.
Traité d'Hématologie. Par Fernand Bezançon, Professeur Agrégé à la Faculté de Médecine, Médecin des Hôpitaux, et Marcel Labbé, Chef de Laboratoire à la Faculté, Médecin des Hôpitaux. Price Fr.25.

Tipografia Cooperativa Sociale, Via de'Barbieri, 6, Rome.
Relazione Medico-statistica delle Condizioni Sanitarie del R. Esercito nell'Anno 1901. Compilata dall'Ispettorato di Sanità Militare. (Ufficio Statistica.) Price not stated.

Turner, G. Grey, 31, Oxford-street, Newcastle-on-Tyne.
Some Surgical Aspects of Appendicitis. By G. Grey Turner, M.S. Durh., F.R.C.S. Eng., &c. (Reprinted from the *Northumberland and Durham Medical Journal*). Price not stated.

Voss, Leopold, Hamburg and Leipzig.
Beiträge zur Augenheilkunde. In Gemeinschaft mit Prof. Dr. E. Fuchs in Wien, Prof. Dr. O. Haab in Zürich, und Prof. Dr. A. Vossius in Giessen. Herausgegeben von Prof. Dr. R. Deutschmann in Hamburg. Heft 69. Weitere Mitteilungen über mein Heilverfahren bei Netzhautablösung. 2. Fortsetzung. Von Prof. R. Deutschmann in Hamburg. Price M.3.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to The Lancet *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

Blair, Charles, M.D., F.R.C.S. Eng., has been appointed Ophthalmic Surgeon, Royal Hospital, Richmond, Surrey.

Bower, E. Dykes, F.R.C.S. Edin., has been appointed Medical Referee under the Workmen's Compensation Act for the Newnham District of County Court Circuit No. 53.

Briscoe, William Thomas, M.D., B.Ch. Dub., has been re-appointed Medical Officer of Health of Chippenham.

Crooks, James, M.D., C.M. Toronto, L.R.C.S. Edin., L.S.A., has been re-appointed Medical Officer of Health of the Chard Urban District.

Dalby, Augustus William, L.R.C.P. & S. Edin., has been re-appointed Medical Officer of Health of the Frome (Somerset) Rural District.

Dawson, George W., F.R.C.S.I., has been appointed Assistant Surgeon to St. John's Hospital for Diseases of the Skin, Leicester-square.

Frost, Albert Ernest, M.B., B.S. Melb., has been appointed *pro tem.* Acting Health Officer, Acting Medical Officer, Acting Visiting Surgeon of the Penal Establishment at Townsville, and Acting Medical Superintendent of the Quarantine Station at Magnetic Island Queensland, Victoria.

Hare, Francis Washington Everard, M.R.C.S., M.D. Durh., has been appointed Visiting Medical Officer to the Diamantina Hospital for Chronic Diseases, South Brisbane, Queensland, Australia.

Langley, J. E., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

McDonald, James Edward Pancourt, M.B., B.S. Melb., has been appointed *pro tem.* Acting Visiting Surgeon to the Penal Establishment at St. Helena, Queensland, Australia.

Marks, Hon. Charles Ferdinand, M.D. Dub., has been appointed *pro tem.* Acting Medical Officer, Acting Visiting Surgeon to the Lock Hospital and Acting Visiting Surgeon to the Prisons at Brisbane, Queensland, Australia.

Osborne, W. A., M.B., B.S. R.U.I., has been appointed Professor of Physiology at the University of Melbourne, Victoria, Australia.

Penny, John, D.Sc. Public Health, M.B. Edin., F.R.S.E., has been appointed Medical Officer to the Union Workhouse No. 2 District, and Public Vaccinator for No. 2 District, Cockermouth.

Scott, H. J. H., M.R.C.S., J.P., has been appointed *pro tem.* Deputy Licensing Magistrate of the Licensing Court for the Licensing District of Bourne, New South Wales, Australia.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Ayr District Asylum.—Assistant Medical Officer, unmarried. Salary

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Royal Dental Hospital of Surgery, Leicester-squar
Stipend £60, rising to £7
£100, rising to £120. Tw
rising to £120.

Royal Free Hospital, Gray's Inn-road, W.C.—Assistant Anæsthetist (female).

Royal Hospital for Diseases of the Chest, City-road, E.C.—
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Wolverhampton and Staffordshire General Hospital.—Assistant House Surgeon for six months. Honorarium at rate of £75 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS

Hackney.—On March 5th, at High-street, Hythe, Kent, the wife of

Durham, the wife of

Pe

Lichfield, the wife of

Rowland.—On March
Frank Mortimer Rowland, B.A., M.D. Cantab., of a son.

DEATHS.

February, at No. 3 West Allington, Bridport,
port; late

Hayward,
C.S. Eng.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

"DR. HETHERINGTON, AMERICA."

WE have received the handbill of a person who trades under the above description. Hetherington evidently does not believe in the old Scottish proverb, "Hawks dinna pyke oot hawks e'en," for he says unkind things about other "American physicians" who are at the present day "advertising in British newspapers to treat all diseases by correspondence." In one point we agree with Hetherington when he says "that it is impossible to correctly form an opinion of diseases without seeing the patients," but nevertheless it is very easy to form a correct opinion of Hetherington without seeing him. His handbill is enough. In this cunningly worded document he informs the world that he is a doctor of medicine and dental surgery of the United States and is a qualified and registered dental surgeon of England. There is *no* such degree as doctor of medicine of the United States. With regard to Hetherington's dental qualification of England we have consulted the Dentists Register for 1903 and there is only one Hetherington therein whose qualification for being on the Register is that he was in practice before 1878. If this Hetherington and Dr. Hetherington of America be the same person we recommend the handbills to the notice of the General Medical Council. If they are not the same person we advise the Mr. Hetherington on the Register to disclaim any connexion with Dr. Hetherington of America. The latter gentleman has at least one element of success—he believes in himself; for we *note* that he describes himself as "the most skilful specialist in England or America for the speedy and pleasant cure of nervous, blood, and urinary diseases"—a modest estimate which reminds us of Gilbert's M. Pierre—

"He was the bravest man in France;
He said so—and he ought to know."

PROFITABLE POTATOES.

THE potato takes an important place among the foods furnished us by the vegetable kingdom and the prices which have recently been paid for specimens remind us of the excitement which prevailed in the seventeenth century when famous tulip bulbs were put up for sale. The *Profitable Farm and Garden*, a periodical the object of which is revealed by its title, on Feb. 27th devoted a special number entirely to the potato and its cultivation, a coloured plate of "Eldorado," the newest of the potatoes which have caused a sensation in the market gardening world, being issued as a supplement. When the disease-resisting "Northern Star" was placed upon the market, we learn from one of the articles in the special number, 10*s.* a pound was considered rather an exorbitant price to pay for the common tuber of our dinner tables, but so keen has been the demand for a tuber which would resist disease that £100 were willingly paid for 16 ounces of "Eldorado" when its merits became known. It is expected that should the present year's crop of this variety turn out well £3 3*s.* per pound will be asked for the tuber next winter. The special number contains many interesting articles upon potatoes, for example, "How to Propagate Potatoes," "Potato Pests," "The Best Potatoes," "How to Cook Potatoes," "Field Culture," "Potato Manures," "Culture in Germany," "Storing," and "Potato Implements." Is it not an astonishing thing that we nearly all of us eat potatoes every day and yet we do not see a well-cooked potato once a month? The publishers of the *Profitable Farm and Garden* are Messrs. Collingridge, 148-9, Aldersgate-street, London, and the price is 1*d.*

URETHRAL INJECTIONS OF CHLORIDE OF ZINC.

Surgeon writes:—Can any reader kindly say where *detailed* accounts of injuries to the urethral mucous tract caused by solutions of chloride of zinc may be found and the treatment of such injuries and the results, and also if any *experiments* have been made on the mucous membranes of the lower animals with solutions of chloride of zinc of *various* strengths and with what results?

THE PROPER FEE?

To the Editors of THE LANCET.

SIRS,—I have been asked to undertake the medical duties attached to a new convent home for the reception of epileptic children. The home is built to accommodate from 50 to 60 patients and when full the staff of nuns will bring the numbers up to about 80. I am distant about three miles and the house is *not* situated on the main road. It is proposed that I should make two regular visits a week—any visits beyond the bi-weekly ones to be paid for separately. Drugs and a qualified dispenser will be found. My object in writing is to ask if any of your readers will help me by suggesting what would be a fair *annual* payment for the regular visits and what sum should be charged for any extra visits that may be necessary. I may add that I am two or three miles nearer than any other practitioner and though the home is in my district it is quite out of my daily beat. Thanking you in anticipation,

I am, Sirs, yours faithfully,
W. B.

March 5th, 1904.

A CIRCULAR TRAVEL TICKET FOR LONDON STUDENTS.

Actum writes to us as follows:—

> I am a student but with my examination a long way behind me. When I can spare the time I listen, for example, to lectures at the National Hospital in Queen-square, at University College, London, at the Brompton Hospital for Consumption, and at other places. There I see crowds of senior students, alert, intelligent men and women. Would it not save much of their time and some expense to have for one fee a circular travel ticket about London? He or she would get into omnibus, or train, or tram, or tube, without other ticket or payment. When King's College Hospital is moved south of the Thames, and when the combined science schools are established, there will be the more call for facility of communication. Very simple rules would suffice to prevent abuse.

We quite agree that such circular travel tickets would be a great boon to the students in question and to many others besides medical and scientific students. The possibility of their issue merely depends upon whether the many companies concerned can see any profit for themselves in such an undertaking. It seems to us that to allot out of the inclusive fare the proportion which should belong to the main railway, the district railway, the omnibus, and the tram when the travellers live in all parts of London and attend demonstrations in all other parts would be far from a simple matter.

COTTON FACTORY DANGERS.

AT the hearing of a charge against a firm of spinners at Ashton of having "unfenced middle scrolls on spinning mules" a sensation was caused by the appearance of four boys, each without a right arm. These boys, who had all lost the right arm through accidents in unfenced middle scrolls, had been brought by Mr. Crabtree, the inspector of factories, from Oldham, Shaw, and Ashton to convince the court of the danger of this unfenced machinery. He said the beam of the engine had no fence and the engineer passed round it six times a day, each time endangering his life. There were also other dangerous parts of the machinery unfenced. A fine of a few pounds was inflicted which would not be felt much by a wealthy firm. But though these cases show that there is still dangerous neglect in some instances things are better than in the manufacturing days gone by.

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Mr. D. K. Chatterjee.—We thank our correspondent for his good wishes and commendations. The omissions he points out in regard to our analytical notices are only apparent, not real. The vegetable extract to which he refers contained, as was shown, 8 53 per cent. of nitrogen which multiplied by the factor for proteid gives 53 73 per cent. In the analysis of lentil flour, which is also referred to, the difference except for about 2 per cent. of fat may be taken to be carbohydrate. The statements about the food value of milk proteid are based upon the relative amount of proteid nitrogen in the dry substance as against that in meat with its complement of water.

Miss A. H.—We have forwarded the letter.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Chelsea (2 P.M.), Middlesex ([illegible] M.), Soho-square (2 P.M.), Samaritan [illegible] Orthopædic (4 P.M.), (2 P.M.), Rc[illegible] London Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9 30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9 30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.).

WEDNESDAY (16th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George[illegible] St. Mary's (2 P.M.), National Orthopæd[illegible] P.M.), Samaritan (9.30 A.M. and 2.30 P.[illegible] A.M.), Gt. Northern Central (2.30 P.M.), [illegible] olitan (2.30 P.M.), London Throat (9 30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (17th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), St. Mark's Metropolitan (2.30 P.M.), London Throat (9 30 A.M.), Throat, Golden square (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (18th).—Lo[illegible] olomew's (1.30 P.M.), St. Thomas's (3.30 P.[illegible]), Charing Cross (3 P.M.), St. [illegible] St. Mary's [illegible] Cancer (2 P.M.), Chelsea (2 P.M.), Gt. [illegible] West London (2.30 P.M.), London (9.30 A.M. and 2.30 P.M.), Throat, [illegible] Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (19th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.). Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

[At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (14th).—MEDICAL SOCIETY OF LONDON (11, Chandos street, Cavendish-square, W.).—8 30 P.M. Discussion on Acute Intestinal Obstruction—(1) Dr. H. White: Its Early Diagnosis; (2) Mr. A. E Barker: [illegible]

TUESDAY [illegible]

Manor-s [illegible]

Debate: [illegible]

Macfady [illegible]

speak.

[illegible] Margaret- [illegible] logy in [illegible] 'ollege, [illegible] enant- [illegible] ork on [illegible] Deep [illegible] .M C..

Inoculation Experiments with Trypanosomata.—Dr. T. J. Horder: [illegible]

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (14th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Dr. P. J. Cammidge: The Physiology and Chemistry of the Pancreas. (Arris and Gale Lecture.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Dunn: Cataract.

[illegible] Chenies-street, [illegible] 5.15 P.M. Dr. [illegible]

[illegible] F LONDON (Pall [illegible] Disorders of the [illegible] (Goulstonian Lecture.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Ball: Certain Symptoms of Disease of the Ear.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. A. P. Luff: Clinique. (Medical.) 5 15 P.M. Dr. G. F. Still: Some Gastro-intestinal Diseases of Infancy and Childhood.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. A. Turner. Bulbar Palsy.

WEDNESDAY (16th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Mr. J. H. Parsons: The Neurology of Vision. (Arris and Gale Lecture.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. D. Robinson: Common Disorders of Menstruation.

[illegible]

[illegible] Spleen. (Lumleian Lecture.)

[illegible] ondon Hospital, Hammersmith [illegible] Administration of Anæsthetics

[illegible] POLYCLINIC (22, Chenies street, [illegible] Clinique (Surgical.) 5.15 P.M. Mr. A. Lane: Abdominal Surgery.

SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone-road, N.W).—3 P.M. Mr. R H. Bell: Dysmenorrhœa.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7, Fitzroy-square, W.).—2 30 P.M. Mr. R. Lake: Demonstrations on Laryngeal Tubercular Cases. (II) (Post-Graduate Course.)

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester square, W.C.).—6.15 P.M. Dr. M. Dockrell: Alopecia. (Chesterfield Lecture)

THE HOSPITAL [illegible] W C) —4 P.M. Dr [illegible] with Pathologic [illegible]

NORTH-EAST [illegible] Hospital, N.).—4 30 P.M. Dr. G. P. Chappel: Complications of Phthisis and their Treatment.

FRIDAY 18th) —ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Mr. J. H. Parsons: The Neurology of Vision. (Arris and Gale Lecture)

P[illegible] Lunatic Asylum, [illegible] R. Jones: The [illegible] Chenies-street, [illegible]

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Collier: Hydrocephalus.

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

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(*Taken daily at 8.30 a m. by Steward's Instruments.*)

THE LANCET Office, March 10th, 1904

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall	Solar Radia in Vacuo	Maximum Temp Shade	Min. Temp	Wet Bulb	Dry Bulb	Remarks at 8 30 A.M
Mar. 4	29·95	E.	0 10	43	41	35	36	37	Raining
" 5	29 95	E.	0 01	57	43	37	38	39	Overcast
" 6	29 81	E.	..	42	41	36	39	39	Raining
" 7	29 65	S.E	0 10	66	47	39	40	41	Overcast
" 8	29 59	S.W.	0 12	91	57	41	46	47	Cloudy
" 9	29 88	E.	..	69	59	42	43	44	Foggy
" 10	30 17	N.E.	0 02	81	45	40	39	40	Cloudy

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Hunterian Lectures

ON

THE PATHOLOGY AND SURGERY OF CERTAIN DISEASES OF THE PANCREAS.

Delivered before the Royal College of Surgeons of England on March 7th 9th and 11th, 1904,

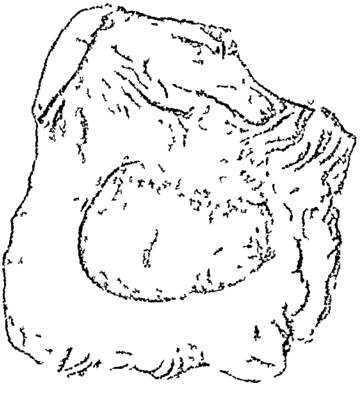
BY A W MAYO ROBSON, F R C S ENG,
HUNTERIAN PROFESSOR ROYAL COLLEGE OF SURGEONS OF ENGLAND

LECTURE I

Delivered on March 7th

[MR MAYO ROBSON commenced by referring to the comparative neglect which until quite recently was evidenced regarding the pancreas, its physiology and pathology He then passed on to consider the anatomical relations of the gland and their variations as influencing the etiology of its diseases or of the tissues with which it lies in relation He quoted a case described by J Symington[1] in which the duodenum was completely surrounded and constricted by a ring of pancreas Reference was also made to the invasion of the duodenum by new growths of the pancreas or the converse The pancreas may also be invaded by new growth or ulcer of the stomach, as seen in the illustration (Fig 1)

FIG 1



Chronic ulcer of the posterior wall of the stomach invading the pancreas (Fenwick, London Hospital Museum)

Mr Robson then gave an account of three cases under his own care in which chronic gastric ulcer associated with pancreatitis and abscess was cured by the performance of gastro-enterostomy In one case the ulcer was excised The lecturer then passed on to consider the anatomical relations of the pancreas and related the operative measures by which the gland may be exposed as to the peritoneum He then proceeded]

The ducts of the pancreas and their variations have important bearings on its pathology as have also the anatomical variations of the common bile duct. The chief excretory duct of the pancreas or duct of Wirsung after passing along the whole length of the pancreas, ends by joining the common bile duct in a small cavity called the ampulla of Vater, situated within the walls of the second part of the duodenum and the two ducts discharge their secretion together into the duodenum through the biliary papilla Besides this chief channel, the pancreas has an accessory duct the duct of Santorini, which opens through the papilla minor into the duodenum two or three centimetres above the papilla major These ducts present great varieties in their relations and in their course, and as we shall see when we come to consider the subject of inflammation, the anatomical variations are probably responsible for pancreatitis appearing in some cases of cholelithiasis and not in others First let us take the common bile duct, which may conveniently be divided into four portions—*a b, c, d* The first two for our present purpose are unimportant but the varieties of the pancreatic and the intraparietal portions are all important in the relations of jaundice to pancreatitis The common bile duct descends alongside the head of the pancreas and comes in contact with the duct of Wirsung, besides which it lies for a short distance before entering the intestinal wall According to Helly it is completely embraced by the head of the pancreas in 62 per cent and lies in a deep groove in the gland in the remaining cases It will be readily seen that if from any cause the head of the pancreas becomes swollen, say from an inflammation set up by the passage of a gall-stone or from a catarrh creeping up Wirsung s duct from the duodenum, the common bile-duct in the former variety will certainly be compressed and jaundice will follow, though in the latter variety where it only lies in a groove in the gland this compression may not take place and the patient may then escape jaundice

Compression of the common bile duct by the pancreas I believe accounts for many cases of so called catarrhal jaundice, both of the acute and chronic variety If under appropriate treatment the congestion or inflammation subsides the jaundice will rapidly pass off, but if the inflammation continues and chronic interstitial pancreatitis supervenes the jaundice will persist and with it a serious train of symptoms, which I hope to consider in my next lecture But this relation may act in another way, which can be seen exemplified in one of the specimens on the table and which we can reasonably infer must always occur in certain circumstances When a gall stone is passing down the common duct and succeeds in reaching the pancreatic portion of the duct it must, should the pancreas be embracing it, produce serious pressure on the gland which will lead to partial if not complete, obstruction of the pancreatic ducts, and thus to stagnation of the secretion in the pancreas, which will probably soon become infected either from the duodenum directly, through the already irritated duct of Santorini or by continuity of mucous surfaces through the duct of Wirsung where it opens into the ampulla of Vater, for it is well known that in many, if not all, cases of common duct cholelithiasis the bile becomes infected and we may reasonably argue from one to the other Thus this anatomical arrangement is probably responsible for many cases of pancreatitis of greater or less severity

It may be argued and, in fact, the argument is used in the text-books that if one duct of the pancreas be obstructed the other will take up its work, but this is not so in 50 per cent of cases, as shown by diagrams These diagrams are the result of the examination of 100 cadavers by Opie who found *that in more* than half of all individuals the duct is at its orifice obliterated or so contracted it cannot assume the functions of the larger is obstructed. The following statistics

FIG 2

Diagram to show the ampulla of Vater (A) with the ordinary termination of the common bile-duct (CD) and the duct of Wirsung (PD) (Testut) analysis. In 90 specimens the two ducts are united; in ten two wholly independent ducts enter the intestine. 1. Of the ducts in anastomosis. (1) Duct of Wirsung longer in 84: *(a)* duct of Santorini patent in 63; and *(b)* duct of Santorini not patent in 21. (2) Duct of Santorini longer in 6: *(a)* duct of Wirsung patent in 6; and *(b)* duct of Wirsung not patent, 0 2. Ducts not in anastomosis in 10: *(a)* duct of Wirsung longer in 5; and *(b)* duct of Santorini longer in 5. In 89 per cent. the duct of Wirsung was larger than the duct of Santorini. In 21 per cent. the duct of Santorini was apparently obliterated near its termination. In six cases the duct of Santorini was larger than the duct of Wirsung. In all cases where the duct of Santorini is patent it diminishes in size towards the duodenum. Thus the duct of Santorini cannot be relied on in many cases to supplement the duct of Wirsung, if it be obstructed; moreover, the duct of Wirsung, even if patent and communicating with the duodenum, may itself be compressed by a moderate sized gall-stone passing down the pancreatic portion of the common duct.

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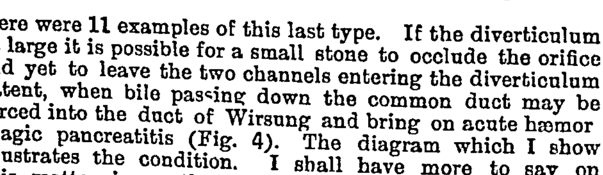
[1] Journal of Anatomy and Physiology 1885, vol xix, p 292.

The normal termination of the common bile-duct and of Wirsung's duct is into the ampulla of Vater (Fig. 2), which is a conical shell-shaped cavity into the base of which the ducts enter and which Testut describes as from six to seven millimetres in length, but this varies considerably in different individuals from 0 to 11 millimetres, the average according to Opie, in 100 bodies examined, being 3·9 millimetres. In only 30 did the diverticulum exceed 5 millimetres The orifice of the ampulla at the papilla is only 2·5 millimetres in diameter, it being thus narrower than any other part of the common bile-duct. In a proportion of cases the ampulla of Vater is absent, when the terminations of the common and pancreatic ducts are liable to great variations. There may be said to be four types as shown in the diagrams. First, the characteristic type which is described as the ampulla. In the second type the pancreatic duct joins the common duct some little distance from the duodenum, the ampulla is absent, and the duct opens into the duodenum by a small, flat, oval surface. In the third type the two ducts open into a smaller fossa in the wall of the duodenum, while the caruncle and the ampulla of Vater are both absent. In the fourth type the caruncle is well developed, the ampulla of Vater being absent, its two ducts opening side by side at the apex of the caruncle (Fig. 3). Among Opie's 100 cases there were 11 examples of this last type. If the diverticulum be large it is possible for a small stone to occlude the orifice and yet to leave the two channels entering the diverticulum patent, when bile passing down the common duct may be forced into the duct of Wirsung and bring on acute hæmorrhagic pancreatitis (Fig. 4). The diagram which I show illustrates the condition. I shall have more to say on this matter in another lecture when speaking of acute hæmorrhagic pancreatitis.

FIG. 3.



Three other methods by which the common bile-duct and Wirsung's duct enter the duodenum. CD, Common bile-duct. PD, Pancreatic duct. O, Common orifice. C. Cup-shaped depression in the wall of the duodenum. P, Papilla.

Accessory pancreatic nodules may be found by the side of, or within the duct of, Santorini or in the walls of the stomach, duodenum, jejunum, or ileum and in all such cases a small independent duct empties into the contiguous intestine An accessory pancreas has been found by J H Wright close to the umbilicus, it being apparently connected with the persistent remains of the vitelline duct. These may be of importance in serious diseases of the pancreas itself, as the histological characters and presumably the physiological functions conform to those of the normal pancreas. Thus may possibly be explained some cases where there is an absence of glycosuria in atrophy or extensive disease of the true pancreas. These accessory glands tend to undergo chronic interstitial inflammation and other diseases like the true pancreas, the inflammatory process being probably due to infection from the intestine into which the ducts open directly. In some cases these ducts have been found dilated and tortuous and in other cases narrowed close to their intestinal outlet.

Among the cases of accessory pancreas that have been recorded their association with intestinal, especially duodenal, diverticula has been noted. This anomaly is readily explained by the small accessory pancreas being developed in the muscular wall of the gut and producing a weak spot through which the mucous membrane tends to bulge. Among the anomalies of the pancreas, the head or tail may be found separated from the rest of the gland, or a portion of the head may be detached and lie behind the mesenteric vessels, or the groove from the mesenteric artery may be converted into a channel. In a case on which I operated recently I found a prolongation from the head of the pancreas extending upwards in front of the common bile-duct and the hepatic duct and exerting pressure on both owing to its being inflamed and swollen. A case of congenital ectopia of the head of the pancreas associated with gastroptosis was reported by Cacchini in 1886 and a number of cases have been reported in which the pancreas formed part of the contents of diaphragmatic and umbilical herniæ. In one case the pancreas was contained in the sac of a congenital umbilical hernia. A case of moveable pancreas producing symptoms resembling those of moveable kidney was reported by Dobrzycki in 1878; it was caused by a fall from a height in a man aged 56 years. In one reported case the pancreas was invaginated into the intestinal canal and, strange to say, there has been one case recorded where the pancreas was apparently entirely wanting.

FIG. 4.

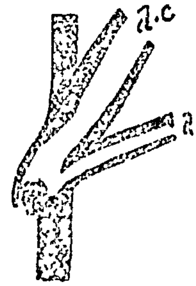


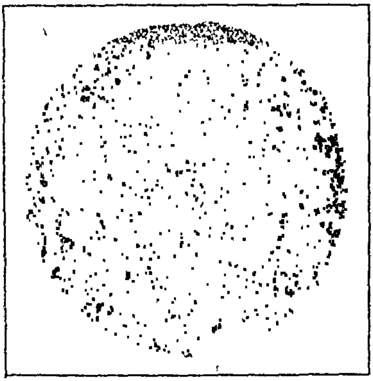
Diagram showing large diverticulum of Vater containing a calculus and illustrating one cause of hæmorrhagic pancreatitis. (Opie.)

MINUTE ANATOMY.

The pancreas is a racemose or acino-tubular gland, the acini being formed of polygonal cells, the ducts connected with the alveoli being lined with flattened epithelium and the larger ducts with long columnar cells. It thus resembles the salivary glands in structure and it appears to have some obscure relation to these glands, as shown by metastasis from the one gland to the other in mumps. Lying in the interalveolar spaces are groups of small, irregular, polygonal cells known as the islands of Langerhans who described them in 1869 (Fig. 5). These cell masses have an important bearing on metabolism and, as we shall see shortly, on the glycogenic function of the pancreas, but as they are not connected with the ducts in the higher vertebrates they have apparently no relation with the proper secretion of the pancreas, though this is not finally settled. Like the salivary glands the pancreas has a firm texture, the lobes being large. The interacinar connective tissue is, however, of loose texture and readily allows of separation of the lobules, as shown in the beautiful specimen on the table from the Hunterian Museum. We shall see what an important bearing this tissue has when we come to consider interstitial pancreatitis.

Physiological considerations and their bearing on the pathology of the pancreas.—The ferments contained in the pancreatic juice, the proper secretion of the gland, are four: (1) trypsin, a proteolytic, proteid-digesting ferment; (2) amylopsin, an amylolytic or starch-digesting ferment; (3) steapsin a lipolytic or fat-splitting ferment; and (4) a milk curdling ferment. Besides these, which pass into the duodenum to perform their functions and which we shall see afford us certain signs in the excretions if they are absent, there is presumed to be an internal secretion, probably a ferment, secreted by the islands of Langerhans and passing into the blood. This may be termed a glycolytic ferment and when it fails, as occurs in certain inflammatory and other conditions, one of the results is glycosuria.

FIG. 5.



Micro-photograph of normal pancreas showing islands of Langerhans.

[Mr. Mayo Robson then recounted the nervous, vascular, and lymphatic supply of the pancreas in their bearing on the pathology of the gland, and continued:—]

Symptomatology and pathology.—As our knowledge of the functions of the pancreas, both with regard to digestion and metabolism, is becoming fairly well established it would seem probable that any departure from the normal would lead to such considerable disturbance of function that the symptomatology of any of the diseases of the pancreas would be so marked as to make the diagnosis easy. But this is far from being the case for several reasons: First, it is seldom the case that the pancreas is diseased without other organs participating—e.g., the relations between cholelithiasis and pancreatitis; between gastro-intestinal catarrh and catarrh of the bile and the pancreatic ducts; between ulcer or tumour of the stomach and extension to the pancreas; between affections of the liver, colon, lymphatic glands, and duodenum and pancreatic disease. Secondly, every function performed by the pancreas may be vicariously taken up by another organ, except the glycogenic function, and that we are not yet certain about. The stomach can digest albumin, the salivary and intestinal glands have the power of digesting starches, and the bile and intestinal secretions can emulsify fats. Thirdly, a considerable portion of the gland may be necrosed and cast off or otherwise disabled and yet the portion remaining may apparently be sufficient to carry on the functions of the pancreas. For instance, in a case of my own, a patient, who is now perfectly well, had necrosis of the pancreas which I removed at operation. As may be seen, a good proportion of his pancreas is on this table. Fourthly, in some cases the true cause of the disease may lie in the pancreas and yet all the symptoms may be caused by implication of another organ. For instance, cancer of the head of the pancreas produces intense jaundice and distension of the gall-bladder, giving the appearance to the uninitiated of disease of the liver or bile-ducts, a symptom to which I drew attention in a paper at the London Clinical Society in 1889. Again, a tumour of the pancreas may compress the intestine and produce intestinal obstruction or lead to pressure on the neighbouring ganglia and cause most violent pain that may be referred to spinal disease, to aneurysm, or to anything but the real cause. Thus it will be seen that very conflicting combinations of symptoms may arise and lead to great difficulty in diagnosis unless we can find some definite signs that will help us to say whether or no the pancreas is participating in the disease in question. I hope to show that this may be possible.

I have decided, before describing any of the special diseases of the pancreas, to consider certain symptoms apart, and as they are intimately associated with pathological questions, it is more convenient to take symptomatology and pathology together. The symptoms may be conveniently classified under (1) digestive symptoms; (2) physical signs; (3) metabolic symptoms; and (4) symptoms artificially produced. 1. Digestive symptoms: (*a*) steatorrhœa or fatty stools; (*b*) azotorrhœa or faulty digestion of albuminous foods; (*c*) sialorrhœa; (*d*) diarrhœa; (*e*) dyspeptic disturbances; (*f*) emaciation; and (*g*) nausea and vomiting. 2. Physical signs: (*a*) presence of swelling or tumour; (*b*) fever; (*c*) pain and tenderness with muscular resistance; (*d*) pressure on adjacent organs; (*e*) hæmorrhage; and (*f*) jaundice; 3. Metabolic symptoms: (*a*) glycosuria; and (*b*) other urinary changes. 4. Special symptoms obtained by artificial means: (*a*) alimentary glycosuria; and (*b*) Sahli's symptoms.

DIGESTIVE SYMPTOMS.

Steatorrhœa or fatty stools.—Although Claude Bernard, from experiments which caused the degeneration of the pancreas, came to the conclusion that the pancreatic juice caused the cleavage and emulsification of neutral fats and aided the absorption of fats in the intestine, yet the fact that the cleavage and the emulsification of fats are performed also by the bile, the intestinal juices, and the bacteria in the intestinal canal shows that the symptoms of steatorrhœa cannot be absolutely relied on in pancreatic disease. Abelmann's and Minkowski's observations on dogs are most important and interesting and they have been confirmed by Sandmeyer, Cavazzani, Balli, and Rosenberg When the pancreas was entirely removed non emulsified fat was not at all absorbed, and emulsified fat only in small amount (18·5 per cent.) The absorption of fat in the form of milk was much more favourable; on the administration of large amounts 30 per per cent., were absorbed. amounts of emulsified fat administration of larger amounts, 70 to 150 grammes, the consumption was not so good (lowest value 30 5 per cent.). Milk was very well absorbed, up to 80 per cent. Administration of pig's pancreas as food facilitated the absorption of fat after the extirpation of the pancreas. Abelmann concludes that all fat with the exception of milk needs unquestionably the influence of the pancreas for its absorption.

In clinical observations as to fatty stools many of the older clinicians relied on naked-eye observations which we now know to be fallacious; for though in some cases where fat is parted with in abundance it is manifest to the patient himself, in other cases a large amount of fat may be passed and only found on chemical investigation of the stools. Kuntzmann in 1820 and Bright in 1833 associated fatty stools with pancreatic disease. To show that the matter is not quite simple, Friedrich Müller found fatty stools in the absence of pancreatic disease, and in a case of obstruction of Wirsung's duct by calculus the fat in the motions was normal, though the last observation does not necessarily carry much weight as Santorini's duct may have been patent. It will be seen that experiments on animals and clinical observations on man do not altogether harmonise. We may, however, derive assistance in the diagnosis of pancreatic disease if we bear in mind the following conclusions:—1. Fat occurs in the stools in three forms: (*a*) as fat droplets; (*b*) as fatty acid crystals; and (*c*) as soap crystals. 2. The capacity for digestion and absorption of fats is limited; if therefore fat be taken in large quantities it is found in the stools. 3. Steatorrhœa occurs in some cases of jaundice, in some cases of enteritis, and in some affections of the pancreas, but in none of these constantly. 4. When jaundice and interstitial pancreatitis coexist there is a great excess of fat in the stools. 5. The presence of an excess of fat in the motions in the absence of jaundice and diseases of the intestine is suggestive of pancreatic disease. 6. If the pancreatic reaction (to be described later) be found in the urine along with steatorrhœa some affection of the pancreas is almost certain. 7. If azotorrhœa be found along with steatorrhœa it is almost certain that the pancreas is diseased, and if the pancreatic reaction in the urine, diabetes, and an epigastric tumour be present the diagnosis is certain.

The following case is reported by Oser. A woman, aged 39 years, had had diarrhœa since the summer of 1892. The patient became emaciated yet the appetite remained good. Fæcal evacuations appeared regularly every night, were unusually copious, of the consistency of thick porridge and of cadaverous odour, chocolate-coloured, and always abundantly covered with fat rings On Jan. 11th, 1893, he saw the patient for the first time and found steatorrhœa. The investigations of the stools gave the following result: large in amount and of the consistency of thick porridge; in the sediment were scattered white particles. Microscopic examination showed: (1) very numerous fragments of striated muscle in the main with well-preserved structure; (2) numerous fat acid needles and fat drops; and (3) bacteria and detritus. After drying the stools for several days on the water-bath in order to determine the amount of fat there were obtained 4 6325 grammes of solid substance, in which 2·1265 grammes were fat, representing 45·8 per cent. of the dried residue. The ether extract consisted almost entirely of neutral fat. On Jan. 18th he found in the epigastrium a distinct, hard, round tumour which was diagnosed as carcinoma of the head of the pancreas. In March jaundice developed. At the beginning of April an exploratory laparotomy was undertaken and the diagnosis confirmed. My own experience in a large number of pancreatic cases that have come under my observation has been the almost universal presence of an increased amount of fat in the motions, either in the shape of oily particles or of solid fat or of fatty crystals, which, if normal, should not contain more than 5 per cent.

The characteristic white stools that are often seen in pancreatic disease in the absence of jaundice owe their pale colour entirely to the solidification of the fat when the motions cool, although there may be a normal amount of bile present, and the greasy bulky motions so often seen in pancreatic disease with or without jaundice are often coated with almost pure oil. This is frequently remarked on by patients as floating on the surface of the urine passed at the same time.

In disease of the pancreas, interference with the digestive functions will lead to steatorrhœa and I have often noted it in acute hæmorrhagic, necrotic, and suppurative pancreatitis, in calculus of the pancreas, in cancer, and in some cases of cyst, where jaundice had accompanied the cyst formation. I have also seen an almost entire disappearance of the fat in some of these cases after the administration of pankreon tablets, liquor pancreaticus and sandwiches of raw pancreas, as well as a complete disappearance in many cases after surgical treatment.

Azotorrhœa or faulty digestion of albuminous foods.—Fles, so far back as 1864, found in the stools of a diabetic very numerous unchanged bundles of striated muscle fibres which disappeared when the patient had a calf's pancreas administered daily and reappeared when it was omitted. In dogs without a pancreas Abelmann found that albuminous substances were absorbed to the extent of about 44 per cent, and in those where the obliteration was incomplete 54 per cent. was absorbed. When pig's pancreas was given with the meats the amounts absorbed were respectively 74 and 78 per cent. De Benzi, Cavazzini, Sandmeyer, Rosenberg, and others found similar results. The conclusions we may form concerning this symptom are: 1. The digestion of nitrogenous foods is not solely the function of the pancreas. 2. As the normal stools of meat eaters contain a small proportion of undigested muscle fibres and as in febrile conditions, in disorders of the stomach, and in enteritis they may be found in excess, their presence in the motions is no proof of disease of the pancreas. 3 If azotorrhœa be found along with liporrhœa the presence of pancreatic disease should be suspected. 4 If azotorrhœa and liporrhœa be found associated with diabetes or with tumour of the epigastrium pancreatic disease is extremely probable. 5 If azotorrhœa and liporrhœa be found associated with the pancreatic reaction in the urine pancreatic disease is certainly present.

My experience of azotorrhœa is that it is not so readily noticed as steatorrhœa and my attention is hardly ever drawn to this symptom by the patient, though a careful naked-eye examination of the stools in nearly all diseases where the digestive properties of the pancreas are interfered with has shown the presence of muscular fibres and a microscopic examination has confirmed the observation. This, when taken with other symptoms, is an important point to notice.

Sialorrhœa pancreatica or excessive pancreatic secretion.—This has been referred to by Senn who suggested a causal relation between hyper-secretion of the pancreas and the diarrhœa which is sometimes [illegible] degeneration of the pancreas. Actual salivation has been noticed in the case of cysts reported by Ludolf and Battersby. Holzmann and others have reported the same symptoms in the case of pancreatic calculi which they explain as a reflex phenomenon. In the cholera epidemic in Bern in 1861 a large amount of leucin was found in the intestinal evacuations, suggestive of excessive action of the pancreas. Personally I have not seen salivation in any of my cases of pancreatic disease and I do not consider it of importance from a diagnostic point of view.

Diarrhœa pancreatica and alteration in the stools—In many cases I have mentioned what one might almost term a characteristic sign of pancreatic disease in the shape of exceedingly bulky, soft, greasy, pale motions, evidently due to the patient's want of digestive power and the passage onwards of the bulk of the food taken. These characteristic motions contain manifest unaltered fat and muscle fibre and are extremely offensive. Patients frequently describe them as diarrhœa, but an examination will show that this is usually an incorrect designation, the motions being bulky and soft and not liquid in consistency. They are due not only to the increased amount of fat and nitrogenous matter passing away undigested but to the bulk of hydro-carbonaceous food being parted with, sometimes unaltered. The symptom is a very noticeable one and when it occurs in cases of jaundice it may nearly always be taken as an indication that the pancreatic functions are being interfered with either by an interstitial pancreatitis or some other form of disease. I have more frequently noticed these symptoms in chronic inflammatory conditions than in cancer, the reason being that the appetite is more interfered with by the latter than by the former disease; hence also the symptom is more apt to be noticed in the earlier than the later stage of the disease unless large amounts of milk be given, when the bulk of it may pass away in this form of spurious diarrhœa. Blood may be noticed in the motions occasionally but it is not a regular symptom until the hæmorrhagic tendency occurs later in the disease or unless there happens to be an ulcerating malignant growth present In some cases constipation exists, the motions being still very bulky and, as a rule, pale. Abscesses of the pancreas and pancreatic cysts have been known to rupture into the intestine and their characteristic contents have been found in the motions. I have personally seen this in one case and in another I have seen the characteristic matter vomited. A necrotic pancreas has been passed through the intestine and cases have been reported by Leichenstern and Minnich in which pancreatic calculi have been passed per anum.

In a paper on the Clinical Significance of Colourless Stools without Jaundice and their Connexion with Disease of the Pancreas, read before the Royal Medical and Chirurgical Society in 1889, Dr. T. J. Walker of Peterborough pointed out the fact that white motions might be indicative of pancreatic disease, although the bile salts are being discharged in the normal way. In discussing this subject a few weeks ago with Sir Lauder Brunton he directed my attention to a lecture in his work, "Disorders of Assimilation, Digestion, &c.," which was published in the *Edinburgh Medical Journal* for February, 1900, where he had referred to the subject of whiteness of the motions and in which lecture he made the following remarks: "The whiteness is due not to the absence of bile as one would expect but to the presence of undigested fat" He referred to a case which he had seen ten years before He said: "The motions were as white as arrowroot but were tougher than ordinary formed motions, so much so that instead of breaking into pieces they fell into a very peculiar shape They looked like a snake coiled up with the head projecting as if ready to strike An analysis of the fæces was made by Dr. Sidney Martin who found that the liver was doing its work and that the motions contained bile, although in small quantity. Biliverdin was present in an unaltered form, though only an indication of biliary acids could be obtained. The reason of the motions being so white was the fact that the milk was not digested and therefore it appeared in the motions." Sir Lauder Brunton goes on to say that want of change in the fat points to some extent to alteration in the pancreas.

Dyspepsia and alteration of appetite.—I have found dyspeptic disturbances to be constantly associated with affections of the pancreas; they take the form of anorexia, pain and fulness after food, flatulency with offensive eructations, heart-burn, nausea, distaste for fats and for meat.

In the case of a woman, aged 28 years, to be referred to later under "Chronic Pancreatitis," a biliary fistula was established in order to relieve the jaundice and by drainage to cure the pancreatitis that was causing [illegible] oned [illegible] and [illegible] such [illegible] A cholecystenterostomy was performed and within 12 hours of the restoration of the bile and pancreatic fluid to the duodenum she expressed herself as hungry, a sensation which she said she had *not felt for many months; during* the month after operation she put on flesh very rapidly and three months later had gained two stones in weight. In several cases where dyspeptic disturbances have been well-marked both in simple and in malignant disease of the pancreas I have found the patients to be markedly relieved of their symptoms and to gain weight by the administration of pankreon tablets or of liquor pancreaticus immediately after meals.

Emaciation.—Ever since pancreatic diseases have been recognised, emaciation has been regarded as a well-known symptom. I have known a patient, a man, aged 59 years, suffering from chronic pancreatitis, to lose eight stones in a little over two years and to regain weight rapidly after a choledochotomy and the removal of a calculus that was obstructing the pancreatic duct, and I also know of another case in which the patient lost five stones in three months and after operation and relief of the condition to gain three stones in a corresponding period. It is not surprising that emaciation should occur in cancer of the pancreas, in which indeed it is most marked, or in diabetes of pancreatic origin, but it may occur in cystic disease, as in Kuster's case, in which the patient lost two stones five pounds in four months, in chronic pancreatitis, as in the cases I have mentioned, and also in calculous disease.

The disturbance of digestion may afford a sufficient explanation in some cases, but in the malignant and in the atrophic cases the interference with the metabolic function of the pancreas must also be partly responsible for the rapid emaciation. Alone, emaciation would not of course justify a diagnosis of pancreatic disease, but if with rapid loss of flesh, fat and muscle fibres be found in the fæces and pancreatic crystals in the urine the diagnosis of disease of the pancreas may be confidently made.

Nausea and vomiting.—These symptoms are frequently associated with acute pancreatitis and I have seen the vomiting so violent as to suggest acute intestinal obstruction, but in the other forms of pancreatic disease it is not a common symptom and when present it is often due to the neighbouring organs—stomach or duodenum—participating in the trouble or being pressed on. There is nothing specially characteristic in the vomited matter unless, as occurred in one of my cases, extremely offensive pus and altered blood be vomited, *when it may point to the rupture of* a pancreatic abscess into the stomach. In acute pancreatitis altered blood, so called "black vomit," is seen at an earlier stage than in any other peritoneal condition.

PHYSICAL SIGNS.

Tumour.—The situation of the pancreas behind the stomach and in front of the spinal column places it in almost the worst possible place for palpation, and in normal circumstances, if the patient be at all stout, it can only be indistinctly felt, but where the patient is thin and in cases of gastroptosis it can readily be defined when the muscles are relaxed and a warm flat hand is applied firmly to the epigastric region. It is commonly stated in text-books that acute and chronic inflammation and even abscess rarely, if ever, cause a perceptible enlargement of the organ. In this view I do not agree, for I have over and over again felt enlargement of the pancreas in these conditions, and I think further experience will show that in many cases a distinct swelling may be felt, which in the acute cases is made up of the swollen pancreas with surrounding effusion of blood and inflammatory fluid, together with matted omentum, in the subacute cases it being due to suppuration and in the chronic cases to a tumefaction of the gland itself. In cancer of the head of the pancreas the only tumour that is ordinarily felt is the swelling caused by an enlarged gall-bladder which can be readily palpated in a considerable proportion of cases. In tumour of the body or tail, as well as in some cases of cancer or sarcoma of the head *of the pancreas, palpation readily discovers the swelling,* and by distending the stomach with gas, either by means of carbonate of soda and *tartaric acid given in separate doses* or by pumping in air through the stomach tube, the relation of the stomach to the tumour can be readily made out. Resonance on percussion owing to the position of the stomach, unless the stomach is empty, communicated non-expansile pulsation, and very slight movement on deep inspiration are characteristic of swellings of the pancreas. In cystic disease of the pancreas tumour is at first frequently the only symptom, the position, as I shall hope to show, depending on the part of the organ from *which the cyst springs. It will thus be seen that the* absence of a tumour does not negative serious disease of the pancreas, though the presence of a swelling when taken with other symptoms, especially the urine test, affords valuable evidence of disease.

Fever.—An increase of temperature is, as a rule, associated with acute and subacute pancreatitis, but only rarely with any of the more chronic forms of inflammation, and as a rule it is absent in cystic disease, in calculus, and in new growths. In acute pancreatitis the temperature may be high but in other cases, as in the hæmorrhagic form, it is usually subnormal. In suppurative pancreatitis I have seen the temperature assume a hectic form but in one case coming under my notice it was subnormal and in another it was persistently from 101° F. to 102° or 103° and associated with rigors. In cancer of the head of the pancreas the temperature is generally subnormal. It will thus be seen that fever as a symptom is extremely variable and alone is no guide, though when associated with digestive, metabolic, and certain physical signs it is a symptom of the greatest importance in making a differential diagnosis.

Pain and tenderness.—These symptoms, though important when present, are so variable that even the entire absence of pain and tenderness is no proof that the pancreas is normal. My experience has been that both pain and tenderness are as a rule absent in malignant disease of the head of the pancreas, though, on the other hand, in some exceptional cases of cancer or sarcoma both of the head, body, and tail of the pancreas the pain may be excruciating, this depending either on pressure on, or involvement of, the great sympathetic *ganglia, or on pressure on, or invasion of, the* neighbouring viscera, especially the stomach or the duodenum. Small scirrhus tumours are as a rule characterised by the absence of pain while large growths are often marked by constant and extreme agony. In the various forms of pancreatitis pain and tenderness in the epigastrium are, as a rule, well marked and the more acute inflammations are characterised by excessive tenderness on pressure, rigidity of the recti, and pain of an agonising character. In chronic pancreatitis pain and tenderness, though usually present, may be little marked, but in some cases the pain is paroxysmal and severe and epigastric tenderness is well pronounced. Cysts may be quite painless and free from tenderness but in some cases I have seen both pain and tenderness well marked. Even in abscess of the pancreas pain may be absent, as has been reported by Stibler, though in the cases that I have seen pain and tenderness were both pronounced.

Calculus of the pancreas may exist for years undetected and unsuspected without causing any pain but in one case that I operated on the patient pointed to a tender and painful spot on the left of the middle line which she begged of me before operation to examine specially and at which exact spot I found and removed by operation a pancreatic [illegible] the orifice of the pancreatic [illegible] ater severe pain occurs in [illegible] seizure and will then be [illegible] *he character of the pain it* may be *continuous or paroxysmal* and *may* be limited to the epigastrium or radiate round either side of the thorax. I have found pain in the back, under the left scapula or between the scapulæ, to be more frequent than pain beneath the right scapula thus serving to distinguish it from gall-bladder pain. "Cœliac neuralgia" was a term long ago applied to epigastric pain such as is associated with some forms of pancreatic *disease and such pain may pass* to the cardiac region and resemble angina pectoris both in its intensity and in its effect on the circulation. It will thus be seen that while pain is a guide to diagnosis it is not pathognomonic of any special disease except acute pancreatitis.

Pressure symptoms.—The presence of ascites owing to involvement of the portal vein *is seen at times in the later* stages of cancer of the pancreas, when at the same time there may be also pressure on the inferior vena cava and œdema of the lower limbs. When the duodenum is surrounded by the head of the pancreas, an extremely rare condition, or where the gland partly surrounds the bowel, any growth or even inflammation of the head of the pancreas may lead to obstruction to the passage of the stomach contents, to gastric dilatation, and to vomiting, as in pyloric stenosis. Specimens which I will now show on the screen demonstrate how the stomach, the duodenum, and the colon may be pressed on both by cysts and new growths, such as cancer or sarcoma, and how the viscera contiguous to the pancreas may be seriously displaced, the stomach, for instance, being pushed upwards beneath the diaphragm or downwards below the umbilicus. Distension of the gall-bladder and jaundice are so frequently found in cancer of the head of the pancreas that they have become a well-known sign of the disease and in some cases of chronic pancreatitis the same sequence of events may occur, the presence or absence of this sign being dependent on the relation of the common duct to the head of the pancreas Pressure on, or involvement of, the solar plexus may give rise to agonising pain. In some cases the hepatic duct may be pressed on when the common duct is free, as in a case I saw a few months ago where there was jaundice without distended gall-bladder owing to pancreatitis involving a prolongation of the gland upwards towards the liver. The pressure of a pancreatic cyst passing upwards to the under surface of the diaphragm may cause dyspnœa from interference with the functions of the heart or the lungs, and in case of inflammatory effusion in the lesser peritoneal sac there may be pressure on the pericardium through the diaphragm leading to distressing cardiac symptoms.

Hæmorrhage.—Besides the local hæmorrhage that may be known as pancreatic apoplexy and the form known as hæmorrhagic pancreatitis, there is in many pancreatic affections a tendency to general hæmorrhage from wounds or from mucous surfaces and to petechial hæmorrhage in the skin or to more extensive bleeding in the subcutaneous tissues. It is well recognised that a hæmorrhagic condition coexists with cancer of the head of the pancreas. Some years ago I thought this to be altogether dependent on the cholæmia, until increased experience in operating on deeply jaundiced patients has taught me that there is much less danger of serious hæmorrhage in patients jaundiced from gall-stones than in those where the jaundice depends on pancreatic disease. This tendency may be due to an altered condition of the blood both in its tissue elements and chemically. In the cases where the blood has been examined for me a very marked diminution in the number of blood plates has been found and the coagulating period has always been seriously delayed.

As for the chemical changes, it is well known that a diminution in the lime salts leads to a tendency to hæmorrhage, and as we have found that there is in nearly every case of pancreatitis a profuse excretion of lime in the shape of oxalates this gives another explanation and also explains the beneficial effects resulting from the administration of calcium chloride. In urine containing bile, calcium oxalate crystals are not generally found microscopically because the bile takes up the lime salts, but after the jaundice has been relieved by operation an examination of the urine will, as a rule, show oxalate crystals so long as any pancreatic trouble continues. In several cases of cancer of the pancreas on which I have operated the bleeding has been the immediate cause of death. In one case sent to me in 1888 by Professor T. Clifford Allbutt, a cholecystotomy was followed by persistent oozing of blood from the interior of the gall-bladder and from the stitch punctures, which resisted all the then known remedial measures in the way of styptics, pressure, transfusion, &c., and proved fatal on the ninth day. In another case of cancer of the head of the pancreas, sent to me by Dr. W. Scatterty of Keighley, a cerebral hæmorrhage on the tenth day produced a fatal result. In neither of these cases was there any peritonitis or other cause than the hæmorrhage to account for death Now in another patient equally deeply jaundiced whom I saw with Dr. T. Churton in 1889, but where the disease was dependent on cancer of the common bile-duct above the entrance of the pancreatic duct, there was no hæmorrhage, although the patient survived several weeks and died from exhaustion due to the disease and to the suppurative cholangitis accompanying it. I could give many similar comparisons showing the difference between the behaviour of the blood in the two classes of cases.

Before operating on these cases I now always administer calcium chloride in from 30 to 60 grain doses thrice daily for from 24 to 48 hours previously to operation and by enema in 60 grain doses thrice daily for 48 hours afterwards; this is usually successful in correcting the hæmorrhagic tendency. The following cases show its efficiency subsequently to operation.

A woman, aged 38 years, was suffering from deep jaundice associated with gall-stones in the common duct and chronic pancreatitis. There was no bleeding at the time of the performance of duodeno-choledochotomy as calcium chloride had been administered for several days before operation. The drug was inadvertently omitted after operation and on the third day violent hæmorrhage occurred which was arrested by opening up the wound and packing with gauze and at the same time giving calcium chloride in 60 grain doses twice and afterwards in 30-grain doses for several days. No recurrence of bleeding occurred and a good recovery was made.

In the case of a male patient, aged 42 years, suffering from cirrhosis of the liver, gall-stones in the common duct, and chronic pancreatitis, no bleeding occurred at operation owing to the saturation of the blood with lime salts; in consequence of this they were left off the second day after operation. Bleeding occurred very freely on the sixth day in the form of general oozing which was permanently arrested by the free administration of calcium chloride, after which recovery occurred.

In a case of suppurative catarrh of the pancreas in a gentleman, aged 65 years, the same freedom from hæmorrhage was found at operation after the administration for some days of chloride of lime which could not be given as the rectum was intolerant of injection. On the seventh day free bleeding occurred which was arrested by giving 30 grains of calcium chloride every two hours.

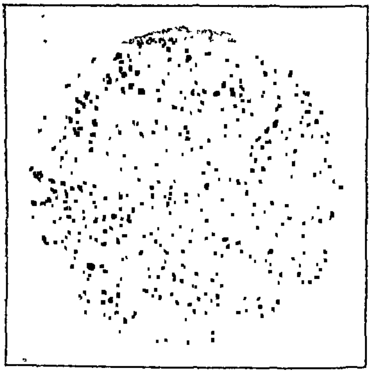
Other cases could be given were it desirable to show the remarkable effect of saturating the blood with lime in order to prevent or to arrest bleeding in these cases. In operating on these cases of pancreatic trouble, especially if associated with jaundice, it is important carefully to ligature all vessels and not to trust to simple forci-pressure.

Jaundice—The now well-recognised relation between pancreatic and gall-stone trouble would lead one to suspect that jaundice would be a frequent accompaniment of pancreatic disease but this symptom is by no means constant. The relation of the common duct to Wirsung's duct and to the head of the pancreas is generally the determining factor of deep jaundice, though in nearly all inflammatory affections an extension of the inflammation takes place and sets up a more or less severe catarrhal jaundice. If, as is the case in 38 per cent. of bodies (Helly), the common duct passes behind the head of the pancreas either an acute or chronic pancreatitis, or even a cancer of the pancreas, may run its course without the appearance of jaundice, but if the common duct lies in a deep groove or is imbedded in the head of the pancreas, as occurs in 62 per cent. of cases, either pancreatitis or growth of the head of the pancreas must necessarily compress the bile-duct and lead to jaundice of greater or less intensity. It may, perhaps, only be a coincidence, but Dr. Cammidge tells me that in all the specimens of urine that he has examined for me from patients suffering from pancreatitis, bile has been found in just over 60 per cent. If common duct cholelithiasis be the cause of pancreatitis jaundice will, of course, be present. Deep jaundice associated with distended gall-bladder is significant of cancer of the head of the pancreas, whereas if the cause of the jaundice be gall-stones in the common duct the gall-bladder is nearly always contracted and not capable of being felt.

METABOLIC SYMPTOMS.

Diabetes and glycosuria as symptoms of disease of the pancreas.—In speaking of the functions of the pancreas mention was made of an internal secretion which recent researches have apparently traced to the islands of Langerhans. It is believed that the absence of this secretion owing to the destruction of these islands leads to diabetes. The earliest observations connecting the pancreas with diabetes was by Cowley in 1788 in the *London Medical Journal*. The patient was an alcoholic, 34 years of age, and a post-mortem examination showed the pancreas to contain numerous calculi. In 1821 Chopart reported the case of a diabetic, aged 19 years, who also had jaundice and steatorrhœa. A necropsy revealed the head of the pancreas to be forming a hard, nodular tumour and the body to be atrophied, [illegible] and Minkowski, [illegible] pancreas in dogs regularly resulted in diabetes, and the important discovery of Opie that hyaline degeneration of the islands of Langerhans was present in a girl, aged 17 years, who had died from diabetes, followed by other observations that diabetes is only present when the islands of Langerhans are involved as in the interacinar type of chronic interstitial pancreatitis, have now apparently established the fact that in diseases of these islands we have the origin of pancreatic diabetes. This explains many of the anomalies that were previously incapable of explanation and renders it quite easy to see why glycosuria should be present in some diseases of the pancreas and not in others. For instance, in chronic interstitial pancreatitis of the interlobular type there is no glycosuria, and the lantern slides which I now show, kindly made for me by Dr. P. J. Cammidge, demonstrate that in this condition the islands of Langerhans are quite free from disease (Fig. 6) In the next slide, one of chronic interstitial pancreatitis of the interacinar form, it will be seen that the islands of Langerhans are involved and in this case diabetes was found and led to death. The next slide is from a case of general cirrhosis of the pancreas with diabetes. Here it will be noticed that the atrophic process has involved the islands. The next slide shows hyaline degeneration of the islands of Langerhans where diabetes was present. This slide is copied by permission from Dr. Opie's monograph of a specimen which he was good enough to demonstrate to me in the Johns Hopkins Laboratory (Fig. 7). In extensive malignant disease the whole gland may be destroyed and then diabetes will be present, as in the photograph of a specimen which I show on the screen.

FIG. 6.



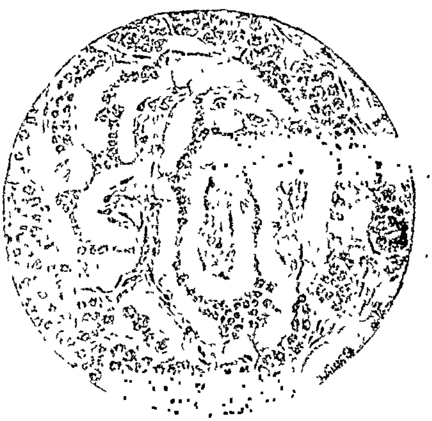
Micro photograph showing chronic interstitial pancreatitis of interacinar variety. From a case of diabetes.

In cases of cancer part of the gland may remain unaffected—glycosuria will not then be present, and the same applies to cysts and other tumours, as well as to interstitial pancreatitis, which may be limited to one part of the gland. Out of a large number of cases of disease of the pancreas that I have seen I have only occasionally found glycosuria present, and in such cases, if well marked, I have not recommended operation, though I am not prepared to say that benefit might not arise by drainage in some cases of interacinar pancreatitis if caught early. As yet, however, I have no experience to bring forward to prove this.

It will thus be seen that glycosuria is not common and cannot be relied on as a diagnostic symptom in diseases of the pancreas, but when it exists along with other signs it is extremely serious and, in fact, as a rule indicates an incurable condition.

Other changes in the urine.—In consequence of the indefinite character of the symptoms in various diseases of the pancreas a want has been long felt for some distinctive signs by which affections of the pancreas may be diagnosed. From the important metabolic functions of the gland attention was naturally given to the urine and in turn indicanuria, maltosuria, pentosuria, lipuria, and glycosuria have been advanced as of diagnostic importance in pancreatic troubles. With regard to indicanuria Gerhardi in 1886 from observations on man, and Piseni from experiments on dogs, thought that changes in the amount of indican in the urine afforded diagnostic data in pancreatic diseases, but Katz and De Renzi's experiments on animals disproved this, and many observations on my own cases and those by other clinical observers enable us to say that the amount of indican in the urine is no guide to the presence or absence of disease of the pancreas Le Nobel and von Ackeren separately found maltose or some allied sugar in two cases of pancreatic disease but in a large number of observations on the urine from patients suffering from different forms of pancreatic disease it has not been found. This, therefore, cannot be relied on as an important symptom. Pentosuria, according to Salkowski, is of greater diagnostic importance, but further observations showed it to be inconstant and to be present in other than pancreatic conditions. Lipuria is a rare condition and although described by Mr. Alfred Clark in THE LANCET of August 16th, 1851, p. 152, as having been associated with a case of cancer of the pancreas, it is known to result from divers causes. Of all the cases of pancreatic disease that I have seen I have only once found lipuria as a symptom and that was in a case of chronic pancreatitis in a lady, aged 44 years. It was associated with liporrhœa, azotorrhœa, bulky stools, and with a well marked pancreatic reaction in the urine, the cause being apparently an extension from duodenal catarrh. The abdomen was opened and a swelling of the pancreas was discovered with a number of adhesions surrounding it, but no gall stones were found. Drainage of the bile-ducts by a simple cholecystotomy completely cured the pancreatic condition, and when the urine was examined a year later there was an entire absence of the pancreatic reaction. Lipuria is difficult to explain and in the case I have mentioned it was not associated with any signs of diseased kidney. As it occurs so seldom it cannot be relied on as an important point in affections of the pancreas.

FIG 7.



Micro-photograph showing hyaline degeneration of the islands of Langerhans. (Opie)

As showing how little importance has been attached to urinary analysis as an aid to diagnosis Oser says: "In brief, the condition of the urine in diseases of the pancreas has no special peculiarities." I hope to be able to prove that this statement will i [illegible] of a large number of [illegible] of cases I hope, in [illegible] to be able to adduce proofs that a certain reaction may be obtained from the urine in the greater number of, if not in all, diseases of the pancreas, which affords considerable help in diagnosis, but further than this, our experience leads us to believe that it may be possible to distinguish between acute and chronic inflammation and between simple and malignant disease. The presence of glycosuria does not prevent the pancreatic reaction being obtained but the sugar must first be removed by fermentation. In this way, therefore, it may be possible to make the diagnosis of pancreatic diabetes. At first when the method was crude and incomplete and our experience in its employment was small, the conclusions, though helpful, were not so certain that one dare venture to assert more than a hope that it would be a help in diagnosis, and this I announced in an address before the American Surgical Association in Baltimore in May, 1901. From that time onwards the test has been applied in every case that has come under my care where the pancreas was suspected and in a large number of control cases where there was no suspicion of pancreatic disease. The control experiments led to the discovery that certain allied crystals were obtained in some other diseased conditions, such as cancer and chronic inflammation, where marked tissue changes were taking place, but fortunately the difference in the shape of the crystals and the increased time they took to dissolve in sulphuric acid and other tests enabled them to be differentiated. There is still a great deal of work to be done on the subject which may have other important issues but we think the time has come when a further announcement should be made so that the utility of the method may be tested by other observers. Of the manner in which these crystals were found, of the method of their preparation, and of their significance, my friend Dr. Cammidge will have much more to say in his Arris and Gale lecture; of their diagnostic importance I will now give my experience.

To give a list of all the cases that we have observed together would be easy, since all have been accurately recorded, but in this lecture it will be more useful if I group the cases. Although I have operated on over 100 patients for pancreatic disease of one kind or another, in my earlier cases the urinary pancreatic reaction was unknown and it is only during 1900 and since that we have been employing the test systematically, but during that time several hundred analyses have been made and the diagnoses have been confirmed by operation in 56 and by necropsy in other cases.

In a considerable number of cases of cancer of the head of the pancreas with jaundice the test has been applied and either confirmed the diagnosis made from the clinical signs or proved the presence of malignant disease in the face of irregular symptoms which rendered the diagnosis doubtful, so that one has been able to advise non-operative treatment with confidence instead of having to recommend an exploratory operation which could do no real good. One of the most marked cases of this kind occurred only a month ago where no less than six medical men of eminence had advised operation in a woman, aged 48 years, in consequence of the general condition of the patient being better than one might have expected after jaundice had existed for five months had the cause depended on cancer. An examination of the urine revealed such a marked pancreatic reaction pointing to cancer of the head of the pancreas that I had not the slightest hesitation in advising non-operative treatment. This, however, did not satisfy the patient who, with the support of her medical advisers, wished to have an exploratory operation done. On opening the abdomen I found, as suspected, a very hard, nodular growth of the head of the pancreas, undoubtedly malignant. The absence of adhesions and the presence of a distended gall-bladder afforded clear evidence that gall-stones had never been present in the case.

In several cases suspected from the clinical signs and symptoms to be cancer, the disease has been proved by this test to be inflammatory and curative operations have been performed—for instance, in the case of a man, aged 51 years, seen in August, 1901, suffering from deep jaundice with great emaciation, the liver being enlarged and there being very slight tenderness. Although he had had rigors and other signs of infective cholangitis there was no history of pain beyond one slight attack of colic that was very indefinite. Cancer of the pancreas had been diagnosed and his case was believed to be hopeless. Before refusing to operate an analysis of the urine was made and a well-marked pancreatic reaction was found, pointing to inflammation and not to malignant disease. An operation was therefore undertaken on Sept. 29th, 1901, when the head of the pancreas was found to be markedly enlarged, the swelling extending well into the body of the pancreas, and five calculi were found in the lower end of the common bile-duct obstructing the pancreatic ducts. These were removed and the common duct was drained. The patient made a good recovery and in two months had gained one stone three pounds. A report received last year was to the effect that he was in perfect health.

In another case that I saw in October, 1903, a patient, aged 57 years, who had resided in India for years, where he had suffered from fever which had left him with a greatly enlarged spleen, gave a history of loss of flesh for some months preceding the jaundice which came on in July, 1903. The patient himself said that he had had no pain but his medical man said that there had been an attack of pain preceding the jaundice. Loss of flesh was well marked and the patient was so ill, there being slight œdema of the feet and enlargement of the spleen to below the umbilicus and of the liver to the umbilical level, that I had very little doubt of the case being malignant. A consulting physician who saw him before me found ague organisms in the blood and after watching him for a time considered the case unsuitable for operation. Before deciding finally an examination of the urine was made, when a well-marked pancreatic reaction was found pointing to inflammation and not to malignant disease and an analysis of the fæces showed steatorrhœa and azotorrhœa. An operation was therefore performed on Nov. 5th, 1903, when the liver was found to be enlarged, dark, and granular, as if in the first stage of cirrhosis, and after separating numerous adhesions a rounded gall-stone of the size of a small walnut was discovered in the common duct, where it was pressing on the pancreas. The pancreas was considerably enlarged but it did not embrace the common duct. After the removal of the calculus a probe passed quite easily into the duodenum and as the duct was not embracing the pancreas I did not consider it necessary to drain it. Recovery was completely satisfactory and the patient is now well.

In one case diagnosed by an eminent physician as cancer of the head of the pancreas, that of a man, aged 65 years, no pancreatic reaction was obtained and on the strength of this test an exploratory operation was performed, when the pancreas was found to be healthy and a gall-stone was removed from the upper part of the common duct, with the result that the patient is now well. In two cases of malignant disease, "cancer of the head of the pancreas and cancer of the biliary papilla" with deep jaundice, the test showed the presence of inflammation of the pancreas and exploratory operations were in consequence undertaken, but the error was not in the test but in our reading of it. The fact is that in many cases of cancer of the pancreas a catarrhal inflammation ensues as a secondary symptom, just as a catarrhal jaundice frequently supervenes in cancer of the liver. These cases led to modifications in the process which have prevented further mistakes of the same nature. In two cases of pancreatic cyst where the diagnosis was doubtful the test showed the presence of pancreatitis which is usually present in the interstitial form in these cases. In three cases of acute pancreatitis the test answered perfectly in confirming the diagnosis. In two cases of suppurative catarrh, associated with fever and jaundice, the presence of pancreatic inflammation was proved by an abundant crop of crystals. In a number of cases of simple catarrhal and of interstitial pancreatitis, both with and without gall-stones, the pancreatic reaction has enabled a diagnosis to be made and active treatment to be applied. In two cases of abscess of the pancreas the reaction was well marked and proved to be correct at the operation and in two cases of pancreatic calculi the reaction proved the presence of interstitial inflammation. Almost equally important have been some of the negative reactions in chronic biliary catarrh, in cirrhosis of the liver, and in tumours supposed to be pancreatic from their situation behind the stomach. From a pathological and clinical point of view the observations made on the urine of patients long after being operated on for pancreatic inflammation and supposed to be quite well are most instructive and will be mentioned in my next lecture.

SPECIAL SYMPTOMS OBTAINED BY ARTIFICIAL MEANS.

Alimentary glycosuria.—Minkowski has shown that if only a part of the pancreas be removed diabetes does not result but the ability of the organ to perform its normal function on carbohydrate metabolism is impaired; for if to animals in which the pancreas has been partially removed sugar be given in large quantities temporary glycosuria results. Wille has observed the symptom in man in association with disease of the pancreas. He adopted the test of giving from two to three ounces of sugar before breakfast to 800 patients, the urine being tested before the sugar was taken and later at intervals of two hours When the test was positive glycosuria usually occurred at the end of two hours. Of 15 patients exhibiting alimentary glycosuria who subsequently came to necropsy, ten presented grave pancreatic disease, chronic interstitial pancreatitis or cancer. Although this symptom may occur under other conditions, as exophthalmic goitre or chronic alcoholism, its presence has considerable value as an aid to diagnosis.

Sahli's symptom.—If iodoform be inclosed in a gelatin capsule, hardened in formalin, and given by the mouth it is almost unaffected by gastric digestion but is readily dissolved by the pancreatic secretion. If pancreatic digestion is normal, iodine should appear in the urine in from four to eight hours. The absence of the reaction or its delayed appearance, if the motor function of the stomach be normal, indicates, according to Sahli, an impairment of pancreatic digestion.

GROUPING OF SYMPTOMS.

With such a number of symptoms and signs as those I have related it is a mystery to me how the idea has gained so firm a hold that pancreatic diseases are, as a rule, undiagnosable. For instance, Opie only last year wrote: "Disease of the pancreas is rarely recognised during life," which is a reproach that I hope will in future have no justification. Although in any single case we may not have all the symptoms and signs that I have mentioned, yet in no case ought we to fail to find digestive or metabolic or physical signs if disease of the pancreas be present. Different diseases of the pancreas it will be seen, as one would expect, present very various grouping of symptoms, but in nearly every, if not in every, case since Dr. Cammidge and I have been working together at the subject we have found most valuable help from the pancreatic reaction. Although we must not yet say that this sign is absolutely pathognomonic, yet it is safe to make the assertion that if the test be skilfully carried out it affords most valuable positive or negative evidence when taken with other symptoms, in not only establishing the presence or absence of some disease of the pancreas but in assisting in the differentiation of simple from malignant disease, a most important matter when surgical treatment is in question.

The two pathological conditions of fat necrosis and hæmorrhage are full of interest and to do full justice to them would occupy all the time at my disposal. Although they are intimately related to pancreatitis it is desirable that they should have separate consideration.

Fat necrosis.—Fat necrosis was first described by Balser in 1882, but has since been investigated by Langerhans, Hildebrand, Dettmer, Milisch, Williams, Flexner, Opie, and many others. Experiments by Opie, who ligatured the pancreatic ducts in the cat, go to show that widespread fat necrosis may be expected to follow the operation very rapidly. A photograph of this was shown on the screen and at the same time a microphotograph of fat necrosis.

By fat necrosis is understood a disintegration or necrosis of the living fatty tissues in the neighbourhood of the pancreas or in small spots diffused widely over the peritoneal cavity or even in the pericardium or pleura or subcutaneous fat. It is associated with a splitting up of the fat into fatty acids and glycerine; the latter is absorbed but the acids being insoluble remain in the cells either as crystals, or uniting with the calcium salts of the blood they form yellowish-white patches of various sizes. Fat necrosis is commonly found in association with pancreatitis and other diseases of the pancreas and the relation between the two conditions has given rise to much speculation. As the result, however, of clinical observation and experimental evidence we may now accept the fact that it is always the result of the penetration of the fat-splitting ferment of the pancreas first into the tissues in the neighbourhood of the gland and when more extensive to the diffusion of the ferment either through continuity of tissue or by means of the lymphatics. It is important to remember that fat necrosis may be present and yet not be visible to the naked eye, although it may be discovered by a method suggested by Bender, the application of a solution of acetate of copper to the tissues. The recognition of fat necrosis by the surgeon who opens the abdomen to relieve symptoms associated with peritonitis in the upper abdomen is of the utmost importance, as it indicates a grave lesion of the pancreas, probably hæmorrhagic, gangrenous, or suppurative pancreatitis It is said not to occur generally with suppurative inflammation, but in a case to be related shortly I found a most extensive fat necrosis in association with subdiaphragmatic abscess of pancreatic origin. It has also been said that the presence of extensive fat necrosis is a fatal sign, but a case of my own disproves this, as a patient under my care made a complete recovery after an operation undertaken for acute pancreatitis in which the fat necrosis was well marked and diffuse. Truhart has also been able to collect ten cases in which the diagnosis was made and yet an immediately fatal issue did not occur. As the ferment causing fat necrosis may be excreted by the kidneys it would form an important diagnostic sign if it could be found in the urine, but this has not yet been determined, although in one case of acute hæmorrhagic pancreatitis Opie obtained a suggestive reaction by means of ethyl butyrate, as suggested by Castle and Loevenhart.

Hæmorrhage.—Hæmorrhage in its various forms is often held up as one of the great mysteries of pancreatic affections and the free use of the term "hæmorrhagic pancreatitis" in ordinary acute inflammation, even where there has been really no hæmorrhage and in others no more bleeding into the tissues than takes place frequently in acute inflammation in other organs where the tissues are soft, has led to an accentuation of the mystery. It is well known that local hæmorrhage into the pancreas may occur apart from injury and apart from any general hæmorrhagic tendency and that, although it may be recovered from, as shown by the remains of extravasated blood in the gland in persons dying from other diseases, yet such spontaneous hæmorrhage may lead to death from collapse either immediately or after some hours Curiously this may occur in persons apparently in good health and without any premonitory signs on which a diagnosis can be based, the only symptom at the time being those of collapse, with dyspnœa and feeble pulse. In this way, severe pancreatic hæmorrhage apart from pancreatitis, forms a disease in itself.

CAUSES OF PANCREATIC HÆMORRHAGE.

1. Vascular disease, such as atheroma and fatty degeneration, or alcoholic or syphilitic arteritis. The following case under my care appears to be one in point. An aged subject, with markedly atheromatous vessels, had a simple drainage operation performed for the relief of jaundice due to cancer ot the head of the pancreas. Death occurred on the third day, almost suddenly from collapse, and at the necropsy there was found extensive effusion of blood away from the site of operation and behind the peritoneum, extending into the loins around the kidney and into the cellular tissues beneath the diaphragm, the blood being in sufficient quantity to account for death. The bleeding had manifestly arisen from the pancreas but there was no gross vascular lesion found to account for it.

The following case under the care of Draper (one of sudden death from pancreatic hæmorrhage) is reported by Oser. A woman, aged 44 years, was found dead in bed. She drank alcoholic liquors but was rarely intoxicated and in the evening before was perfectly well. In the morning she complained of headache, returned to bed, and later was found dead. At the necropsy the pancreas was seen to be infiltrated [illegible] its whole extent; there were also a [illegible] the retroperitoneal tissue and [illegible] the peritoneal cavity.

2. Injury may be the cause. The tissues of the pancreas are comparatively soft and easily bruised, so that although anatomically it is placed in the most protected position, yet a slight injury takes more effect on it than on many other firmer organs and there is ample experience of pancreatitis resulting from blows in the epigastrium apparently trifling in character as in a case that I saw several years ago. A butler slipped and fell forward against a knifeboard projecting from the end of the table at which he was working. The blow was comparatively slight and the man did not even fall to the ground. Pancreatitis followed on what was at the beginning probably a mere bruising of the pancreas but which was followed by slight bleeding into the gland and this effusion becoming infected acute hæmorrhagic pancreatitis resulted. An exploration for the cause of the peritonitis resulted in the discovery of a large collection of highly blood-stained fluid in the lesser peritoneal sac, some of

which had burst through a small laceration in the omentum into the greater peritoneal sac. There was general peritonitis present at the time of operation and though drainage was freely adopted both from the front and back the patient did not survive many hours. Probably slight injury to the pancreas may occur in abdominal operations for gall-stones in the common duct when it is sometimes necessary to manipulate the head of the pancreas rather freely. Though I have not personally seen such an occurrence, such a case has been related recently. The photographs now thrown on the screen are examples of hæmorrhagic pancreatitis and the specimens from St. Bartholomew's Hospital Museum on the table show traumatic hæmorrhage and hæmorrhagic pancreatitis respectively.

3. Fatty degeneration of the gland cells and deposit of fat in the pancreas, the result of alcoholism or of general adiposity, may lead to want of support of the blood vessels which are no longer able to withstand the blood pressure. This may account for hæmorrhagic pancreatitis so often occurring in fat and flabby individuals. I show on the screen a case of fatty pancreas from the Hunterian Museum.

4. Fat necrosis in the gland or its vicinity has been suggested by Balser who related several cases in support of his views.

5. Disintegration of neoplasms, such as cancer or sarcoma, may be the cause of extensive hæmorrhage.

6. Hæmorrhage from embolism of a pancreatic artery is reported by Mollière.

7. Other causes, such as heart disease, lung disease, cirrhosis of liver, hæmorrhagic diathesis, scurvy, purpura, the exanthemata, phosphorous poisoning, &c., may all give rise to pancreatic hæmorrhage.

8. Pancreatitis may undoubtedly lead to hæmorrhage and in considering acute pancreatitis I shall refer to it again, but it seems highly probable that an effusion of blood into the pancreas from one of the before-mentioned causes should more frequently be the cause rather than the effect of pancreatitis owing to disruption of the secreting tissue, escape of the proper secretion of the gland, fat necrosis, and invasion of the effusion by organisms either through the ducts or in some other way. Large pancreatic hæmorrhages are of great interest clinically and are probably more common than is usually thought; they may occur into the substance of the gland and disintegrate it, or on to the surface and lead to extensive effusion either beneath the peritoneum or into the lesser sac, as in the case which I have related.

Symptoms.—A great variety of symptoms may occur, from mere attacks of colic in the epigastric region, soon passing off, to violent and persistent pain followed by collapse and rapid death within a short time, or if recovery from the first seizure should occur the attacks may be repeated and ultimately symptoms of acute pancreatitis may supervene. The site of the pain may be præcordial or dorsal but it is usually epigastric and is often accompanied by vomiting. The abdomen soon becomes distended and tympanitic and if inflammation occurs fever of an irregular type may supervene, or if the disease assumes a rapid ultra-acute form the temperature may be subnormal throughout. At first the diagnosis will be obscure but with the onset of pancreatitis some of the symptoms which I have related will be found and an examination of the urine for the pancreatic reaction will afford valuable help.

Treatment.—In the very acute cases, where death rapidly occurs, even if the diagnosis could be made specific treatment would probably be useless, but if the diagnosis could be effected before a fatal result had occurred abdominal section and gauze packing would seem to be indicated. In the later stages the treatment is that of acute pancreatitis and in this case a diagnosis can be made both from the symptoms and physical signs as well as from the discovery of the pancreatic reaction in the urine.

ST. BARTHOLOMEW'S HOSPITAL REBUILDING SCHEME.—The March issue of the *St. Bartholomew's Hospital Journal* prints a list of old St. Bartholomew's men who have intimated their willingness to act as local secretaries for the purpose of raising a sum of money towards the rebuilding scheme. It is suggested that it would be appropriate if a new pathological department could be provided by the exertions of past and present students of the hospital and with this object a subscription list will be published monthly in the *St. Bartholomew's Hospital Journal.*

The Arris and Gale Lecture

ON

THE CHEMISTRY OF THE URINE IN DISEASES OF THE PANCREAS.[1]

Delivered before the Royal College of Surgeons of England on March 14th, 1904,

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MR. PRESIDENT AND GENTLEMEN,—Since 1889, when von Mering and Minkowski first clearly demonstrated the relationship of the pancreas to diabetes, many important additions have been made to our knowledge concerning the functions of the gland. While, on the one hand, the experiments of Pawlow, Bayliss and Starling, and others have shown how much more complicated than had formerly been supposed are the influences which bring about the due performance of its part in digestion, the researches of Laguesse, Ssobolew, Schulze, Opie, and other workers have increased our information as to the means through which it controls the assimilation of carbohydrate material by the tissues. From being considered as merely an accessory to the digestive tract the pancreas has now come to be regarded as an organ having a most important influence on the metabolism of the body and there has accumulated a considerable mass of evidence tending to show that the part which it plays in completing the process of digestion is probably the least important of its functions. When from any cause the flow of the pancreatic juice into the duodenum is interfered with no serious disturbance of digestion necessarily follows, since its work may be performed by other agencies, but it is otherwise with the internal secretion of the gland, for, so far as we know at present, there is no other organ capable of playing the part which the pancreas does in controlling carbohydrate metabolism. One would expect, therefore, that disease of the pancreas would be accompanied by evidence of a disturbed relationship in the internal chemistry of the body, and although experiment has shown that almost complete ablation of the gland is necessary in animals before the symptoms of diabetes supervene, it is probable that in all cases where inflammation or some other pathological state interferes with its functions, a condition tending towards glycosuria is produced.

While our knowledge of the physiology and pathology of the pancreas has thus rapidly increased little or no corresponding advance has been made in the clinical diagnosis of the affections to which it is liable. Inflammatory changes, malignant disease, even cysts and calculi, offer no pathognomonic signs by which they can with certainty be recognised, and Opie in his recent monograph writes: "Disease of the pancreas is rarely recognised during life." A correct opinion may be formed no doubt in a few instances, generally by a process of exclusion, but in the majority of cases the true state of things is only learned on the operating table or in the post-mortem room. That this should be so is neither creditable to the art of medicine nor just to our patients. Disease of the pancreas is now known to be by no means rare and there is no doubt that in the past many a life has been sacrificed which could have been saved had but the nature of the disease been recognised in time and suitable treatment adopted. The difficulty in diagnosis arises chiefly from the obscurity and indefiniteness of the symptoms. Masked as they frequently are by the more salient evidences of perverted function in neighbouring organs and leading to wrong conclusions by their similarity to those of better known affections it is not surprising that disease of the pancreas is perhaps more frequently overlooked than any other serious abdominal trouble.

Not only is there a difficulty in recognising pancreatic affections during life but, as Mr. A. W. Mayo Robson was the first to point out in his lecture at the London Polyclinic in July, 1900, the symptoms of cancer of the pancreas are often so closely simulated by those of chronic pancreatitis, and the condition of the gland found at operation is so much alike in the two conditions, that it is only the after-history of the case and its response to suitable treatment that allow of their accurate differentiation. That this is a matter of the utmost importance is apparent when it is remembered that whereas operation in cancer of the pancreas is inadvisable, and whenever possible to be avoided, most satisfactory results usually follow appropriate treatment in cases of chronic inflammation. The difficulty is, however, to decide which are the cases that will benefit by operation and which are those where interference will only hasten an inevitably fatal conclusion. Hitherto there have been no satisfactory means by which this question could be decisively answered and it was mainly in the hope of finding a solution of the difficulty that some three years ago I commenced, in conjunction with Mr. Mayo Robson, an investigation of the chemical changes in the body produced by pancreatic diseases. These researches are not as yet by any means complete, for as the investigation has progressed many new and interesting issues have been raised, but, as I hereafter hope to show, the original object with which the experiments were commenced has, we believe, been gained and, not only so, but we have reason to think that the whole question of the diagnosis of diseases of the pancreas has been placed on a much more satisfactory footing than heretofore.

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[1] The purely chemical aspect of this subject will be dealt with on another occasion.—P. J. C.

In this lecture I shall as far as possible confine my remarks to a consideration of the practical application of our observations to clinical medicine and more especially to their bearing on the diagnosis of diseases of the pancreas and the differentiation of the various affections to which this organ is liable. It will, however, be necessary for me in the first place briefly to indicate the lines on which the research was commenced and to state the theoretical considerations that formed the original basis of the work.

On carefully considering the symptoms that may be associated with the various forms of inflammation of the pancreas one is struck by the fact that a number of the more typical of them are obviously dependent on alterations in the chemistry of the body. Among such may be mentioned the tendency to hæmorrhage, apart from the presence of jaundice, the occurrence of fat necrosis, the discovery of undigested fat and muscle fibre in the stools, the appearance of sugar in the urine, and the marked wasting seen in many cases. The association of these symptoms in acute cases and the frequent occurrence of several of them in the subacute and chronic inflammations suggest that the chemical changes that give rise to them are directly or indirectly dependent on perversion of the pancreatic functions. The most characteristic and striking of the signs I have mentioned is undoubtedly fat necrosis, and whatever view of its ultimate causation is held there can be no doubt that it is almost invariably associated with obvious disease of the pancreas. Although it is most typically met with in acute and gangrenous pancreatitis, it is not improbable that similar but less evident changes accompany all forms of pancreatic inflammation, and it is to these changes that the hæmorrhagic tendency which is so characteristic of the affections is due. It is now admitted by most authorities that the masses of free fatty acids or the combination of them with lime, which constitute the lesion, are directly derived from the fat of the affected part by the fermentative action of the pancreatic secretion and that the other constituent of the fat molecule—namely, the glycerine—is absorbed into the circulation. Bearing in mind the effects produced in animals by the subcutaneous injection of glycerine it occurred to us that in man the continued action of minute doses, such as fat necrosis would give rise to, might produce such a blood state as is met with in pancreatitis, especially when to the action of the glycerine on the blood there are added the effects of the removal of calcium salts from the circulation.

Starting on the theory that there was some such connexion between fat necrosis and the hæmorrhagic tendency we commenced our investigations of the chemical pathology of pancreatitis by examining the blood of several cases for glycerine and glycerine derivatives. But, as we quickly realised that such direct proof was impossible, owing to the small amounts of blood available at the bedside and to the relatively minute quantity of glycerine likely to be present in it, we turned our attention to the urine in the hope of there finding indirect evidence in support of our hypothesis. The well-known selective power of the kidneys by which they detect and excrete abnormal constituents of the blood favoured the view that the soluble products of fat necrosis, or their derivatives, might cause changes in the composition of the urine which, owing to the large bulk of material easily available for examination, could be satisfactorily detected. Further, although glycerine when introduced into the circulation is stated to be oxidised and to increase the secretion of carbon dioxide, Catillon has demonstrated it in considerable quantity in the urine after administration by the mouth and from 50 to 60 per cent. of the quantity given has been shown to be excreted thus in dogs. Even a larger percentage than this might reasonably be expected to escape destruction in patients suffering from pancreatic affections, for in them the metabolic processes are abnormal and there is apparently a tendency to defective oxidation.

Lewin has suggested a method for detecting glycerine in the urine which depends upon the fact that oxalic acid breaks up in the presence of glycerine into formic and carbonic acids. On distilling a sample of urine from a case of pancreatitis in the way he describes, indications of the presence of a formate in the distillate were obtained which, although not very marked, were still sufficiently pronounced to encourage further investigation. Several other methods for detecting the presence of glycerine were afterwards employed, and among them was that which depends on the formation of glycerose when a solution of glycerine is heated with nitric acid. In carrying out this test we employed phenylhydrazin as the means for detecting the glycerose, and were struck by the exceedingly well-marked deposit of crystals given by pancreatic urines. Control experiments carried out with normal urines and with specimens from cases of catarrhal and obstructive jaundice, intestinal obstructions, gastric ulcer, &c., were found to be uniformly negative, so that we hoped that we had not only obtained evidence in support of our theory but also had succeeded in finding a method of distinguishing pancreatitis from at least some of the clinical conditions with which it is liable to be confused. A more extended experience showed, however, that the matter was not quite as simple as it at first sight had appeared, for although all pancreatic urines gave a reaction, a similar result was obtained in a certain number of other diseases in which there was no reason to believe that the pancreas was diseased but which were characterised by rapid tissue change and defective oxidation. It had also to be borne in mind that the reducing power of most urines is increased by boiling with mineral acids, and although it was found that either hydrochloric or sulphuric acid could be substituted for the nitric acid originally employed, a series of careful experiments carried out for the purpose failed to demonstrate that the reaction obtained in pancreatic urines was due to the so-called animal gum from which the reducing substance of normal urine is said to arise. As the success of the test appeared to depend on the presence of some abnormal constituent in the urine, the examination of a large number of specimens from cases of known or suspected pancreatic disease was next undertaken and it was found that when taken in conjunction with the clinical symptoms the reaction was of considerable assistance in diagnosis. The strength of the acid employed, the kind of acid used, the time of boiling, and other details of the experiment appeared, however, to exert considerable influence on the result, and [illegible] erous experiments a method of [illegible] which proved to be generally s [illegible] y describe and call, for convenience of reference, reaction "A."

The specimen of urine to be examined is filtered, and ten cubic centimetres of the filtrate are poured into a small flask. One cubic centimetre of strong hydrochloric acid is added and a funnel having been placed in the neck to act as a condenser the flask is placed on a sand bath and gently boiled for ten minutes after the first sign of ebullition is detected. A mixture of five cubic centimetres of the filtered urine and five cubic centimetres of distilled water is then poured into the [illegible] The excess flask, [illegible] ur grammes of ac [illegible] minutes to of lea [illegible] is filtered allow of the [illegible] through a moistened filter paper and the flask is washed out with five cubic centimetres of distilled water on to the filter. To the clear filtrate are now added two grammes of powdered sodium acetate and 0 75 gramme of phenylhydrazin hydrochlorate and the mixture is boiled for from three to four minutes on the sand bath. The hot fluid is then poured into a test tube and allowed to cool undisturbed. After the lapse of a period, varying with the severity of the case from on to 24 hours, a more or less abundant flocculent yellow deposit is found at the bottom of the tube, and this when examined under the microscope with a $\frac{1}{6}$-inch objective is seen to consist of sheaves and rosettes of golden yellow crystals. As the presence of sugar in the urine would obviously vitiate the results thus obtained it is necessary before proceeding to the test to make sure that the untreated urine does not give a reaction with phenylhydrazin. This may roughly be done with Fehling's solution, or some similar test, but it is better to carry out a control experiment with phenylhydrazin hydrochlorate and sodium acetate in the manner I have just described, omitting the preliminary boiling with hydrochloric acid. Should the control experiment reveal even a trace of sugar it must be removed by fermentation, with subsequent boiling to expel the alcohol formed, before the investigation is proceeded with. The presence of albumin in the urine is also liable to cause trouble, and it is best got rid of either by treatment with ammonium sulphate or by acidifying with acetic acid, heating, and filtering.

The results obtained by this method were found not to be absolutely trustworthy, although a useful aid in diagnosis, since a positive reaction was also obtained in patients suffering from certain other diseases where active tissue change was taking place, such as cancer, adenitis, pneumonia, &c. For a long time the positive reaction given by these non-pancreatic cases diminished the practical usefulness of the test but eventually a means by which the cases of pancreatitis might be distinguished was devised, and we now believe that by combining the results of the two it is possible in the large majority of cases to make a trustworthy diagnosis from the examination of the urine alone. The differentiating test depends upon the fact that the formation of the crystals described in reaction "A" is interfered with in inflammation of the pancreas by a preliminary treatment of the urine with perchloride of mercury, while such treatment does not affect the appearance of the crystals in cases of cancer of the pancreas and the other conditions which give rise to a positive reaction. The procedure, which I shall refer to as the "B" reaction, is as follows.

20 cubic centimetres of the filtered urine are thoroughly mixed with half its bulk of a saturated solution of perchloride of mercury. After standing for a few minutes it is carefully filtered and to ten cubic centimetres of the filtrate one cubic centimetre of strong hydrochloric acid is added. The mixture is then boiled for ten minutes on a sand bath and subsequently diluted with five cubic centimetres of the filtrate from the mixed urine and perchloride of mercury solution and ten cubic centimetres of distilled water. After cooling it is neutralised with four grammes of lead carbonate and the succeeding stages of the operation are carried out as in reaction "A"

Experiments were next set on foot with a view to still further differentiating the various forms of disease to which the pancreas is liable, especially chronic inflammation and malignant disease, for, as I have already mentioned, the accurate diagnosis of these two conditions is a matter of the utmost importance to the patient. Careful observation of the crystals isolated from the urines of various types of pancreatic disease showed that while there was a general resemblance variations in form occurred. On classifying the crystals from a considerable number of cases it was found that those obtained in malignant disease were as a rule coarser and broader than those seen in simple inflammation and that in the simple inflammations again the crystals from acute cases were on the whole somewhat finer than those seen in most instances of chronic inflammation. The lines dividing these types were not hard and fast, however, and although to the experienced eye a suggestive difference was discernible, great reliance could not be placed on a differential diagnosis based on the microscopical characters of the crystals alone In the course of our further investigations a character of much greater value was discovered, and this was the differing rate of solubility of the crystals in dilute sulphuric acid. It was at first thought that this difference depended on the varying size of the crystals, but more extended experience proved that this was not the case; for although the coarser crystals took, as a rule, longer to dissolve completely than the finer ones, exceptions were met with and the time of solution appeared to be directly dependent on the intensity of the inflammatory changes in the gland. If the crystals obtained in reaction "A" be observed under the microscope whilst a 1 in 3 dilution of strong sulphuric acid is being irrigated under the cover-glass, they will be seen to turn brown when the acid reaches them and then to dissolve. In acute pancreatitis the interval that elapses between the first appearance of the brown colour and the complete solution of the crystals under observation varies from a few seconds to half or three-quarters of a minute; in chronic pancreatitis it extends from half to one and a half or rarely to two minutes, while the crystals of malignant disease as a rule do not completely disappear for from three to five minutes. To form a trustworthy opinion it is advisable to take the mean of several observations, so that slight variations unavoidably present in the conditions of the experiment may be neutralised and comparable results obtained. The crystals met with in non-pancreatic cases turn brown and dissolve in dilute sulphuric acid in a similar way to those obtained in pancreatic affections, and they most closely resemble those of chronic pancreatitis in their time of solution which generally ranges round one minute. Phenylglucosazone crystals, with the strength of acid mentioned, only slowly assume the brown colouration and take five minutes or more to dissolve.

The time limits mentioned are the result of the comparison of a large number of observations and will as a rule be found to be correct. The exceptions, which are in most instances cases of malignant disease of the pancreas, I shall consider in detail when dealing with the examinations which I have made of specimens from cancer cases. The practical results of the examination of the urine by the methods which I have described may be briefly summarised as follows: 1 If no crystals are found by either the "A" or the "B" method the pancreas is not at fault and some other explanation of the symptoms must be sought. 2. If crystals are obtained by the "A" method but not by the "B" reaction active inflammation of the pancreas is present and surgical interference is generally indicated. (*a*) The crystals obtained by the "A" method will in acute inflammation dissolve in 33 per cent. sulphuric acid in about half a minute. (*b*) In chronic inflammation the crystals obtained by the "A" method will take one or two minutes to disappear. 3. If crystals are found in preparations made by both the "A" and the "B" methods there may be—(*a*) malignant disease of the pancreas, when the crystals will as a rule take from three to five minutes to dissolve and operation is inadvisable; (*b*) a damaged pancreas due to past pancreatitis, when the crystals will dissolve in from one to two minutes; (*c*) some disease not connected with the pancreas, when the crystals dissolve in about one minute. In the two latter, (*b*) and (*c*), the urgency of the symptoms and the condition of the patient must decide the need for an exploratory incision, but there is generally not much difficulty in referring the case to one or other of the groups when the clinical history is considered in conjunction with the result of the examination of the urine.

Other aspects of the examination of the urine in diseases of the pancreas may now be mentioned. The most important of these from a diagnostic point of view is the microscopical investigation of the centrifugalised deposit. This in nearly 30 per cent. of the specimens from cases of pancreatic inflammation that I have examined has shown calcium oxalate crystals and if those urines in which bile was present be excluded the proportion is more than doubled. The significance of oxalate of lime crystals has long been debated, but the marked tendency to increased oxalate excretion in diabetes and its frequent rise simultaneously with a decrease in the output of sugar have suggested that it is associated with the incomplete oxidation of carbohydrates. The remarkably frequent occurrence of these crystals in pancreatitis lends support to this view, for it is only in the comparatively early stages of the lesion that they are found; and when, as sometimes occurs, the disease progresses and glycosuria occurs the formation of calcium oxalate appears to cease. Further, their presence seems to indicate that a stage antecedent to diabetes and closely related to it is reached in most cases of pancreatic inflammation, whether they ultimately develop into the typical condition or not. Dextrose has only been met with in a very few of the urines examined and in all instances where it has been detected the case has been either one of acute inflammation or advanced cirrhosis of the pancreas. The ordinary forms of infective subacute and chronic inflammation do not appear to give rise to dextrosuria in the stages where they come under the observation of the surgeon. As Kulz and Vogel have detected a pentose in the urine in diabetes and Hammarsten has demonstrated a similar substance in a nucleo-proteid obtained from the pancreas, the possibility of pentoses being present in the urine in pancreatitis had to be borne in mind, but I have been unable experimentally to verify the fact. Acetone and di-acetic acid were also sought for in a considerable number of cases, but no evidence of their presence could be found except in a few instances of advanced pancreatitis with typical diabetes.

In view of the fact that inflammation of the pancreas is in a considerable number of cases associated with more or less jaundice it is not surprising to find that bile pigments were *discovered in 60 per cent. of the urines examined. In some* only a faint trace was detected with difficulty, while in others there was a very large quantity. All the specimens but one, derived from cases of malignant disease of the pancreas, showed a considerable amount of bile in the urine. No special significance can be attached to the quantity present, as in many cases with chronic catarrh the urine is as deeply coloured as it is in most cases of malignant disease. *The removal of any obstruction of the common duct that* may exist is generally followed very shortly by the disappearance of bile from the urine, but in a few cases where the condition is of long standing bile pigments may be found, although in much diminished quantity, several weeks or even months after the operation.

In the course of our observations over 300 specimens of urine have been investigated, but of those about 100 were *only employed as controls. The remainder may be divided* into an earlier series on which the preliminary investigations were carried out, and a succeeding series of 170 specimens derived from 111 cases of suspected pancreatic disease where the diagnostic value of the methods described was put to the test. As I have already sketched the lines along which the investigation proceeded it will not be necessary to refer further to the first series, except to state that all the cases *were under Mr. Mayo Robson's care and had been found at* operation to be suffering from some disease of the pancreas.

In the second series specimens of urine were sent to the laboratory for examination without any indication as to the nature of the report expected and in many of the earlier ones the condition of the pancreas was ascertained while the examination was being made. By thus separating the clinical and experimental

bias on the part of the

avoided and a true estimate

formed. Among the earliest cases dealt with in this way I may mention two which were examined on the same day. Both were deeply jaundiced and presented very similar clinical symptoms, but on the operating table one was found to have well-marked pancreatitis with a stone in the ampulla of Vater, while in the other no enlargement or hardening of *the pancreas could be detected although some gall-stones* were found in the gall-bladder. The results of the examination of the urines entirely agreed with the conditions found, for while with the sample from the first case a well-marked reaction was obtained, no crystals of any sort could be isolated from the urine of the second. Similar encouraging confirmations of the value of the tests were met with in many other cases, but it will facilitate matters if I *consider the whole series in groups arranged according to the* lesion present, only referring to individual cases where they illustrate some special point or contain elements of particular interest.

GROUP 1.—ACUTE PANCREATITIS.

The urine from three cases of acute pancreatitis has been investigated. All were under Mr. Mayo Robson's care and two of them were operated on by him. In the third death occurred shortly after the patient was first seen and as unfortunately no post-mortem examination was permitted the diagnosis is not absolutely certain but clinically the case was a typical one of acute pancreatitis. In the two cases operated on one was found to have pancreatitis with fat necrosis, while in the other a slough of the pancreas was removed and a stone was found in the common duct. A typical reaction was obtained in all three when the urine was examined, the crystals obtained by the "A" method dissolving in a quarter to three-quarters of a minute. An interesting fact was observed in connexion with one of the cases (that showing fat necrosis)—namely, that a month after operation, when the patient was convalescent, the crystals which were obtained from the urine, but now in much reduced numbers, took from one minute to one and a half minutes to dissolve instead of the three-quarters of a *minute noted before and shortly after the operation.*

GROUP 2.—CHRONIC PANCREATITIS.

Chronic pancreatitis is an inflammatory process due in the greater number of cases to an infection travelling up the pancreatic ducts. The infection may originate in a catarrh of the duodenum or may result from stagnation of the bile and pancreatic secretion as a consequence of partial or complete blocking of their common channel of entry into the intestine. When an obstruction occurs it is in most instances due to a gall-stone lodging in the pancreatic portion of the common duct or in the ampulla of Vater. In 30 of the 51 *cases in this group a biliary calculus was found in one or* other of these situations. The urine in all cases yielded typical crystals dissolving in dilute sulphuric acid in about one minute, although in three instances they completely disappeared in half a minute and in four others one and a half minutes elapsed before solution was complete. Crystals dissolving in three-quarters of a minute were obtained in two cases where pancreatic calculi were the cause of the obstruction. *An account of the first case was published by Mr.* B. G. A. Moynihan in THE LANCET of August 9th, 1902, p. 355, while the other has been described in detail by Mr. Mayo Robson in his recent Hunterian lectures. Obstruction from causes other than calculi are occasionally met with, and in one, where a malignant growth of the ampulla of Vater blocked the entrance of the common duct into the duodenum, crowds of fine crystals dissolving *in from half to three-quarters of a minute were obtained* from the urine; in another, where a fold over the mouth of the papilla and a much dilated common duct were discovered at operation, the urine yielded crystals dissolving in from one minute to one and a half minutes. Sometimes the inflammation of the pancreas goes on to suppuration and either a localised abscess is formed or the duct is found to be filled with pus. Two examples of each of these *conditions have been met with and all gave a typical* pancreatic reaction. The most recent was a striking illustration of the difficulties attending an accurate diagnosis in pancreatic affections and also shows how a chemical examination of the urine may throw light on a difficult case. The patient, a man, aged 65 years, was deeply jaundiced and much emaciated, a swelling could be felt in the region of the pancreas, and the general condition suggested *malignant disease although a varying temperature* indicated septic absorption. A sample of the urine sent to me for examination by Dr. Hector W. G. Mackenzie yielded by the "A" method many crystals soluble in one minute, while with the "B" reaction only amorphous granules were obtained. I accordingly diagnosed inflammation of the pancreas and the sequel proved the correctness of the diagnosis, for when the abdomen was opened a stone was *found in the ampulla of Vater and on removing this pus* oozed out of the duct of Wirsung. Mr. Mayo Robson, who performed the operation, also found that the pancreas was very much enlarged. Further cases in this group might be mentioned where the chemical diagnosis proved of considerable assistance but I will only refer to one. This was that of a man who had for some time been steadily losing flesh and in the three months before *he was seen in consultation by Mr. Mayo Robson was said* to have lost over two stones in weight. For two months he had been deeply jaundiced and physical examination showed enlargement of the liver and spleen and some swelling over the pancreas. The gall-bladder was also dilated and altogether the case was strongly suggestive of cancer of the pancreas. His urine, however, gave crystals dissolving in one minute by the "A" method, while the "B" reaction was negative. At the operation which was subsequently performed chronic pancreatitis with a stone in the common duct was found and the diagnosis based on the urinary examination thus proved to be correct.

In 17 other cases where the reaction was obtained the pancreas was more or less enlarged but no obvious obstruction of the ducts was discovered at the time of operation. In six of them bile pigments were found in the urine, so that the inflammatory process would appear to have travelled up the bile and pancreatic ducts either as a direct extension of a catarrh of the duodenum or as the result of an obstruction of the common duct which had passed away.

GROUP 3.—MALIGNANT DISEASE OF THE PANCREAS.

The diagnosis of malignant disease of the pancreas from the examination of the urine depends chiefly on the appearance of the crystals and the time of solution of those *obtained by the "A" reaction in dilute sulphuric acid, for* like non-pancreatic cases they give a reaction by both the "A" and the "B" methods. Out of the 15 cases of cancer examined a correct diagnosis was made in 13. In one, although the coarseness of the crystals raised a suspicion of malignant disease, only a doubtful opinion was given as complete solution was effected in one or two minutes. In the other case a diagnosis of chronic inflammation of the pancreas was incorrectly made since the urine yielded fairly fine crystals dissolving in from one minute to one and a half minutes by the "A" reaction and the "B" reaction gave only a few crystals. In four of the instances where the opinion given was confirmed typical coarse crystals dissolving in from four to five minutes were obtained, while in the other 11 from three to four minutes elapsed from the first brown colouration of the crystals to their complete disappearance. In the majority, therefore, of these cases the examination of the urine was of considerable assistance in solving a difficult problem, but in a small proportion the result was not so satisfactory. The explanation of the difference in time of solution met with in various cases of malignant disease was not at first apparent, but the results of the examination of two specimens from a case of cancer of the pancreas in March of last year suggested that it was probably associated with the amount of inflammatory reaction set up and the situation and extent of the growth. The first specimen referred to, examined on March 27th, showed coarse crystals soluble in from three to four minutes, while the second, taken a week later, yielded crowds of fine crystals dissolving in under half a minute—that is to say, the latter approximated in appearance and solubility to those met with in acute pancreatitis, whereas the former were typical of malignant disease. In a communication accompanying the second sample it was stated that the condition of the patient had markedly changed since the last examination, and as he very shortly afterwards succumbed it appeared probable that the alterations noticed in the urine and in the clinical condition were associated with a rapid extension of the growth. Two cases under the care of Dr. J. Stewart of Leeds lend support to this view. In one, where coarse crystals dissolving in about four minutes were obtained, the disease affected the body of the gland but did not encroach on the duct; in the other the growth was confined to the head of the pancreas and the presence of fairly fine crystals dissolving in from one minute to one and a half minutes led, as I have already mentioned, to an incorrect diagnosis of chronic pancreatitis. Clinically also this last case was of interest as I hear from Dr. Stewart that careful palpation failed to reveal the distension of the gall bladder that usually accompanies malignant disease of the head of the pancreas. The explanation was found at the post-mortem examination when no trace of a gall-bladder could be discovered.

The correct diagnosis of malignant disease from an examination of the urine requires considerable care, for although the typical, broad, slowly dissolving crystals are met with in most instances, in a few cases the presence of an attendant pancreatic inflammation is liable to obscure the issue and to lead to an incorrect opinion. The mistake of diagnosing inflammation for cancer can be avoided by carefully noting the result of the "B" reaction and the difficulty now is to differentiate it as a rule from some non-pancreatic affection. In all cases of suspected malignant disease of the pancreas it is advisable to investigate the fæces as well as the urine, for the presence of undigested muscle fibre, the absence of bile pigments, and a large amount of fat in the stools are strongly in favour of cancer.

GROUP 4.—CYST OF THE PANCREAS.

The urines from two cases of cyst of the pancreas have been examined and both gave results similar to those met with in chronic pancreatitis. The crystals obtained by the "A" method were fairly fine and dissolved in about one minute.

GROUP 5.—CASES WITH GLYCOSURIA.

Considering the effect produced in the lower animals by removal of the pancreas the relative infrequency of glycosuria as a symptom of pancreatitis is somewhat remarkable. In chronic pancreatitis sugar is rarely met with, while even in acute destructive lesions glycosuria is rather the exception than the rule. In the 90 cases of proved pancreatic disease investigated sugar has only been found in the urine of five and these were all examples of advanced chronic inflammation. In neither the urines of the 15 cases of malignant disease nor in the samples from the three acute cases was any reducing substance met with. The relation of the fibrous tissue of chronic pancreatitis to the islands of Langerhans is, according to Opie, the determining factor, and whereas in the interlobular variety diabetes only supervenes when the sclerotic process has advanced to a late stage and the interacinar islands are destroyed along with the secreting tissue, in the interacinar form diabetes is an early symptom as the islands of Langerhans are more or less involved from the commencement. Since obstruction of the pancreatic duct gives rise to interlobular pancreatitis and obstruction is the most common cause of inflammation, glycosuria is relatively uncommon in chronic pancreatitis.

The methods adopted for the examination of the urine when sugar is present have already been described and, although our experience of them is not as yet large, the results obtained lead us to hope that they will prove of assistance in differentiating pancreatic from non-pancreatic diabetes. In one of the five cases mentioned the pancreatic origin of the disease was proved post mortem and histological examination of the gland showed that the fibrous tissue of which it was mainly composed had destroyed practically the whole of the glandular structure. Only a few isolated patches of pancreatic tissue could be seen and in these no trace of the islands of Langerhans was detected. The specimen of urine that I examined was taken in the post-mortem room by Dr. C. Powell White from the bladder of the patient who was killed in an accident near St. Thomas's Hospital. It contained a large amount of dextrose and after this had been removed showed by the "A" method many fine crystals soluble in half a minute. The "B" reaction gave only an amorphous deposit of granules. Similar results were obtained with a sample of urine kindly secured for me by Mr. J. Tait from a case of acute pancreatitis described by Mr. W. Gifford Nash in THE LANCET of Nov. 1st, 1902, p. 1192. My examination was made over a year after the first onset of the symptoms but the urine still contained a considerable amount of sugar, and crystals dissolving in from a quarter to half a minute were prepared by the "A" method. A second specimen, kindly sent to me by Mr. Nash in February of this year, showed dextrose but no acetone or di-acetic acid. A well-marked pancreatic action was given by the "A" method, the crystals dissolving in from half to three-quarters of a minute, but no precipitate of any sort was found in a preparation made by the "B" method. These results indicate, I think, that although the operation had been successful in relieving the acute condition a subacute or chronic pancreatitis still remained.

That an inflammation of the pancreas may occasionally progress in spite of the removal of the initial obstruction of the duct which gave rise to it is also shown by two cases operated on by Mr. Mayo Robson some years ago and samples of whose urine I have recently had the opportunity of examining. In one the condition of the pancreas found at the time of the operation was such that malignant disease was diagnosed and a bad prognosis was given. The patient is still alive and apparently well, however, eight and a half years after the operation. Her urine which I examined in February showed an abundance of dextrose but no acetone or di-acetic acid. Crystals dissolving in three-quarters of a minute were obtained by the "A" method but none could be isolated by the "B" method. The second case was operated on in 1898 and a sample of the urine examined recently gave similar results to those just mentioned. In this case, too, a swelling of the head of the pancreas, thought at the time to be malignant, was found at the operation, but the rapid increase of weight and subsequent good health of the patient showed that the tumour was really inflammatory. The remaining case of the five in this group was that of a man who had suffered for some years from what appeared to have been gall-stone colic. His urine contained sugar and yielded crystals by the "A" method which dissolved in half a minute.

GROUP 6.—CASES WITH SYMPTOMS RESEMBLING THOSE OF PANCREATITIS.

In 35 cases the clinical symptoms suggested for a time the presence of an inflammation of the pancreas but their subsequent course and the conditions found on operation confirmed the diagnosis based on the examination of the urine that the pancreas was not affected. Seven of them turned out to be cases of obstructive or catarrhal jaundice. One of the former was particularly instructive as it had been diagnosed by a well-known London physician as being a case of cancer of the pancreas and was regarded by him as hopeless. The result of the examination of a specimen of urine sent to me for an opinion did not agree with this view, however, as I failed to obtain any crystals by either the "A" or the "B" methods. I consequently ventured to suggest that the pancreas was not diseased at all. Mr. Mayo Robson shortly afterwards operated on the patient and found that the pancreas was perfectly normal but that there was a large biliary calculus lodged in the bile duct above the duodenum and it was *from this that the jaundice and other symptoms arose* A perfect recovery followed and the patient is now quite well. Several cases of ulceration of the stomach and duodenum have been differentiated from pancreatic diseases by the absence of the characteristic reaction in the urine. In malignant disease of the stomach the positive results obtained by both the "A" and the "B" method have served to exclude pancreatitis, while the solubility of the crystals in about one minute showed that the symptoms were probably not due to cancer of the pancreas. I have only *had the opportunity of examining* the urine *from one case* of intestinal obstruction, but as this did not give the pancreatic reaction it is most likely that acute pancreatitis may be diagnosed from it by this means in spite of the similarity of their clinical phenomena. In most cases of malignant disease of the intestine crystals dissolving in one minute or thereabouts have been obtained from the urine, but in one case of cancer of the rectum none could be found.

GROUP 7.—RE-EXAMINATION OF OLD CASES.

When a patient with pancreatitis is operated on the symptoms are relieved and he is generally restored to apparent health, but the cases of glycosuria I have quoted as occurring some years subsequently to surgical treatment show that in some at least there is a permanent disturbance of metabolism which may ultimately develop into diabetes. Such a progressive lesion is not common, but the examination of the urine in a considerable number of cases during convalescence and at varying intervals afterwards has indicated that in most there is a permanent alteration in the chemical equilibrium of the body. While for all practical purposes the work of the pancreas may be efficiently carried out, the damage it has sustained would appear to interfere with an absolutely normal performance of its functions and it is probable that the oxidation of carbohydrate material is imperfect in all cases of healed pancreatitis. So long as there is any active inflammation of the gland the "B" reaction is negative, but when the active stage is passed both the "A" and the "B" methods are found to yield crystals. In many cases where the urine has been examined at intervals for several months after operation an abundant crop, dissolving in about one minute, has been obtained, and in two cases where the urine was re-examined two and a half years after recovery a well-marked reaction was given by both methods. I have recently had sent to me samples from several cases on which Mr. Mayo Robson operated for pancreatitis as long as six years ago, and these all gave similar results. In about half the recovered cases also calcium oxalate crystals have been found in the urine and in several cases of pancreatitis with jaundice it has been noticed that they have made their appearance when the icterus was relieved by *drainage of the* biliary passages.

I have not attempted to deal with the cases examined individually, as most of them have been under Mr. Mayo Robson's care and are either described in the last edition of his book on Diseases of the Gall-bladder or have been dealt with by him in his Hunterian lectures. In THE LANCET of Sept. 27th, 1902, p. 856, Mr. Moynihan has recorded several instances of chronic inflammation of the pancreas, samples of the urine from which I had examined and I take this opportunity of thanking him and a number of other surgeons and practitioners in various parts of the country who have interested themselves in these investigations and have materially assisted the work by supplying specimens from cases under their charge.

It is unfortunate, from the point of view of our researches, that it has not been possible to obtain much evidence as to the histological condition of the pancreas that accompanies the changes in the urine described. Of the three cases where a post mortem examination was allowed one was a spheroidal-celled carcinoma and has already been referred to; the other two were examples of an early and advanced stage of chronic pancreatitis respectively. Microscopical examination of the gland from the former case showed engorgement of the blood-vessels, cloudy swelling of the parenchyma, and in places some excess of fibrous tissue, while in the latter an advanced condition of fibrosis was found.

In spite of the paucity of post-mortem evidence in support of the diagnostic value *of the methods of urinary examination* mentioned there is no doubt that they are clinically useful. We do not claim that they are pathognomonic or that, taken alone, they will enable a correct opinion to be formed in every case, but we do think that when the results of the examination of the urine are considered in conjunction with the clinical symptoms a trustworthy diagnosis is in nearly all cases of pancreatic disease capable of being arrived at. A much more extended experience, dealing with a considerably larger number of cases than it has been possible for us to obtain, will be necessary before their exact value can be finally determined, but so far as our observations go they lead us to think that in future an exploratory operation will not be necessary to determine the presence of a pancreatic lesion and that chronic pancreatitis will no longer be found in the post-mortem room as the cause *of death* in supposed inoperable cases of "cancer" of the pancreas. The tests are not yet perfect and our excuse for bringing them forward at this stage is a desire to place in the hands of the profession an aid to diagnosis which, however incomplete, has proved in our hands of great assistance in many difficult cases. We can only hope that the experience of others will be equally happy and that *an early recognition of disease of* the pancreas by an examination of the urine may in some cases prevent suffering and lead to the saving of lives that might otherwise have been sacrificed.

And now, Sir, it only remains for me to thank you and the Council of this College for the honour you have done me in permitting me to deliver this lecture It is an honour that I deeply appreciate and I can only trust that I have proved worthy of your confidence and of my predecessors in the lectureship.

ACUTE APPENDICITIS: ITS DIAGNOSIS AND THE INDICATIONS FOR OPERATION.[1]

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INTRODUCTORY.

NOTHING is more valuable and nothing can be more misleading in medicine than personal or individual experience. This seeming paradox is perhaps specially applicable to the clinical and therapeutic questions which surround the cæcum, for in this domain each individual physician, surgeon, and general practitioner tends to base his views and methods on his personal experience. One man calls in the knife the moment he scents appendicitis; another holds lingeringly to the dying faith in a stercoral *typhlitis* and perityphlitis, and each man is prone to continue to act in accordance with the results of a limited personal experience. It is now more than 20 years since the vermiform appendix [illegible] as the main factor in what aforetim [illegible] The predominance of the [illegible] has been steadily asserted and hundreds of operations have afforded opportunities for the confirming of its position and for a reasonable classification of the morbid changes which affect it. In this connexion it will not be uninteresting to you to know that in the medical statistics of the Edinburgh Royal Infirmary for 1891–92 there are four cases of appendicitis, three of typhlitis, and nine of perityphlitis. In 1894–95 the cases of appendicitis rose to 21, while perityphlitis has two, and typhlitis has disappeared from the list. In 1901–02 both terms have disappeared and appendicitis only is retained. *Many writers have formally given* the old typhlitis and perityphlitis a place in the classical mythology of medicine and assure us that no one has ever seen or ever will see a simple perforation of the cæcal wall or a perityphlitis not due primarily to the appendix. Some writers are more judicious and recognise a small percentage of such cases, some even placing them as high as 5 per cent. Were the statements of the former class to be taken as correct I could claim a unique experience, for in a comparatively small experience I have had four such cases. I have had three cases of acute perityphlitis due to primary lesion at the cæcum; one case at the operation showed marked pericæcal inflammation, while the appendix showed none, and a few days later we had, unfortunately, the opportunity of seeing fæcal ulcers in the cæcum; another fatal case was the result of perforation of one of a number of fæcal ulcers; the third occurred in an old man and proved rapidly fatal without perforation or ulcer; the fourth case, also a fatal one, was of chronic perityphlitic burrowing abscess in which the appendix was not involved and where the diagnosis before I saw the patient was malignant disease. I mention my experience to accentuate one half of the seeming paradox with which I opened—namely, that nothing may be more misleading than the personal experience of any one of us if taken by itself and not brought into relations with the experience of others. Whatever lingering sentiment may cling to the older views the evidence is overwhelming that in something between 95 and 100 per cent. of acute affections at the cæcum the primary seat of grave trouble is the appendix and that were it not for the appendix perityphlitis would be a rare occurrence.

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[1] The opening paper read at the discussion on this subject before the Edinburgh Medico Chirurgical Society on Jan. 20th, 1904.

THE DIAGNOSIS OF ACUTE APPENDICITIS.

In approaching this question it is necessary to have a clear conception of the condition we seek to diagnose. I do not, however, propose to dwell in detail upon the varied anatomical changes which are met with in the appendix as a result of morbid action; but there are some points which materially assist us in our efforts at differential diagnosis. It is important to bear in mind in the first place that the appendix varies in length and in calibre, in its position relative to the cæcum, and in the form of its mesentery. Moreover, the meso-appendix also carries its blood-supply. In the second place two morbid conditions may arise in connexion with the appendix—namely, (1) inflammation and (2) necrosis, going on to gangrene. The intensity of the inflammation varies from a catarrh of its mucous membrane to a parietal inflammation involving all its coats or an inflammation accompanied by ulcers which may or may not perforate. Necrosis or gangrene of the entire appendix is sometimes, if not always, determined by a short mesentery which gives the appendix a sickle shape or by some other mechanism which interferes with the blood-supply. Van Cott goes so far as to hold that the primary local condition in appendicitis is a trophic one which makes it a point of least resistance for the action of virulent organisms. The fact that appendicitis is much less frequent in women than in men is probably in part due to there being a second source of blood-supply in women by way of the appendiculo-ovarian ligament. This anatomical point is of important significance, for various conditions at the cæcum or of the appendix itself may impede and even arrest the arterial blood-supply so that necrosis and gangrene readily follow. The two other anatomical points which seem to me of most importance are the calibre and perhaps the length of the appendix or the relation between these and the relation of the lumen of the appendix to the cavity of the cæcum. I do not venture to lay down definite rules but it is by recognising the existence of differences in the directions indicated that we are able to understand how the appendix in certain persons, from its shape, size, position, or curvature, is bound to give trouble to its possessor on the slightest provocation, while in others from birth to death it never indicates its existence, no matter what the gastro-intestinal experience of the individual may have been in other respects.

On this anatomical difference of position and of lumen depends and hangs the question of inflammation. Why does the appendix inflame and not the cæcum? I take from A. O. J. Kelly of Philadelphia the idea, which I apply more generally, that the question is essentially one of drainage. Secretion from the mucous membrane of the appendix or fæcal matter entering from the cæcum and not expelled form an excellent nidus for the growth of the micro-organisms of the intestine, but such conditions do more—they have been shown experimentally to be the very conditions which rapidly exalt the virulence of that otherwise harmless organism, the bacillus coli communis. Kelly, Deaver, and others have shown by a large number of observations that this organism is the most common bacterial agent, although not the only one, in the determination of acute inflammation in the appendix. It is important to realise that the exaltation of virulence of the organism mentioned takes place in other bowel conditions as obstruction, strangulation, and volvulus, but for our present purpose it is still more important to know that it also takes place in diarrhœic conditions and in constipation. The variability in the measure of this exaltation of virulence determines the great differences in the clinical manifestations and in the ultimate issue in individual cases. But this question of drainage requires further consideration and in this connexion I believe that the condition of the mucous membrane of the cæcum as a factor in causing the block is forgotten. We never forget that a duodenal catarrh causes a block of the common bile duct, but at the cæcum we are so taken up with the appendix that we ignore the possibility of the block which determines and keeps up the inflammation being caused by a like condition at its mouth. We must, I think, accept this proposition. The block, however, may be associated with a fæcal concretion in the appendix and this association is frequently present in the fulminating type of appendicitis. Here also we have to be on guard against unwarrantable conclusions. Fæcal concretions are common in the appendix without any trace of irritation but if a fæcal concretion and a catarrh operate together then we have the conditions which may lead to rapid perforation. But even then the issue turns on the virulence of the organism present. I have seen a fæcal mass on a surgeon's finger tip a second or two after he had introduced his hand into the abdominal cavity and yet the patient never showed an anxious symptom after the removal of the perforated appendix. In connexion with this question of fæcal concretion Fowler records a unique case in which gangrene of the appendix was due to a gall-stone entrapped and stuck at its orifice.

Following upon the foregoing considerations the first point which appears to me to call for consideration is the question of "appendicular colic"—is there such a condition and what view do we take of it? The sudden onset of severe abdominal pain, perhaps vomiting, muscular rigidity of the abdominal wall or of the lower right segment of it, and tenderness are known to all of us. Talamon argues that this sudden onset of pain is due to a scybalous concretion formed in the cæcum becoming suddenly engaged at the mouth of the appendix. Fowler denies the occurrence of appendicular colic; Hawkins questions it. Personally I do not see how the manifestations referred to are to be otherwise explained than by a temporary embarrassment to the appendix drainage. We all know that an attack of the kind indicated may come on in the night; that after hot applications and a dose of castor oil or of a saline laxative, the individual may be well enough to be at business that day or the following day. No medical man sees him, for the condition is looked upon as indigestion or colic due to constipation and only requiring domestic skill. We have seen cases where a second and a third recurrence of this experience formed the historical back-ground to a tragedy; we have known it repeated over a period of many years and no tragedy to follow.

This question of appendicular colic lies at the threshold of the diagnosis of appendicitis; from it you easily build up the whole clinical story of acute appendicitis. You pass from the mere mechanical and physical embarrassment of colic to the superadded inflammation, perforation, or necrosis. The symptoms of acute appendicitis are common to various abdominal illnesses—sudden onset of pain which may be of extreme severity, vomiting, tenderness, rigidity, a measure of shock with an accelerated and feeble pulse, and a varying degree of elevation of temperature—so that appendicitis has been mistaken for many things; amongst them are acute indigestion, gastric perforation, internal hernia, renal and hepatic colic, while diaphragmatic pleurisy and croupous pneumonia have been thought to be appendicitis. It would be treating the members of this society with scant respect were I to occupy their time with a reproduction of the points determining the differential diagnosis in all these. There are. however, two phenomena which I venture to deal with—namely, pain and tenderness. With regard to pain I am often impressed by the undue significance attached to the site of pain in abdominal conditions. In acute appendicitis the pain is often referred to the umbilical, epigastric, or other region, or it may be diffused all over the abdomen. When pain is thus referred to regions at a distance from the seat of lesion it frequently misleads. When such referred pains are associated with surface tenderness in the same regions they still more commonly lead to an error in diagnosis. This surface tenderness or skin hyperæsthesia is a great stumbling-block in abdominal diagnosis, and accuracy of diagnosis need never be expected until we have, by careful and patient examination, learnt to distinguish between it and the true tenderness of the diseased organ. We need not discuss the paths of referred pains, but it is well to remember that the nerves involved often carry with them to their terminal distribution a surface hyperæsthesia. One point where the surface tenderness is common has been engraved with the name of McBurney and proves a trap to the unwary clinician. Surface tenderness must not be confused with deep tenderness. At the outset of an attack the rigidity of the muscles may be a barrier to deep palpation, but with sufficient patience it is usually possible to make out the presence or absence of deep tenderness, and if we are at all successful in our manipulations pain can always be elicited by pressure on an inflamed appendix. To indicate to you that this mode of examination may be quite trustworthy, I may mention that in one case I ventured to tell the surgeon into whose hands I gave the patient that the appendix was lying behind the cæcum and the operation showed this to be correct; in other cases the point of marked tenderness is only to be found by rectal examination. I saw with one of my brethren some time ago a case in which tenderness was only elicited in this way, and it was the only guide to the origin of the lesion causing symptoms the extreme gravity of which it was easy to estimate. The situation of the tenderness in such cases is, of course, due to the position of the appendix. The importance of being able to elicit this direct tenderness of the affected part cannot be exaggerated; it is the key to abdominal diagnosis; it is recognised by all the authorities—Hawkins, Fowler, and Deaver lay stress upon it. Deaver says it is "always present." Fowler says "in the early stage of the disease tenderness is only elicited when pressure is made in the immediate neighbourhood of the appendix itself." Fowler goes so far *when considering diagnosis as to say that "every case of* colicky pains in the abdomen suddenly developed with right- [illegible] case of appendicitis [illegible] Leguen denies diffi- [illegible] cases. Nothnagel [illegible] .ve done, to a false localisation of the pain or an unusual position of the appendix. Talamon holds that the diagnosis of acute [illegible] nosis of pneumonia. One [illegible] to the state of the bowels [illegible] *is the rule it is not the* invariable condition. Some time ago I was looking after a boy with diarrhœa, elevated temperature, some tenderness in the right iliac region, and a history that suggested tuberculous ulceration of the intestine. He was seen for me by another physician but it was left to me to realise a couple of days later that we had both overlooked an appendicitis. The patient fortunately recovered after operation. In fact, the diagnosis of acute appendicitis hangs upon and depends upon our skill in eliciting the essential and distinguishing it from the non-essential and incidental.

INDICATIONS FOR OPERATION.

At the outset of this part of the subject we have to face two strong currents of opinion which cannot be called the medical and the surgical, for the surgeons are found in both camps. Indeed, the French surgeon, Leguen, divides even his surgical *confrères* into radicals and opportunists or temporisers. Probably the best designation for the two schools is to be found in our own literature and we may accept the terms "radical" and "conservative" as indicating the point of distinction between them from the operative standpoint. The radical school has attained its full effulgence in America. Since the publication of Fitz's papers in 1886 and 1888 and the establishment of the appendix as the dominant structure in the pathology of the right iliac fossa American surgeons have more and more adopted the practice of routine excision as soon as appendicitis is recognised. Fitz, Senn, Sands, McBurney, Price, Morris, and Deaver are all names associated with this school. Leguen says: "*Toute appendicite doit être operée à temps.*" If this aphorism be adopted the position is simple; differential diagnosis becomes a mere unpractical refinement and there is nothing left to discuss. The argument in support of this position is that the danger of perforation is great and that it is impossible to determine which cases will perforate and which will not. This is the main point: there are also minor although important points to which I need not refer. This is the point which appeals to those of us who have learnt to dread the possibility of an intense toxæmia from peritoneal infection and who know how rapidly this supervenes in some cases. I myself am so alive to this truly terrible aspect of acute appendicitis and the cases which I see are so often cases in which operation is clearly indicated that were I to take my personal experience of the last ten years as my sole guide I should not be far from the radical position. But here again our individual experience has to be checked by the knowledge of the results of a wider experience.

The conservative school is represented in this country by Treves, Tubby, and Hawkins; in France by Talamon; and in Germany by Nothnagel. Hawkins, on whose work Treves leans, says of the American school that "the gravity of disease of the appendix was measured by the rapidity of death in a few fatal cases rather than by the actual frequency with which a fatal event occurs." Referring to some more recent contributions to the subject he says: "They seem to be compiled by a surgeon for the use of a physician concerning a disease which is in all its aspects familar to the physician but of which the surgeon has seen only the more severe form. They assume a rate of mortality from disease of the appendix which has no foundation in actual figures." Talamon says that the position of the partisans of the extreme view would necessitate operation for every attack of intestinal colic attended with intense pain localised in the right iliac fossa, a rule he thinks sufficiently absurd in itself and not likely to be adopted. Nothnagel speaks of the operation fanatics. Treves says: "It would be as wise to advise immediate operation in all cases of ulcer of the stomach as soon as a diagnosis is made because some cases of ulcer of the stomach end in a fatal perforation." Tubby says: "I am strongly inclined to think that no judicious surgeon is prepared to tie himself down to the practice of routine early operation in all cases but would prefer to watch his cases closely and when in doubt operate at once." The warrant for the conservative position is to be found in the results of a wider experience rather than in that embraced by the individual observer. Some of these results are as follows. Furbringer in 120 cases had 10 per cent. of deaths. Renvers had from 91 to 92 per cent. of recoveries. Guttmann at the Moabit Hospital had 96 per cent. of recoveries. Curschmann in 453 cases had 4 5 per cent. of deaths and nine cases sent to the surgeons. Sahli, as the outcome of a collective inquiry, had a return of 7213 cases which showed that in 6740 cases not operated on 8 8 per cent died and 91·2 per cent. recovered. Nothnagel in 130 cases had 115 cured or improved, four deaths without operation, and 11 cases sent to the surgeons. Hawkins's statistics of the cases at St. Thomas's Hospital, if we exclude cases of perityphlitic abscess and of general peritonitis, show 190 cases with 190 recoveries and only one operated on. I have collected from the statistics of the medical side of the Edinburgh Royal Infirmary from 1891–92 to 1901–02 (that is, ten years, for one year is wanting) 268 cases, of which 189 were cured or relieved, seven were unrelieved, 23 died, and 49 were sent to the surgeons. I regret that the only point I could be sure of in the statistics of the surgical side was that all the cases of appendicitis were not operated on, showing that the conservative school is represented there also.

It thus appears that in acute appendicitis recovery takes place in from 90 to 95 per cent. of cases without operation. This is the position of appendicitis when it is judged of by a wide experience and it seems to me to be in accord with the experience of many of our brethren in general practice in the country and in the provinces who have not skilled surgical help at their call any and every hour of the day or night as practitioners have [illegible] well prove a comfort to our [illegible] but they throw a greater we[illegible] more and more imperative to watch with us, for it becomes more and more imperative to watch with the closest attention every individual case and to learn to determine the one case in the ten which if it is to be saved must be submitted to the surgeon's knife without delay.

The first question which ought to be faced in every case of acute appendicitis is: Is the appendix rapidly to perforate or promptly to become gangrenous? Early perforation and early gangrene account for most if not for all of the cases of early peritonitis with grave toxæmia. St. Thomas's Hospital statistics show 36 in a total of 264 cases and of these 27 proved fatal. Perityphlitic abscess may be regarded as a later development, but it supplies 38 cases with 28 deaths in the statistics of the same hospital. The above question ought to be formulated definitely in every acute case. The chances as shown by statistics are fully nine to one against perforation; but differential diagnosis is not based on averages, and it is equally poor comfort to be assured by many authorities that the question cannot be answered until the disaster we desire to anticipate has occurred.

As I understand the matter one great object which the promoters of this discussion had in view was to elicit whatever there is of knowledge and of experience on this point among us. I myself approach it with much diffidence but there are some points which I venture to submit. The first is that if in an acute attack I find that there have been one or two previous attacks, even mild ones, I do not hesitate to advise removal of the appendix at once. My reason for doing so is that I am satisfied that the anatomical relations of certain appendices are such that appendicular trouble is bound to arise. Recurrence is the clinical proof of this and in any recurrent attack the appendix may perforate or necrose, so that the sooner such appendices are removed the better. The second point is that if an acute appendicitis has an early rigor immediate removal is indicated. I have seen early rigor followed speedily by gangrene. But this only disposes of a small number of acute cases. When we come to the remaining cases, and if we are not to adopt routine removal in all instances, the questions necessarily arise: What are we to do? How long are we to continue the medical treatment we may have adopted? and What indications are to guide us in determining for or against operation? As regards the first of these it is quite clear that something must be done and always is done. You all know that purgatives are anathematised and that if perforation occur after the administration of such the medical man who has ordered them is looked upon as a most culpable person. I have not given purgatives in these cases for many a day, but in the earlier years of practice I used repeated doses of saline laxatives in what we called perityphlitis and I had not then a single death. All of us have seen cases where the so-called "fatal" purgative has been taken by the patient on his own initiative and his appendix has not ruptured. Such experiences have their due place. I have referred to the point as I venture to think that statements are made in this connexion which are mere presumptions and are based upon isolated and misinterpreted occurrences.

The next point that arises for consideration is the relief of pain. This is sought for by either hot or cold local applications; these are at least harmless. When, however, we go beyond local measures we at once enter a region where there is a great difference of opinion. You all know how opium and its chief alkaloid are condemned. Their administration relieves pain and gives rest to the patient and to the cæcum. The main argument against their use is that they "mask symptoms" and so they do to the inexperienced and the unwary. Nothnagel is a great advocate of opium and while I am not prepared to follow his method I have found, as he contends, that its previous administration need not mislead, and I can hardly imagine the hospital physician or surgeon being seriously misled by the mere relief of pain consequent upon its administration. If given at all it ought certainly to be limited in its use to the alleviation of intense suffering and as a temporary expedient. I even go so far as to say that the call for the continued use of opium is an indication that operation is desirable. Personally I prefer to use belladonna which relieves spasm and does not dull sensory centres. There is only one further procedure which is worth referring to and that is lavage. There exists in regard to its use some degree at least of the same feeling as exists about the giving of laxatives. The reasons given against its use are open to question. That lavage of the colon and cæcum is dangerous and may cause either perforation or gangrene is a mere arbitrary presumption and has no foundation in fact. Granting that the essential factors in the production of acute appendicitis are as I have represented, there is no measure which one would more instinctively turn to than cæcal lavage, owing to the effect it would have upon the mucous membrane at the mouth of the appendix and the effect it might have in aiding the re-establishment of appendix drainage. Professor Bourget of Lausanne has published an important monograph on this method of treatment. He uses it in all cases of acute appendicitis which come under his care, and he only advises operation after the acute symptoms have subsided and in selected cases. In his monograph he gives the details of 23 cases which occurred in his hospital practice between January, 1901, and February, 1902, which he treated on the lines indicated without a single death; and the clinical records show that some of the cases were of a grave type. My own experience of this method of treatment is too limited to say more about it than that so far as I have yet used it I am satisfied with the results.

Having thus indicated the medical measures which may legitimately be used when brought face to face with a case of acute appendicitis the serious questions still remain: How long are we to continue to use whichever measures we may have adopted? How long are we to wait for alleviation of the condition at the appendix? and What are the indications that surgical interference is the wise course to adopt? I can endorse the precept laid down by others that every individual case ought to be regarded with great seriousness and is to be closely watched for the appearance of any unfavourable symptom. There are, however, definite indications which help us to determine those questions and an accurate mental picture of the steps of morbid processes in the appendix materially aids us. Some of those indications are as follows. The continuance of severe pain in spite of local applications and the administration of belladonna internally may be taken as an indication for operation, for it mirrors almost certainly blockage and severe inflammation. The recurrence of paroxysms of pain indicates operation, for it is a proof that the appendix drainage is being recurrently interrupted and the sooner such an appendix is removed the better for the patient. Great importance is to be attached to the condition at the cæcum as revealed by careful and patient palpation; localised tenderness and swelling are the two phenomena which demand much more patient handling than they often get. If the case has been ushered in by great pain and yet appears to be a mild one as judged by cursory examination be on your guard; that is the kind of case that can perforate within 48 hours. If pain subsides and the appendix remains very tender notwithstanding the use of local applications and the internal administration of belladonna do not wait many hours for lessening of tenderness, for the appendix may be already necrosed and will shortly be gangrenous or a concretion may be completing a perforation. In these instances of necrosis and of threatening perforation the leucocyte count gives no sufficient warning of the threatening disaster. Hubbard, Dunham, Da Costa, Wassermann, and Brown have all dealt with the question of leucocytosis in appendicitis, but on this important point no strong claim of its value is made. I am very suspicious of severe onset, no great local swelling, only moderate tenderness over the cæcum, but a point where deep palpation reveals acute localised tenderness. If it is realised that a blocked and inflamed appendix accounts for such phenomena you will want proof within 24 hours that that appendix has clearly lessened in tenderness and if it has not you will want to have it removed. I again lay great stress upon the cultivation of abdominal palpation as a means of great value, not only in diagnosing appendicitis but in estimating the progress of an acute attack. In the less rapid, which is also the more common, type of case, with marked swelling and tenderness over the whole cæcum, the temperature and the pulse are an index of the measure of inflammatory reaction and the blood examination shows a leucocytosis of somewhere about 15,000 as a rule. If the local and general symptoms do not speedily subside under such measures as have been indicated, and if on further blood examination it is found that the leucocytosis reaches 20 000 or more, the case falls entirely to the surgeons, for pus has almost certainly formed and the condition has to be treated on general surgical principles.

I have sought in what I have said to formulate points which present themselves before grave peritoneal infection has taken place. When it has taken place the facies abdominalis and the rapid and small pulse are indication enough of what has happened. What the promoters of this discussion want to bring out are the indications which will enable us to anticipate this danger and by anticipation to avoid it, and to this object my remarks have been directed. When disaster has occurred there is little difficulty in recognising it and there are not two opinions as to the proper course to adopt. Beyond saying this I do not further pursue this side of acute appendicitis.

Permit me in conclusion to reiterate the main points in the line of thought which I have endeavoured to present to you to night. 1. Certain appendices are so formed anatomically that they of necessity give rise to trouble. 2. Interference with the drainage of the appendix is an important factor in determining inflammation. 3. The occurrence of appendicular colic may be taken as a warning that dangerous anatomical conditions exist in connexion with the appendix. 4. In all abdominal cases detailed palpation should be carefully and patiently carried out. 5. Too much emphasis must not be put on the site of pain or on superficial tenderness. Palpation should be directed towards ascertaining the actual condition of the diseased part. 6. Statistics show that from 90 to 95 per cent. of cases recover without operation and the chances against recurrence are as three to one or thereby. Therefore routine removal cannot be accepted as necessary. 7. Operate at once in any case with a history of previous attacks, also in all cases commencing with a rigor. 8. The chief difficulty lies in the early recognition of the cases in which the appendix will necrose or perforate rapidly. In this connexion suspect cases which show constitutional disturbance with little inflammatory reaction round the cæcum but with marked tenderness on deep palpation and an ordinary degree of leucocytosis. 9. In cases which do not call for immediate operation pain may be relieved by hot or cold local applications and by a cautious and sparing use of opium or morphine or of belladonna. Lavage may give good results. 10. Medical treatment should not be relied on for more than from 24 to 48 hours if severe pain continues or an acute tenderness on deep palpation still remains. 11. Later in the disease a continuance of the local and general symptoms along with a high leucocyte count indicates the presence of pus and the necessity for operative interference.

Bibliography.—Bourget [illegible]
Brown: International Clini[illegible]
American Journal of the M[illegible]
[illegible]
Treves: [illegible]
Append[illegible]
mann; [illegible]
Edinburgh.

THE EARLY DIAGNOSIS OF ACUTE INTESTINAL OBSTRUCTION.[1]

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IT will, I think, be found that most of us look upon the early diagnosis of intestinal obstruction in a somewhat different way from that in which it was usually regarded 40 years ago. This is because our skill in diagnosis has advanced, but in saying this I am speaking of medical men generally, for it is doubtful whether even the best of us are more skilful than the most brilliant diagnosticians of half a century ago, but as the average of skill has risen we less frequently see cases in which acute intestinal obstruction has been so long overlooked that when the patient comes to a hospital the diagnosis is obvious. Then, too, the responsibility attached to a correct diagnosis has increased enormously in this and many other diseases of the abdomen. Before surgery could help us to any appreciable extent it mattered comparatively little whether or not the diagnosis was correct, for if the patient was suffering from acute intestinal obstruction we could, unless it was due to an external hernia, do little or nothing to relieve him. But now the responsibility of the physician has increased ten-thousandfold, for if he fails to suggest that a surgeon should see a case which the necropsy shows to have been suitable for operation it is always quite likely that early surgical interference might have saved the patient's life. On the other hand, the physician may urge the surgeon to operate unnecessarily and on all grounds unnecessary operations are most undesirable.

Formerly much importance was attached to the elucidation of the problem as to whether the obstruction was high up or low down, but Fagge pointed out in his classical paper, on which most subsequent descriptions have been founded, that often the supposed points of difference in the symptoms were untrustworthy, and we now know that the symptoms are more dependent upon the cause of the obstruction than upon its situation. He classified his cases according to the cause and all the best descriptions since have followed him, as it is important for the surgeon to know the cause for which he has to search. But the result of this treatment of the subject is that very often accounts of acute intestinal obstruction fail to give sufficient prominence to the conditions for which such obstruction may be mistaken, and therefore, as the subject put before us to-night is the early diagnosis of acute intestinal obstruction, I thought the most practical way to attack it would be first to mention the conditions which I have known to be mistaken for it, especially as the best way to prevent mistakes in diagnosis is to be aware of their possibility.

[illegible]

most instances of confusion acute appendicitis is mistaken for intestinal obstruction but not of the most acute variety, rather than that the converse mistake is made. The following is a case in point. One Friday evening I saw with Dr. Slater-Jones a man, aged 60 years, who gave a history of severe attacks of colic, once accompanied by jaundice. On the previous Wednesday evening he was suddenly seized with a severe rigor. Dr. Slater Jones soon arrived and found the patient extremely collapsed with a temperature of 104° F. The next morning it was 99° and normal in the evening, there was some abdominal pain but it was across the top of the abdomen, he was sick twice, and we were told that the bowels had been opened on this day. On Friday he was sick only in the morning and when I saw him in the evening the abdomen was uniformly moderately distended without any dulness, tenderness, or other sign to indicate local disease. The distension made me fear we should have to open the abdomen later but as the pulse was very good, he did not look ill, his temperature was 98°, and he said that he felt better, we decided, as it would have been very difficult to arrange any operation that night, to leave him till the morning, believing that if he continued to improve we should have to conclude he was suffering from gall-stone colic without jaundice or from abdominal influenza. I heard early Sunday morning that he was not so well, therefore Mr. Charters J. Symonds joined us and we learnt that on Saturday there had been frequent very foul stercoraceous vomiting and that we had been misinformed about his bowels—they really had not been opened, not even any flatus being passed, since Wednesday in spite of several enemata. His pulse was 110 and of good volume; he looked well; and his temperature was 98°. His abdomen was distended uniformly without any indication of local disease but we decided upon operation because of the obstruction and continuing distension. We all thought the most likely diagnosis was that there was a gall-stone impacted in his ileum but operation showed a small abscess around the appendix in which a slough had led to a perforation; the peritonitis was not general. Here was a case in which severe and absolute constipation, distension, and stercoraceous vomiting were due to appendicitis which, on the other hand, did not give any indication of its presence and in which the initial rise of temperature only lasted 24 hours. We did not forget that an examination of the blood might have helped us but unfortunately I had not any of the necessary apparatus with me when I arrived at the patient's house. In another case of doubt I have known the presence of leucocytosis correctly turn the balance in favour of an abscess connected with the appendix.

It will be noticed that the case of appendicular abscess [illegible] just recorded, unlike as it was [illegible] did not lead to a diagnosis of [illegible] obstruction of a more chroni[illegible] and I think it is extremely rare for the localised peritonitis, caused by disease of the appendix, to be mistaken for acute intestinal obstruction, but it is less rare for a mistake to be made between acute general peritonitis and intestinal obstruction and this is not surprising, for strangulation of the bowel renders possible the [illegible] of bacteria through it and therefore many cases of acute obstruction quickly become complicated by acute peritonitis, hence it follows that the difficulty of diagnosis is often less the earlier the case is seen, but, on the other hand, probably the symptoms of few diseases vary so much as do those of acute peritonitis. Speaking generally, absence of pyrexia and of leucocytosis is in favour of intestinal obstruction, so also is rapid distension of the abdomen, especially if coils of intestine in which peristalsis is visible can be seen; early and urgent vomiting quickly becoming stercoraceous is in favour of obstruction; the pain is often paroxysmal in obstruction, the abdomen is not board-like or very tender, and there is no cutaneous hyperæsthesia; the patient does not lie in the usual attitude of peritonitis but may bend forward, doubled up by the pain, and the abdomen moves with respiration until later in the disease than is the case with acute peritonitis. But it is essential to bear in mind that every one of these symptoms which have been mentioned as generally indicating obstruction may be met with in peritonitis in which there may be complete absence of the passage of fæces and flatus by the bowel.

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[1] Being the introductory remarks at a discussion at the Medical Society of London on March 14th, 1904.

Volvulus is the form of intestinal obstruction which most resembles acute peritonitis, nor is this surprising, for owing to the large amount of bowel strangulated and the severity of the strangulation the bowel rapidly permits the passage of micro-organisms which set up peritonitis. Probably the chief distinguishing feature of volvulus is the distension of the abdomen which is, as a rule, much more extreme and rapid than with acute peritonitis and perhaps the pain is less severe and the temperature is lower in volvulus.

Acute hæmorrhagic pancreatitis is apt to be mistaken for intestinal obstruction; the form which it most nearly resembles is that due to acute strangulation of the small intestine but if the patient is suffering from acute pancreatitis the actual obstruction is not well marked, the bowels are often opened several times soon after the onset of the pain, although later they are constipated, there is no distension of the intestines, and as the case goes on the vomiting does not often become stercoraceous. Should the patient live long enough there are signs of a localised peritonitis and pancreatitis at the upper part of the abdomen, the chief being localised tenderness, a feeling of resistance, and later distension due to the formation of a localised abscess with its circumjacent peritonitis. Probably by this time the bowels have been opened again and slight pyrexia has supervened. Several cases of pancreatitis have been recorded as surviving and laparotomy has been undertaken under the impression that they were cases of intestinal obstruction, but there is no evidence that in such the operation has been of benefit; indeed, it may have turned the scale against the patient; but whether we shall become sufficiently sure of a diagnosis of acute pancreatitis to withhold exploratory laparotomy is doubtful but at any rate this is the goal to be aimed at. It need hardly be said that if a distinct abscess forms operation will be needed.

Perforation or rupture of any hollow viscus or cyst within the abdominal cavity may be mistaken for intestinal obstruction, especially strangulation of the small intestine, but the mistake is one of the least serious because immediate laparotomy is necessary for either perforation or obstruction. The difficulty is at its greatest when the previous history gives no suspicion that rupture might occur—e.g., there is nothing to lead us to suspect a gastric ulcer or an ovarian cyst. Our chief guides to correct diagnosis will be that the onset of the symptoms is more severe and sudden with perforation even than with strangulation of the small intestine by a band and symptoms of peritonitis supervene much more early with perforation. The vomiting is more likely to be severe and later to become stercoraceous in obstruction in which the pain is almost always referred to the umbilicus and local tenderness is no guide to the seat of obstruction but not infrequently local tenderness and pain are guides to the seat of perforation. The abdomen usually becomes immobile and distended earlier in perforation than obstruction.

Thrombosis and embolism of the mesenteric vessels both lead to symptoms which may closely resemble those of acute intestinal obstruction. Fortunately the conditions are rare, for nothing but harm can follow opening the abdomen. Usually there is some obvious cause for the trouble, as heart disease which might cause embolism or some intra-abdominal trouble which might cause thrombosis. The sudden abdominal pain—referred to the umbilicus in both cases—and the collapse are equally marked in vascular obstruction and intestinal obstruction, in both vomiting is early and may become stercoraceous but probably it is altogether a more striking symptom in intestinal obstruction. If a vessel corresponding to a large area of bowel is blocked abdominal distension will be earlier than in a case of acute strangulation of the small intestine but the characteristic symptom is the passage of much blood from the bowel and if the superior mesenteric artery or vein is blocked some blood may regurgitate into the stomach and be vomited. Sometimes the blocking occurs in the aorta and then if this be in such a situation that the mesenteric arteries are interfered with there will be in addition to the symptoms due to interference with the mesenteric vessels severe sudden cramp-like pain and loss of power in the legs. The diagnosis from intestinal obstruction is then of course easy. A patient recently under my care who was suffering from heart disease was suddenly taken with pain and complete loss of power in the legs, abdominal pain and collapse so severe that he died in ten hours in spite of treatment; embolism of the abdominal aorta implicating the mesenteric arteries was found. I need hardly add that if the renal arteries are implicated hæmaturia will be an aid.

Intestinal colic is a fruitful source of error and many a patient's life might have been saved if he had not been regarded as suffering from what is called "simple colic." I need not take up the time of a society such as this with the diagnosis of lead colic which I have seen mistaken for acute intestinal obstruction. I would only point out that severe vomiting is quite the exception in lead colic and that we too often neglect to look for lead in the urine. With regard to other forms of intestinal colic it is important to remember that very severe intestinal colic—restricting the term to pain due to some local irritation usually caused by an error of diet—is rare in adults, while, on the other hand, acute intestinal obstruction—except that due to intussusception which has its own special symptoms—is rare in children, so that the opportunities of confounding intestinal colic with acute intestinal obstruction ought to be few. It is other forms of abdominal disease—e.g., appendicitis—rather than acute intestinal obstruction which are often erroneously set down to colic. Still, the mistake does occur and it is mainly to be avoided by noting the severity of the symptoms. If the patient's abdominal pain is so severe that he—an adult—sends for a medical man who finds that there is no diarrhœa and that there is no obvious indication of any cause for the pain such as a renal calculus, lead, disease of the appendix, &c., but the symptoms are not severe enough to indicate certainly acute intestinal obstruction, nothing should then be done except to apply warmth to the abdomen and to give an enema if there has been constipation, but no opium, as that will mask the symptoms. On a second visit a few hours later it will usually be found, if the case is one of acute intestinal obstruction, that the severity of the pain, the collapse, the state of the pulse, and the frequent urgent distressful vomiting leave no room for doubt and the abdomen should be opened at once. In the cases under discussion usually the severity and frequency of the vomiting and the state of the pulse are the first symptoms to show that the cause of the pain is acute intestinal obstruction, later the patient's expression and his collapse show this disease, in which it will be borne in mind the pain is often relieved by vomiting.

Biliary and renal colic can hardly ever be confused with acute intestinal obstruction if care is taken. Here, again, the severity of the vomiting and the collapse together with the facial expression and the feeble rapid pulse met with in intestinal obstruction will prevent an error. I have known the abdominal pain in a patient who had ulcerative colitis with constipation lead to an erroneous diagnosis of intestinal obstruction.

Acute intussusception may be confused with severe diarrhœa in children but as a matter of fact the mistake can nearly always be avoided if sufficient care is taken. The detection of a tumour either in the abdomen or the rectum is, of course, conclusive and the sufferer from acute intussusception at first has bloody diarrhœa, later constipation supervenes, but he commonly at some time passes pure blood, whilst in the severe enteritis of children the motion, if blood is present at all, consists of fæces, blood, and mucus throughout and constipation does not supervene till the patient is convalescent. Even if the case of diarrhœa is so severe as soon to lead to collapse this is usually preceded by pyrexia and often in these cases there is frequent and severe vomiting, but this is not usually a striking symptom in intussusception unless severe constipation comes on early in the case. Cholera may closely resemble acute obstruction.

There are some conditions which are met with in women which may be difficult to tell from acute obstruction—namely, the twisted pedicle of an ovarian cyst, a ruptured ovarian cyst, a ruptured extra-uterine fœtation, a ruptured pyosalpinx, and hysteria. In the three cases of rupture these are really instances of perforative peritonitis and therefore all that has been said in connexion with the diagnosis of that from acute obstruction will apply here. I have seen a ruptured extra-uterine fœtation mistaken for acute appendicitis, for it led to a tumour and feeling of resistance on the right side, but the slight elevation of temperature and the signs of pregnancy soon led to a correct diagnosis. In the only case of a twisted pedicle of an ovarian tumour leading to difficulty that I have met with the presence of a palpable right-sided tumour which was tender led to a diagnosis of appendicitis, which was perhaps a pardonable mistake as the patient was only 12 years old. In most cases the locality of the pain and tenderness, with in some the detection of a tumour, will usually lead to a correct diagnosis from acute intestinal obstruction. I have known great care necessary to distinguish hysteria from acute peritonitis but hysteria does not simulate acute intestinal obstruction.

Lastly, in any case of severe pain in the abdomen we should think of pleurisy and pneumonia but when early in the course of either of these the symptoms are mainly abdominal they suggest peritonitis rather than obstruction. I have seen pneumonia thought to be peritonitis but never obstruction.

Having very briefly reviewed the conditions which may be mistaken for acute obstruction we pass on to the diagnosis of the kind of obstruction and here it is of fundamental importance to remember that the early symptoms of acute intestinal obstruction are caused by the strangulation of the bowel and not by its obstruction. This is illustrated by the fact that a volvulus of the large intestine gives very sudden acute and serious symptoms—because of the strangulation—while the symptoms of a complete obstruction—say, by a gall-stone—without strangulation are much less severe. Indeed, the more we think of it the less important does mere obstruction become. For example, I remember the case of a woman whose bowels had not been moved for a month, it was thought owing to the pressure of a huge renal tumour compressing the bowel, but the tumour was really a great mass of fæces blocking the descending colon. She was not acutely ill. We do not observe acute symptoms even in spite of prolonged constipation in the cases in which the intestine is compressed by peritoneal adhesions due to the various forms of peritonitis. Think of the state of the intestines all compressed into one mass, such as we see at a post-mortem examination on a case of chronic peritonitis, yet there are no acute symptoms. The other day I saw the abdomen opened for chronic obstruction; the intestines were all matted together, the bowels had been rarely opened, and only with the greatest difficulty, but there were no symptoms of acute obstruction. The upshot of this is that to diagnose the form of obstruction we must, if the *symptoms are severe and acute, say to ourselves the patient* has got some form of obstruction that is likely to be associated with strangulation—e.g., a band, internal hernia, volvulus, kinking, or anything that will strangulate the bowel, and he is not suffering from compression, stricture, or impaction of contents unless these are complicated by strangulation. It illustrates my point to remind you that intussusception is severe in proportion as the bowel is strangulated. It is true that if a large number of obstructions of the small intestine are contrasted with a large number of obstructions of the large intestine the symptoms of the former will usually be much more acute than of the latter but this has nothing to do with the position of the obstruction; it is because whatever obstructs the small intestine generally at the same time strangulates it. Usually speaking, there are no acute symptoms unless there is strangulation and the symptoms of this are sudden agonising pain, often paroxysmal, referred to the umbilicus, frequent, early, distressful, and severe vomiting, a rapid, feeble pulse, apathy, pinched countenance, a normal or subnormal temperature, and collapse so severe that a previously *healthy man may in a few hours be at death's* door, hence when these exist we infer that the bowel is strangulated and it would be more accurate to diagnose such a case as acute strangulation of the bowel rather than as acute intestinal obstruction, for as already mentioned, these symptoms only enable us to diagnose strangulation of the bowel irrespective of the seat or cause of the strangulation. If there is great and rapid distension in addition to the symptoms of strangulation we infer a volvulus; if there is history of chronic obstruction—e.g., that due to malignant growth in the large intestine—the distended bowel behind the obstruction has become kinked or strangulated in some way; there may be other evidence of intussusception; or if, as is usually the case, we decide none of these are present and there is no external hernia, then, arguing from the experience of the post-mortem room, we learn that the small intestine is almost certainly the seat of the strangulation, a view which is supported if thus early in the case there is not much intestinal distension, for distension in such a case is partly due to obstruction of the bowel above the strangulation—but in strangulation of the small intestine there is not much of this—and partly due to paralytic distension of the strangulated bowel, but usually when the small intestine is strangulated not much of it is affected. But when we have arrived at the diagnosis of strangulation of the small intestine we cannot from the symptoms say what part of it is affected or the cause of the strangulation. Our knowledge of morbid anatomy shows that the cause of the strangulation may be one of many, such as a band of some sort, an internal hernia, &c. Excluding external hernias internal strangulations are far the most important variety of obstruction to diagnose early, for (1) they are frequently of such a nature that the surgeon can completely relieve them; (2) unless relieved they will quickly kill; (3) they usually come in previously healthy adults in the prime of *life*; and (4) *there is usually* no *concomitant disease* likely to kill the patient.

Among intestinal obstructions belonging to the entirely different class in which there is no strangulation, obstruction of the ileum by a gall-stone is one of the most acute, but here the fact that the patients are nearly always women over *50 years of age while strangulation usually occurs in men* under the age of 50 years will be of help. Further, the acute symptoms already given as indicating strangulation are rarely so severe in obstruction by gall-stones with which, too, there may be a history of jaundice. As already mentioned, chronic obstruction as by a growth may suddenly give rise to very [illegible] When, as sometimes occurs, they show themselves suddenly in a case in which the growth of the bowel has given rise to no symptoms the diagnosis is very difficult. If acute symptoms supervene upon chronic obstruction there is almost certainly a stricture of the large intestine—and strictures of this are virtually always carcinomatous—for except gall-stones the only chronic obstruction of the small intestine is that due to compression of a large extent of bowel from some form of chronic peritonitis and this compresses so much bowel that strangulation behind the compression rarely if ever occurs. Perhaps this is the best place to mention that visible mapping out of the distended bowel is a most uncertain symptom, for it may be absent in obstruction or it may be present in cases in which no obstruction is present—e.g., peritonitis—and, again, it may be impossible to tell whether *it is the large or* small intestine which is distended. Variation in the amount of urine passed is *another symptom on* which but little reliance can be placed.

I am very fully aware of the numerous shortcomings of these opening remarks which have had to be brief owing to the limited time at my disposal, but they are only intended as a basis for discussion. Fortunately, at the bedside the *difficulties are* often less than they appear on paper.

Harley-street, W.

A CASE OF ECLAMPSIA TREATED BY THE ADMINISTRATION OF CHLOROFORM.

BY JOHN FREDERICK JENNINGS, M.B. LOND., F.R.C.S. ENG.,
LATE INTERN MIDWIFERY ASSISTANT, ST. BARTHOLOMEW'S HOSPITAL.

THE patient, who was a primipara, 23 years of age, was admitted into St. Bartholomew's Hospital at 10.45 P.M. on Sept. 10th in an unconscious condition with the history that she had been seen to fall out of a railway carriage on to the platform whilst the train was still in motion. On arrival at the hospital she was not only comatose but had no corneal reflex. The pupils were equal, her colour was good, the knee-jerks were increased, there was no paralysis or œdema, and she had no fits till fully an hour after admission. Her temperature was 97° F. and her pulse rate was 64. She was eight months pregnant and the fœtus was alive; no uterine contractions were apparent; the os internum admitted one finger easily. The urine contained about one-quarter albumin. At midnight twitching of the face was noticed. On Sept. 11th the course of events was as follows. At 12.20 A.M. three definite fits occurred, commencing in the face and following each other in rapid succession. The bowels were well opened by an enema. At 1 30 A.M. there were four more fits. At 1.45 A.M. the cervix was dilated with the finger, the membranes were ruptured, and a large quantity of liquor amnii was let out. Labour pains commenced and soon became strong. The patient was given chloral hydrate and potassium bromide without much effect; she also had saline enemata which she retained. A steam bath was given but appeared to increase the number and severity of the fits and did not produce sweating. Three-minim injections of hypodermic solution of morphine had no effect on the fits and made the general condition worse. The bowels were well opened with compound powder of elaterin and diaphoretics and diuretics were given.

During the 12 hours following admission the patient had 37 fits and her face became œdematous and bloated. Chloroform was given and had a markedly beneficial effect; the severity of the fits was diminished and the patient's pulse, complexion, and respiration improved. She was delivered by forceps at 1.40 P.M. on Sept. 11th; the child was small and apparently at about the eighth month. Considerable hæmorrhage followed the birth of the placenta. The fits still continued after the birth of the child till noon on the 14th. She had 39 fits before and 75 fits after confinement, a total of 114. From noon on the 11th till noon on the 14th she was kept more or less continuously under chloroform and it was noticed that if the chloroform was stopped the fits became more frequent and more severe. Not only so, but chloroform was found to improve the pulse, the respirations, and the colour of the face. After the birth of the child the urine increased in amount (the patient was taking ammonium acetate and potassium citrate) up to 85 ounces per diem and the albumin diminished till only a faint cloud was present. She did not properly regain consciousness till the 16th, though she had asked at times for various things she desired. Both mother and child have since done well.

It is interesting to note in this case the excessive number of the fits and the beneficent effect of chloroform as compared with the apparent inefficacy of the various other remedies which were tried. In round numbers, the daily relation between the number of the fits and the quantity of urine which was passed was as follows: on the first day, 70 ounces of urine and 25 fits; on the second day, 85 ounces of urine and 15 fits; on the third day, 55 ounces of urine and 45 fits; and on the fourth day, 30 ounces of urine and five fits.

I am indebted to Dr. W. S. A. Griffith for permission to use the notes of this case.

Cardiff

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON TWO CASES OF RODENT ULCER TREATED BY RADIUM.

By A. Stanley Green, M.B, B.S. Lond.

The following notes of two cases of rodent ulcer seem to me to be of sufficient interest for publication as both of them yielded to the action of radium after resisting the action of the x rays for a lengthened period.

Case 1.—The patient was a married woman, aged 75 years, who came to me with a rodent ulcer attacking the right ala nasi, extending upwards on the septum and the external wall of the nose and affecting the anterior end of the inferior turbinate. She had undergone three operations; the last one had involved the labio-nasal fold and a portion of the incision had remained unhealed and was now ulcerating. The discharge from the nose was troublesome and caused irritation of the upper lip. The x rays were applied for eight weeks every second day, the time of exposure varying from five to 20 minutes. The ulcerated surface in the labio-nasal fold rapidly healed under their influence, but no impression was made on the rodent ulcer which progressed along the septum slowly but surely. On July 2nd she went home, promising to return in a month, but it was September before I saw her again. The portion which had healed looked very well and was quite sound, but there was no improvement in the nose. For one month I gave applications of the high-frequency current, my thumb acting as the electrode. As there was no improvement I tried applications of radium bromide in a glass tube, the tube being held within the nose for periods varying from five to 20 minutes every second day. Progress was very rapid and in three weeks the ulcerated surface was soundly healed and remains so up to the present.

Case 2.—The patient was a man, aged 65 years, who had been suffering from a rodent ulcer on the right side of the scalp for the past two years. He had put off treatment and the ulcerated surface was of the size of a shilling and was slowly increasing in area. The x rays were tried and exposures varying from five to 20 minutes were given every second day for one month without any improvement. The patient went away for six weeks and returned with the ulcer in the same condition as before. Two more exposures of 20 minutes were then given, but owing to a severe attack of influenza he was compelled to interrupt the treatment for five weeks. I then commenced the application of radium bromide, the tube being held up against the ulcer for 15 to 20 minutes. Seven exposures were given in a month. The ulcer was then quite healed and the rapidity of the healing after the application of the radium was in this case most striking.

Lincoln.

A CASE OF UNUSUAL DISLOCATION OF THE CLAVICLE.

By Arthur C. Bird, M.R.C.S. Eng., L.R.C.P. Lond.

The following case being one of extreme rarity seems to be well worth recording. The patient, who was a man aged 38 years, met with an accident while riding a bicycle from an adjoining village to his home on the evening of Jan. 1st. He was somewhat under the influence of alcohol and was also carrying a bag of vegetables on the lamp crook of his machine, which was placed just below the handle bars and over the front wheel. On descending a hill the front wheel turned somewhat and caught in the bag of vegetables. The man then fell off on to his left shoulder and head and became unconscious. He was taken home in a cab and did not recover consciousness for some time, but when he did he complained of great pain and inability to move his left shoulder. When I saw him he was in a semi-conscious condition with his pupils reacting sluggishly to light and to accommodation. On examining the left shoulder I found that the left clavicle had been dislocated backwards and torn from the acromion process of the scapula. On dipping my fingers behind the acromial end of the clavicle, I could, with some force, bring the acromial end forward and downward into position, but on releasing my hold the acromial extremity (or, to be more correct, the whole clavicle, for there was no fracture) was immediately pulled backwards by the trapezius muscle. That night I gave him five grains of calomel, put him on a fever diet, and had ice applied to his head. On Jan. 2nd he was removed to the Victoria Cottage Hospital, Sidmouth, and was kept quiet, and on the 3rd his general condition was so much improved that I decided to endeavour to obtain permanent reduction of the dislocation. Nitrous oxide gas and ether having been given by Dr. G. A. Leon of Sidmouth, I easily managed to bring the acromial extremity down into position and having applied a flannel spica bandage I doubled up a firm sponge and placed it on the top of the acromial end of the clavicle and then put on a Bavarian plaster-of-Paris shoulder cap which completely covered the sponge. With a large pad in the left axilla and the left arm in the Sayre's position for ordinary treatment of fractured clavicle, I managed to make the chief pressure over the left shoulder and under the left elbow with, of course, occasional turns round the body. The patient left the hospital in a few days. The shoulder was kept in this splint for five weeks and when the splint was removed at the end of that time the injured shoulder was found to be perfectly symmetrical with the other one and all the parts were in excellent position. Passive movements were then employed, with the rubbing in of liniments, and the patient now (Feb. 22nd) has excellent mobility in his left shoulder-joint and is able to use his arm well. It is probable that the superior and inferior acromio-clavicular ligaments, as well as the conoid and trapezoid ligaments, were ruptured.

Sidmouth.

A CASE OF SUBMAXILLARY ABSCESS FOLLOWED BY FACIAL PARALYSIS.

By JAMES C. MCWALTER, M.D. BRUX., F.F.P.S. GLASG.

So seldom is it that the relation of the seventh nerve to the chorda tympani and the salivary secretion can be pointed out as a cause of death that an account of a case where the connexion seems unequivocal may be worthy of record.

The patient was an infant, aged about five months, and the mother brought her to me for an ordinary scrofulous abscess situated under the jaw. The child was otherwise healthy and well nourished and the swelling was ordered to be poulticed. This instruction was carried out too faithfully by the mother, who continued it after the abscess discharged, neglecting to bring back the child meanwhile. When the raw surface began to heal she was alarmed by the extraordinary contortion of the child's features when in the act of crying, and coming to me in terror she was told that the child had facial paralysis of which all the typical signs were present. The contraction of the scar from the abscess had evidently involved some fibres of the facial nerves but treatment was now unavailing to restore it although continued for some weeks Shortly afterwards symptoms of involvement of the secretory fibres became manifest and the infant commenced to waste away. The mother, believing that the breast milk was not agreeing with the child, fed her on cow's milk and the wasting became still worse. The infant seemed to lose the desire for nourishment, the power of sucking, and the function of assimilation, though without any evident lesion other than the involvement of the seventh nerve. She became gradually weaker and died apparently from sheer lack of nutrition.

Dublin.

A Mirror

OF

HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus Morb.*, lib. iv., Proœmium.

MIDDLESEX HOSPITAL.

A CASE OF FOREIGN BODY IMPACTED IN THE LEFT BRONCHUS; REMOVAL BY OPERATION.

(Under the care of Dr. W. PASTEUR and Mr. T. H. KELLOCK)

A SCHOOLBOY, aged five years, was admitted into the Middlesex Hospital on Sept. 28th with the following history. On the 23rd he brought home a small glass stopper which he had picked up in the street and showed it to his mother. A few minutes later the father called her back to the room which she had just left to find the child lying on the floor "fighting for his breath." His face and lips were blue and his eyes were "starting." Guessing that he had swallowed the stopper she picked him up by the heels and shook him violently with marked relief to his symptoms, but the stopper did not reappear. He was at once taken to the hospital, x-rayed with a negative result, and as he was then breathing quite quietly allowed to go home again. On the 27th he was seen by a local practitioner who discovered physical signs at the apex of the left lung which he attributed to impaction of the glass stopper in the bronchus leading to the upper lobe. On admission the boy looked ill. His temperature was 102·8° F. and his complexion was pale and slightly dusky. The respirations were 36 per minute, but not laboured. The alæ nasi moved slightly. There was no stridor during ordinary breathing but with cough or deep breathing there was a stridulous wheezing sound. The cough was loud, inclined to be brassy at times, and decidedly paroxysmal. The pulse was 110 and the urine was normal. On examining the chest there was marked loss of movement on the left side, which felt smaller than the right. The heart's apex beat was in the fifth interspace in the nipple line. The percussion note was a trifle short over the left upper lobe but there was no dulness. Vocal fremitus was impaired over the left front as low as the level of the fourth rib and behind in the suprascapular region and part of the interscapular region. The breath sounds were very weak all over [illegible] entirely lost the vesicular qual[illegible] much weaker than normal over [illegible] than over the apex. The voice sounds were audible but weak and distant all over the left chest. With the exception of an occasional rhonchus there were no adventitious sounds. The right lung was healthy. Dr. Pasteur saw the child on Oct. 1st and at once asked Mr. Kellock to see him. Mr. Kellock recognised the boy as having been under his care a few months before for an injury to the hand. At that time he was healthy and robust looking and Mr. Kellock was much struck with the change in his appearance. The child was again examined with the screen when it was noticed that there was practically no movement of the ribs on the left side in respiration Dr. Pasteur and Mr. Kellock were unable to see anything in the region of the left bronchus but Mr. C. R. C. Lyster fancied he could detect a faint shadow in that situation. Dr. Pasteur and Mr. Kellock agreed that in the face of such a definite history and with physical signs so pointedly suggesting obstruction of the left bronchus an attempt to relieve the condition by operation should at once be made, the more so that the oscillating temperature and serious illness of the child made it probable that local [illegible] taking place

[illegible] probe downwards and into the left bronchus a foreign body was distinctly felt and on measuring the distance it was found to be about three and a half inches from the lowest part of the opening in the trachea. Attempts were made to dislodge it by means of the probe but they were unsuccessful as was also an attempt to grasp it by means of long forceps. A piece of silver wire twisted into a loop at the end was then tried, passed down to the foreign body, and rotated Whilst this was being done the child rather suddenly coughed up about one drachm of thick pus. On the next attempt the wire evidently got beyond the foreign body and dislodged it, for it was seen with a good deal of mucus to emerge from the wound for an instant but was sucked back again at once on an inspiration occurring. Fortunately, it was found on examination to have returned to its original situation; a rather stiffer loop of wire was passed down to and beyond it, on withdrawing which the glass stopper was delivered through the wound. The pus and mucus having been thoroughly cleaned away from the wound, the opening in the trachea was closed by fine silk sutures passed through the intervals between the cartilaginous rings but not entering the lumen, the muscles were brought together by one or two fine silk stitches, a small drainage tube was put in the lower angle of the wound reaching nearly to the sutured trachea, and the skin wound was closed round this by means of interrupted horse-hair sutures. A light dressing was applied and the child, who had borne the operation very well, was sent back to the ward. The neck was dressed on the second day and the drainage tube was removed; there had been very little discharge through it and the upper part of the wound had practically healed. Five days later, the wound having quite closed over, a little fulness was noticed at the lower part; this was reopened with a probe and a few drops of pus were let out and complete healing took place a day or two after this. There was never any escape of air through the wound. There was a marked diminution of symptoms from the time of operation onwards. The temperature, which before operation had been high and irregular, fell at once and remained normal. The cough immediately lost its paroxysmal character but persisted for several days. The condition of the lung rapidly improved and, beyond slight impairment of movement, the physical signs were practically those of health by the end of the fourth day. There was a striking change in the child's colour and general condition and he continued to make good progress up to the date of his discharge on Oct. 26th.

Remarks by Dr. **Pasteur** and Mr. **Kellock**.—The features of interest in this case are mainly surgical. We were fortunate in obtaining so definite a history that there could be no reasonable doubt as to the cause of the obstruction. The x-rays screen examination only gave an indefinite shadow in the region of the left bronchus. After removal the stopper was found by Mr. Lyster to offer a resistance to the x rays equal to nine centimetres aluminium, which will only give an indefinite shadow through the thorax of a child about this age. Measurements taken at the time of the operation and subsequently applied to the trachea of a child of about the same age showed that the foreign body must have been lodged just at the bifurcation of the left bronchus.

It is worthy of note that a foreign body such as was found in this case should have given rise to the formation of an appreciable amount of pus in the course of a few days. Septic changes would not have been surprising had it been an organic body capable of decomposition or of such irregularity of surface as to be likely to cause ulceration. From the absence of blood in the pus that was liberated and the rapidity of recovery we conclude that the pus in this case had been pent up in one of the larger bronchial tubes rather than in a cavity caused by ulceration.

The operation itself calls for little comment. It was evident that we had to deal with a foreign body impacted in the bronchus and there was so little likelihood of its being coughed up on opening the trachea that an opening as low as possible seemed desirable. On ascertaining that the body was lying some way down the left bronchus and after an unsuccessful attempt to reach it with tracheal forceps, these were abandoned in favour of a twisted loop of wire similar to that successfully used by Mr. Kellock in a previous case for the removal of an impacted haricot bean in the left bronchus. The modern plan of completely closing the trachea by sutures was attended with complete success.

ROYAL BERKSHIRE HOSPITAL, READING.

TWO CASES OF THROMBOSIS.

(Under the care of Dr. **Francis H. Hawkins**.)

For the notes of the cases we are indebted to Dr. W. T. Scott, house physician.

Case 1. *Multiple thrombosis; embolism of the middle cerebral artery; death.*—The patient, a married woman, aged 33 years, was admitted on Oct. 15th, 1903, into the Royal Berkshire Hospital, Reading, under the care of Dr. Hawkins, complaining of pain and swelling of the left leg. She had never suffered from any definite illness but for some time past had felt "out of sorts." She had had three children, the youngest being two years old. Labour was in each case normal. One month previously she had pain in the calf of the left leg which was followed by some swelling. Soon after she had a sudden severe pain round the lower part of the chest, lasting for three days. A week previously she began to complain of pain in the left leg, especially in the groin, and the limb became swollen. For a fortnight before admission she suffered from profuse perspirations. There had been no cough.

On admission the patient was dark-haired, of medium height, somewhat spare, with slight flushes over the malar bones and an anxious expression. The whole of the left leg was œdematous and pitted on pressure except over the dorsum of the foot, where the œdema was very fluid and fluctuation could be obtained. Tenderness was most marked in the groin, behind the knee, and over the calf of the leg. There was no pain or swelling of the right leg. The heart was normal in position and there were no murmurs. No abnormal physical signs were observed on examinatian of the lungs. The abdominal and pelvic organs appeared to be normal. The urine gave an acid reaction; it had a specific gravity of 1018 and contained no albumin or sugar. A blood examination gave the following results: red blood corpuscles, 4,200,000 per cubic millimetre; white blood corpuscles, 9000 per cubic millimetre; and hæmoglobin, 80 per cent.

For the first ten days after admission the patient's condition steadily improved, the tenderness and swelling of the left leg gradually disappearing. She complained of a troublesome cough occasionally but no abnormal physical signs were detected in the lungs. On Oct. 25th at 5 A.M. when visited by the nurse she was quite comfortable and remarked what a good night she had passed but feeling thirsty she asked for a glass of water. When the nurse returned with this a minute or two later she found the patient crying and unable to speak. On examination it was noted that the patient was not unconscious; there was no stertor, the pupils were equal, the mouth was drawn over to the left, the tongue was protruded to the right, and there was paralysis of the right half of the occipito-frontalis muscle. The right arm and right leg were completely paralysed and the knee-jerks were absent. The pulse was of low tension. On the 26th the patient seemed brighter and two days later could say "yes," answering "yes" to all questions but if she meant "no" shook her head after saying "yes." The swelling of the left leg had nearly disappeared when on Nov. 2nd, eight days after the hemiplegic attack and two months after the left leg began to swell, the right leg became tender. On the 3rd the right leg was very tender and œdematous. This condition increased and the whole of the leg and thigh became very swollen. Three days later the swelling began to subside but the dorsum of the foot became red and tender with some lymphangitis. The patient's condition gradually improved and she tried to say something besides "yes" but was usually quite unintelligible. The knee-jerk became exaggerated and ankle clonus was readily obtained during a few days. On the 17th, 15 days after the right leg became œdematous, there was tenderness over the left brachial veins but no œdema of the arm or the hand. A thrombus could be distinctly felt in the left brachial and median basilic veins. At this time the patient became much distressed, her pulse was 140, and her respirations were 45, a condition which continued until her death. On the 22nd, five days after the left arm, the right hand was noticed to be œdematous and just below the elbow there was marked tenderness. Three days later the right hand and forearm were very swollen, the œdema over the dorsum of the hand being so fluid as hardly to pit on pressure. The patient's condition gradually became worse, the abdomen became greatly distended, and death occurred on Dec. 6th. The temperature throughout the illness hardly rose above normal until the last fortnight, when the evening temperature was usually about 101° F.

Necropsy.—At the post-mortem examination the left pleural cavity contained a moderate effusion of blood-stained serum. A large recent infarct was present at the right apex of the lung, as well as several smaller infarcts in the left lower lobe. The left lung was partly collapsed. The heart contained several small ante-mortem clots in the ventricles and auricles, one being adherent to the mitral valve. There was no mitral stenosis. The liver showed some passive congestion. A large not very recent infarct was found in the spleen. A small infarct was present in each kidney; both were beginning to cicatrise. The intestines were dark and congested. The internal saphena veins in both legs and the femoral vein in the left leg were blocked. There was marked œdema of the right arm below the level of the insertion of the deltoid muscle. There was a large area of softening in the region of the internal capsule of the brain on the left side.

Case 2. *Thrombosis with extravasation of blood in the left lower limb; gangrene; amputation; recovery.*—The patient, a married woman, aged 50 years, was admitted on Nov. 12th, 1903, into the Royal Berkshire Hospital under the care of Dr. Hawkins, complaining of pain and swelling of the left leg. She had been anæmic since the birth of her youngest child, 14 years previously. The labour was natural and there was no excessive hæmorrhage. She had not felt short of breath or noticed any swelling of the feet but always felt weak and tired. She stated that the pain and swelling in the leg began rather suddenly a week before admission. During the first four days she had continued her work but at the end of that time the swelling became much greater and the pain more severe and she had to take to her bed.

On admission the patient was a very pale woman, rather emaciated, with dark hair turning grey. The whole of the left lower limb was very œdematous and pitted on pressure except over the dorsum of the foot where the œdema was very fluid. There were much pain and acute tenderness, especially in the groin, behind the knee, and at the inner side of the tendo Achillis. From the knee to the heel on the inner side and the front of the leg there was a mark resembling a large bruise, being green and purple in colour. There were similar but smaller marks behind the knee and behind the trochanter. There were also red purpuric patches scattered over the same areas, while the region behind the malleolus was of so vivid a blue that it looked as though it had been stained with methylene blue. The heart was normal in position; a systolic hæmic murmur could be heard over the pulmonary cartilage. No abnormal physical signs were detected in the lungs and the abdominal and pelvic organs appeared to be normal. The urine gave an acid reaction and had a specific gravity of 1020; it contained no albumin or sugar. A blood examination gave the following result: red blood corpuscles, 2,500,000 per cubic millimetre; white blood corpuscles, 22,000 per cubic millimetre (neutrophile cells 80 per cent.; lymphocytes and hyaline cells, 20 per cent.); and hæmoglobin, 28 per cent.

During the first fortnight the pain and swelling gradually diminished but several blebs formed over the inner side and back of the leg. On Nov. 26th it was noticed that the toes of the left foot were dark in colour and rather shrivelled. There was absence of sensation, tactile and painful, over the lower third of the leg and over the foot. She complained that the foot felt numb. During the next few days the foot and ankle became gangrenous and by Dec. 1st a line of demarcation began to form about the middle of the leg. The foot was then quite black and dry but the lower third of the leg was moist and gave out an offensive odour. The pulsations of the popliteal artery could be easily felt and operation was postponed so long as the patient's general condition remained good in order to allow the œdema of the thigh to disappear as far as possible. On the 3rd the patient began to complain of severe pain in the leg and her temperature, previously normal, rose to 101° F. Immediate operation was therefore decided on. Amputation of the limb through the middle of the thigh was performed by Mr. W. J. Maurice. At the point of amputation a blood clot of the size of an orange was found lying in a *distinct capsule in the* neighbourhood of the large vessels. The wound healed by first intention and the patient made a good recovery.

Remarks by Dr. HAWKINS.—The first case recorded is interesting: (1) clinically in showing venous thrombosis in all four extremities and in œdema being present in three but absent in one (the left arm) and it illustrates the fact that venous thrombosis may occur without producing the consequences more frequently met with; and (2) pathologically in having a thrombus on the posterior cusp of the mitral valve. There was no stenosis of this valve. This thrombus on first sight gave somewhat the appearance, except in colour, of the vegetative excrescences of a malignant endocarditis; it, however, peeled off with some pressure, showing the underlying surface to be normal in appearance but of the colour of a port-wine stain. To this or to the other smaller thrombi were due the emboli in the brain, the lungs, the kidneys, and the spleen. From the examination of the blood nothing definite could be determined as to the cause of the thrombi so that one can only suggest that they were the *product* of blood stasis consequent *on debility.*

The second case is recorded as illustrative of gangrene following venous thrombosis with blood extravasation (unfortunately the vessels of the amputated limb were not examined, the limb being disposed of before an examination could be made), but during the time the case was under my observation I so regarded it. However, the possibility of such has been much discussed and I may be wrong in so describing it, but I would suggest that the pressure of a blood clot due to the venous thrombosis pressed upon the arteries and so caused the gangrene. From the facial aspect of this patient, the yellowy, almost lemon tinge of the skin of the face and the trunk, the pale lips and pearly conjunctivæ, the case might have been thought to be one of chlorosis, pernicious anæmia, or malignancy. My own view was that the case was one of chlorosis associated with venous thrombosis, and the blood showed a considerable deficiency of hæmoglobin, but a further examination made by Dr. Scott showed a considerable increase in the white corpuscles and a relative increase of neutrophile cells which suggest a secondary anæmia.

GENERAL INFIRMARY, WORCESTER.

A CASE OF CHRONIC INTUSSUSCEPTION DUE TO MULTIPLE POLYPI OF THE INTESTINE.

(Under the care of Dr. MABYN READ.)

FOR the notes of the case we are indebted to Dr. P. G. Harvey, house physician.

An unmarried woman, aged 22 years, was admitted for the second time to the General Infirmary, Worcester, under the care of Dr. Mabyn Read, on June 4th, 1903, with the following history. On May 20th, 1903, she was sick and had some pain in the abdomen, chiefly on the left side. After her bowels had acted "something came down" from the rectum and could not be replaced. This protrusion was seen by a medical man who kindly informed Dr. Harvey that it was a large prolapse of the rectum which was covered with numerous dark, exceedingly brittle stalked polypi, many of which broke off on replacing the prolapse but some were returned with it. The next day she was admitted to a surgical ward at the Worcester Infirmary and was examined and kept under observation for a week, but nothing abnormal being found and no symptoms occurring she was discharged. No polypus was felt. On May 31st she began vomiting again and had abdominal pain; the bowels acted regularly and frequently. This continued until admission, the sickness tending to get worse. With regard to her past history the patient had never been strong and had attended at the Worcester Dispensary for some six or seven years for loss of flesh. She had had no attacks like the present one before May.

On admission the patient was very emaciated and looked ill. The tongue was dry, red, and coated with a dry-brown fur. The temperature was 99·2° F. and the pulse was 100. As to [illegible] he liver dulness [illegible] The abdomen [illegible] nd under the costal arch. Active peristalsis was observed in the distended portion of the abdomen. There were very little tenderness and no rigidity of the abdomen. Pain was worse when the bowel contracted. From its situation the distended and contracting bowel was supposed to be the transverse and descending colon. Per rectum the mucous membrane felt relaxed; nothing abnormal was felt in the rectum. In Douglas's pouch a tender moveable body was felt which was supposed to be the body of the uterus from its size and position. (The patient was menstruating at the time.) The urine was of specific gravity 1026 and acid; there was nothing abnormal. The case was looked on as probably one of a polypus high up in the sigmoid flexure. The patient was put on a fluid diet and had fomentations applied to the abdomen and a bismuth mixture to try to check the vomiting. On June 5th she was sick twice during the night; she vomited curdled milk. Milk was stopped and meat essence and broth were given. She was sick once after the change of diet. There were much less pain and distension of the abdomen and peristalsis was not observed. The bowels acted well after an enema. On the 6th, 7th, and 8th the patient continued to improve. There was no sickness and there were less pain and distension of the abdomen but slight tenderness was present in the right iliac region. On the 10th the patient was again sick and it was decided to examine her under an anæsthetic but nothing was found in the abdomen or the rectum. Her general condition greatly improved, the bowels acted naturally, and on one occasion she had eight motions in the 24 hours (July 4th). On the 7th, when the rectum was again examined, clear mucus was found on the finger after examination. On the 11th she was again examined under an anæsthetic but nothing further was discovered, a good deal of clear mucus being observed. The rectum was washed out daily with two pints of boric lotion, a good deal of shreddy mucus in flakes of about two inches in length being returned. By Sept. 23rd she had considerably improved but had had six attacks of sickness during the two months; the shortest lasted one day and the longest four days. The vomited material was chiefly food but on one occasion contained bile. The abdomen was never distended to the extent it was on admission but there were decided fulness and some tenderness on the left side. An indistinct band was felt on the 23rd extending across the left side of the brim of the pelvis and it was thought it might be due to an adhesion. She had so far improved as to be able to take ordinary food and to get out of doors. On Oct. 6th she had an attack rather more severe than usual. The abdomen became a good deal more distended and, as on admission, the distension was chiefly on the left side, where a coil of gut in active peristalsis was observed. The patient was put on nutrient enemata of peptonised milk and the rectum was washed out every morning, fæcal material and some shreddy mucus being obtained. Nothing was felt by the rectum. On the 9th the vomit was fæcal in smell and dark brown in colour. Her condition was getting steadily worse and she was seen in consultation by one of the honorary surgeons at 1 P.M. and it was decided that she was suffering from subacute obstruction probably due to a polypus in the sigmoid flexure or perhaps to the band which had been noted on Sept. 23rd. If her symptoms did not improve it was arranged to perform a laparotomy, but it was decided to wait a little longer as she had had several attacks before and to operate during a quiescent period if possible. At 5 P.M. she returned a large quantity of peptonised milk representing three or four nutrient enemata from the rectum and became very collapsed. Dr. Read was summoned and it was decided to operate at once but the collapse increased and she died at 6.30.

Necropsy.—The post-mortem examination was held on Oct. 11th. On opening the abdomen the first thing to attract attention was a coil of greatly distended *small* intestine lying in the left flank, to which were adherent omentum and some collapsed small intestine. On separating the adhesions some pus was found which was confined to the left side by a band of omentum which was adherent to the pubes and the brim of the pelvis. A small rupture was found in the *small* intestine through which an intussusception could be seen. After removing the intestines and opening them a large polypus was found near the duodeno-jejunal junction; about two feet down the jejunum was the intussusception which was about six inches in length, at the apex of which was a large polypus. There was a smaller polypus about half way up the entering layer of the intussusception. There was a large collection of polypi in the cæcum and lower part of the ascending colon and there were three smaller ones in the transverse and upper part of the descending colon. No polypi were found in the sigmoid flexure or rectum.

Remarks by Dr. HARVEY.—The above case may be of interest on account of the length of time the illness lasted, the indefinite and in fact somewhat misleading nature of the symptoms, and the unusual condition found post mortem. I am greatly indebted to Dr. Read for permission to publish the notes of this case.

Medical Societies.

CHELSEA CLINICAL SOCIETY.

FOR the
Scott, house pl*ion on "Internal Secretion" in Disease and in*
CASE 1. *Multy Treatment.*
*cerebral artery; de*linical debate of this society was held at the
33 years, was admitry, Manor-street, King's-road, London, on
Berkshire Hospital, RVINCENT DICKINSON, the President, being
complaining of pain
had never suffered frUNTON, in opening the discussion, said
time past had felt it better to take a general view of the
children, the youngeld mention that one of the first experiments
each case normal the excretion of ferments by bacteria was
the calf of the lef Macfadyen and himself, in which they found
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of the chest, lasse bacilli showed the power of adapting
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admission she self to the food upon which the animal had
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On admissioarch and secreting a ferment which would split
height, somew the animal was fed upon fats. It would seem
bones and an an researches that the ferments which were
was œdematous the intestine after their absorption met with
of the foot, whebodies and again became recombined to form
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was no pain or swe ferments and that in the case of the
normal in position ait was pouring out into the duodenum a
physical signs were would convert starch into sugar, it was
The abdominal and pelvthe lymphatics into the blood another
The urine gave an acid reactiontey, that very sugar and allow it

to undergo combustion in the body. They had there, then, in the pancreas apparently a double secretion, one of which they might term the external secretion, as distinguished from an internal secretion where the fluid from the gland was not poured out upon a free surface but into the blood. Apparently those two secretions were dependent upon different parts of the pancreas. In the case of diabetes they seemed to have a disease depending upon failure of the internal secretion but his own experiments to supply a glycolytic ferment in cases of diabetes although not entire failures were comparative failures. The most striking of all the internal secretions, however, was that of the thyroid gland. He had occasion once to see nearly all the symptoms of exophthalmic goitre with the exception of the enlargement of the thyroid and the protrusion of the eyeball produced by an overdose and over-long continuance of thyroid administration for myxœdema. Most of the symptoms of exophthalmic goitre were due to actual poisoning by the internal secretion. In cases of exophthalmic goitre he used to depend very much upon bromides and upon lime in one form or another, and sometimes he seemed to see good results from those; but the results were not so well marked or pronounced as one would have liked. He had since tried extract of suprarenal capsule and that he thought produced a certain amount of benefit. He had tried thymus but his results had not been very good with that either. Extract of suprarenal capsule had an almost entirely different action upon the blood-vessels and upon the heart from the extract of thyroid. The latter was one of the most marked vaso-dilators he knew and it had been exceedingly useful where they had the fingers becoming dead in winter time and where the patients suffered much from chilblains. By putting them upon small doses of thyroid extract they got the vessels of the fingers dilated and chilblains thus prevented. Extract of suprarenal capsule contracted the vessels to an enormous extent and also stimulated the heart; so between the two they got the blood pressure very much raised indeed; in fact they knew no drug which would raise the blood pressure to such an extent as suprarenal capsule, except nicotine, and one did not know at present whether the nicotine which people took in smoking might not be an adjunct to the action of the suprarenal capsules in keeping up the blood pressure and so keeping up the general tension and power of the individuals. But another question arose in connexion with the agitation in relation to youthful smoking. If suprarenal extract counteracted the effects of thyroid might not nicotine to a certain extent? One of the uses of thyroid was to increase growth. Its effects were more marked in cretinoid dwarfs than in others but he had seen a marked growth following in a child who was not cretinoid by the administration of thyroid extract. Probably it would be said that that was *post* and not *propter hoc*. But he thought it was *propter hoc*. And the idea occurred to him that it was possible that juvenile smoking might have the effect of counteracting the effect of some of the glands which would tend to cause growth and thus to stunt the growth of the child. But it was the pituitary body which seemed to be the gland which regulated the growth of the child and disease of that was often followed by acromegaly and also by the enormous growth of the patient, so that he became a giant. Ovarian extract had been used, especially in cases of women at the menopause, and he thought he had seen sometimes a certain amount of benefit by giving ovarian extract in cases where women were complaining very much of the flushes of heat which were so common at the menopause; but even with that he had not obtained any very marked results. The kidney was another organ which seemed to have an internal secretion as well as an external one. With increased knowledge of the enzymes formed by the glands, of their reabsorption, the changes they underwent, and of how to get both enzymes and zymogens if possible, and if they could know how to split up those zymogens in the blood afterwards, then their powers of treating disease would be enormously increased.

Sir VICTOR HORSLEY said that after all the work which had been done on the thyroid gland, and after all the well-known clinical results obtained by the use of thyroid extract in a disease like myxœdema, they had rather got the idea clinically that when they considered an internal secretion and its alterations by disease they thought only of its banishment. With regard to the thyroid gland at the present time the idea of the internal secretion of that gland being altered by disease was simply that it came to an end. There was not merely that negative side of internal secretion, the positive side was as important clinically. The internal secreting glands when diseased were no longer able to furnish the useful ingoing ferment and in the process of becoming diseased poured into the circulation not merely a healthy ferment but aberrant and poisonous substances. In certain well-known conditions like simple goitre there was ample clinical evidence of such poisoning going on. The thyroid adjusted itself to the requirements of the organism chemically and prevention of that was seen in disease, especially in the formation of new growths. Exophthalmic goitre was a condition in which the thyroid gland was responsible for certain nerve symptoms and the clinical treatment of exophthalmic goitre at present was apparently based upon an attempt to treat the external secretion of the gland. There were few cases of exophthalmic goitre which could not be cured by systematic treatment with the faradic current carried out persistently. Many cases had been brought to him for operation in which operation had been avoided by the energetic use of the faradic current, not the constant current, as was sometimes used by mistake. Supposing the electrical treatment not to have produced a beneficial effect it was curious that in exophthalmic goitre the division of the isthmus by a surgical operation might stop the disease. There was one other condition in relation to the operative treatment of exophthalmic goitre which brought them to a very interesting conclusion with regard to internal secretion. When it was first proposed to operate in exophthalmic goitre people immediately took it up without considering the cases or without knowing exactly why they were doing the operation and the result was that a large number of deaths followed the operation. In such cases if most of the thyroid gland was removed the patient was practically brought to the same condition as a carnivorous animal from [illegible] thyroid gland had been suddenly removed and in [illegible] temperature rapidly rose if it were young, with [illegible] dyspnœa, and death. Such was exactly the same clinical picture in cases of rapid death after removal of one lateral lob[illegible] thalmic goitre. That was a p[illegible]ocesses in the gland, the abs[illegible] and also the existence of [illegible] adenoma of the thyroid gla[illegible] the condition was advanced there would be found symptoms of toxicity. The patients were being poisoned precisely in the same way as in exophthalmic cases, only in a much less degree. At the present time thyroid extract was frequently given in goitre. Thyroid extract given internally could not have any supplementation effect in the case where the new tissues were poisoning the patient already. On the contrary the patients often said it made them much worse. In parenchymatous goitre thyroid extract produced a beneficial effect for some time—it did not cure it or avert an operation ultimately but it made the patient better and it was easy to understand why it should. By giving the thyroid extract they were doing a judicious thing—they were supplementing the failure to the patient of his thyroid gland and providing against his athyroidism. And so markedly was that the case that where patients had not been treated in that way it was advantageous to treat them so for a certain time before operating, for by that means the athyroidal condition was reduced. They were familiar now with the fact that in malignant disease of the thyroid gland, however localised, it was absolutely essential to remove the whole gland. In those cases, although the gland was completely removed, the patients required exceedingly little thyroid extract to keep them in health. With an ordinary myxœdema patient the custom was to give thyroid extract daily but a carcinoma case did not require it. The thyroid gland which was such an extremely important organ in early life for the growth and development of the body became of very little importance every year after the age of 40 was passed, and most carcinomata of the thyroid gland began after the forty-fifth year. In other words, it was another proof of the quantitative relationship between that internal secretion and the needs of the body. Sir Victor Horsley concluded by suggesting that clinically they ought to look more than they did for the positive conditions accompanying aberrant internal secretion, for the poisonings which accompanied these secretions, quite as much as they looked for the loss of normal useful internal secretion.

Dr. H. D. ROLLESTON said that the theoretical consideration which naturally arose was the possibility that some of the diseases which were assumed to be due to disturbance of the normal internal secretion of one ductless gland, such as exophthalmic goitre, acromegaly, and possibly others, were more complex in their nature. In acromegaly glycosuria was not uncommon and had been shown to depend on changes in the pancreas; were those pancreatic changes secondary, like the splanchnomegaly sometimes seen in that disease? Or were they two concomitant changes? Acromegaly might be combined with exophthalmic goitre and there was some superficial resemblance between acromegaly and myxœdema. It might be argued that acromegaly was the result of a disturbance of the chemico-physiological equilibrium maintained in health between the internal secretions of those glands. An anatomical fact which suggested that there was some inter-relation between the diseases due to abnormal internal secretions was that the thymus gland, which underwent complete atrophy before adult life, was almost always persistent or rejuvenated in exophthalmic goitre and sometimes in myxœdema and in acromegaly. The want of success in the treatment of exophthalmic goitre and acromegaly might possibly depend on the fact that two or more glands instead of one only were in each case in an abnormal condition. In the last part of his remarks Dr. Rolleston referred to the therapeutic uses of suprarenal extract. Schäfer and Oliver had shown that the active principle was not destroyed by gastric juice *in vitro* and there was no doubt that when given by the mouth to patients with Addison's disease it raised the blood pressure. It was remarkable that when taken by healthy persons it did not raise the blood pressure. Preparations of the active principle were now available for hypodermic injection and the method was probably more effectual than administration by the mouth. The effect of treatment of Addison's disease by suprarenal extract or its active principle [illegible] as compared with the effects [illegible] Improvement often occurred [illegible] rare instances that the good effect was maintained and that anything like a cure was effected. In Adams's critical analysis of 105 cases of Addison's disease treated by suprarenal extract, the treatment had no effect in 49 cases, 33 cases improved coincidently with treatment, in 16 cases permanent benefit resulted, and in seven cases alarming or fatal results were produced by the treatment. Although suprarenal extract was not a marked success in Addison's disease it had been successfully employed as a local application to constrict the peripheral vessels in operations on mucous surfaces, such as the nose, eyes, &c., in capillary oozing, in hæmophilia, and in epistaxis. Crile had advocated its use in cases of pure surgical shock as a most satisfactory method of raising the blood pressure; he recommended that it should be injected intravenously in large quantities of salt solution, continuously and slowly.

Dr. A. E. WRIGHT said the secretions that he would speak about were those which were not elaborated by any gland. The substances he proposed to discuss were those which they all required daily. They were substances of which they did not know where they were created in the body, but they were present in considerable quantities in the blood. The most marked type of internal secretion was diphtheria antitoxin. All the protective substances involved in the cure of disease were to be regarded from the point of view of internal secretions. The blood of a man affected with acne was defective in a certain internal secretion. In a patient suffering from acne who was defective in his protective substances against that condition in the blood they did not know where to get those substances which were required. If they took a person who had recovered from disease they would find that he had got the power of elaborating the internal secretions required and though they could not supplement them they could if they knew the laws by which they were produced help the production of those substances in patients. He (Dr. Wright) might be considered venturesome if he said that there was no case of acne which could not be cured in a practically short time, but in his own experience there had not been one case which had not been curable, though his experience was only some 36 cases. There had not been one of them in which he could not produce enough internal secretion to kill off the staphylococcus. Patients with tuberculosis recovered if they produced enough of the internal secretion to render their bodies uninhabitable by the tubercle bacillus, and a serum had been used for the purpose of supplying this. The patient was put into the open air in the hope that he

Broadly speaking, in a disease of chronic character inclined to reinvade people, which was not immediately dangerous to life, there was an interval during which the secreting tissues in the body could be induced to secrete the substances required. Evidence could be got that they had been obtained, and in almost all cases, clinically, benefit would result. The effect of one inoculation in any disease was not sufficient to increase the amount of protective substances in the blood so as to change the whole nature of anybody. Ordinary inoculation was best carried out by a series of repeated doses, and they had to know the law which governed those repeated doses to secure success. The object of all inoculations was to produce by a series of repeated doses an internal secretion by accumulative effects. When they dealt with internal secretions it should not be simply a matter of thyroid or acromegaly, but it should come home as a daily thing in their lives that chronic or local infection was a symptom of defective internal secretions, and that those secretions could be elaborated in the body when there were youth, strength, and health by the application of a stimulant given in the proper quantities and at proper intervals and given always in the light of careful and systematic examination of the blood.

The discussion was then adjourned.

MEDICAL SOCIETY OF LONDON.

Discussion on Acute Intestinal Obstruction.

A MEETING of this society was held on March 14th, Dr. F. DE HAVILLAND HALL, the President, being in the chair.

Dr. W. HALE WHITE opened a discussion on Acute Intestinal Obstruction by communicating a paper on the early diagnosis of the condition which is published at p. 791 of the present issue of THE LANCET.

Mr. A. E. BARKER confined his remarks to an outline of the principles of surgical treatment in intestinal obstruction and to the most important details. He emphasised the fact that the condition under discussion was made up of three preponderating factors: (1) mechanical or anatomical; (2) physical; and (3) vital. It was pointed out that the mechanical factors *per se* were not dangerous if promptly relieved, as could be learned by the results of operations for strangulated hernia at an early stage. The physical factors induced by strangulation were certain to come on sooner or later—i.e., congestion of the retained bowel, thrombosis, and effusion, and they became very serious if neglected. But in the local and general vital changes due to the action of the toxins stored up under pressure in the bowel above the point of arrest lay the greatest dangers to the patient, whether operated on or not. In an advanced case of obstruction therefore the quick evacuation of this stored-up putrid material must be provided for either by artificial anus or, as preferred by Mr. Barker, by resection of several feet of bowel above the constriction and anastomosis of the remaining parts. The reasoning in support of this course was only lightly touched on, having been already published in THE LANCET of May 30th (p. 1495) and June 6th (p. 1576), 1903 Illustrative cases were quoted, however, and some specimens were shown. A sketch of the chief details to be observed in a case of acute intestinal obstruction was given and some remarks were made upon after treatment and complications. The stomach should be emptied, by stomach-tube if necessary, and the mouth washed out with antiseptics, warm brandy-and-water administered by the mouth, and a saline solution injected per rectum. Chemical germicides were, in Mr. Barker's experience, best avoided but thorough asepsis should be employed. Local analgesia, excepting perhaps towards the end of an operation, was to be preferred to generalised anæsthesia.

The PRESIDENT alluded to a case resembling renal colic which was about to be operated on for intestinal obstruction and in which he prescribed warmth to the abdomen and rest and the patient duly recovered. The responsibility of the physician in such cases was very great. Some observers had referred to leucocytosis as being a characteristic of intestinal obstruction as well as of appendicitis. Urgency of symptoms was an indication of the amount of constriction rather than its position as taught by older authors.

Mr. C CARTER BRAINE was very interested in Mr. Barker's views on the use of local analgesia. He had often had an anxious time in the administration of general anæsthesia. It was a very good plan to wash out the stomach repeatedly, since there was a constant tendency to regurgitation of stercoraceous material.

Dr. J. VINCENT BELL (Rochester) referred to cases of obstruction by a volvulus and by bands of adhesion.

Mr. H. J. WARING referred to the diagnosis of true acute intestinal obstruction from hysteria. The resemblance was often very great, the character of the pulse being a valuable aid. He mentioned a case of hysteria which had been operated on by four eminent surgeons at different times for obstruction of the bowels. It was of importance to examine per rectum before diagnosing the obstruction or its cause.

Dr. HALE WHITE and Mr. BARKER replied.

PATHOLOGICAL SOCIETY OF LONDON.

Recent Experimental Work on Bacillary Dysentery.—Deep Chromatin Staining in Malaria.—An Unusual Anatomical Lesion.

A MEETING of this society was held on March 15th at the Royal Army Medical College, Victoria embankment, Lieutenant-Colonel R. H. FIRTH, R.A.M.C., being in the chair.

Lieutenant-Colonel FIRTH communicated notes on some Recent Experimental Work concerning Bacillary Dysentery, in which he explained that while there could be no doubt as to the existence of bacilli in the intestinal dejecta from cases of acute dysentery which were capable of differentiation from the common colon and enteric micro-organisms all the bacilli which had been described as being the specific cause of bacillary dysentery were probably not so. In the course of a detailed examination of a considerable number of these dysentery bacilli, derived from a variety of sources, it was possible to divide them into those which were pathogenic and those which were not. Pathogenicity had been determined in the rabbit and although both varieties presented morphological resemblances in common, the distinctive cultural features of the non-pathogenic group seemed to be an ability to split maltose, galactose, and mannite with the formation of acid but without production of gas, also to produce indol. These characteristics were wanting in the pathogenic varieties. The non-pathogenic forms were apparently the "pseudo-dysentery bacilli" of some authors but whether they represented degraded or transitional forms of the pathogenic type he was unable to say. As representative of the true bacilli of dysentery he mentioned the organisms associated with the names of Shiga, Vaillard, and Kruse. After demonstrating the cultural reactions of the two types he pointed out that from the point of view of their agglutination reactions the two groups presented marked differences; whereas the serum derived from animals immunised with one or other of the pathogenic varieties was capable of reacting upon the other members of the same group in high dilutions, it had little or no effect upon those of the non-pathogenic group; moreover, there was no concordant interaction between members of this latter group and sera resulting from immunisation with similar non-pathogenic strains. The same experiments had shown that in the rabbit, although a serum had developed marked agglutinating functions, it had no antitoxic action. While in rabbits no ill effects followed when the dysentery organisms or their toxins were administered either by the mouth or by direct injection into the intestinal tract, as exposed by a preliminary laparotomy, lesions characteristic of those found in human dysentery could be produced by subcutaneous inoculation. Examples of these were exhibited showing ulcerated and sloughing areas in the cæcum and large intestine; also sections of some of the affected parts in which the bacillus seemed to be affecting primarily the submucous layer of the bowel. The lesions could be caused not only by injections of living bacilli but also by cultures killed by heating to 60° C. for half an hour; these same effects followed inoculations with a sterile filtrate derived from a four-day-old broth culture and also with the filtrate obtained from a sterile autolysed maceration in water of bacilli which had been killed by chloroform. The existence of toxic broth filtrates had been denied by some, but provided care were taken to see that the broth in which the dysentery bacilli were grown was definitely alkaline no difficulty was experienced in obtaining a highly toxic filtrate. The dysentery bacilli and the toxic substances elaborated by, or contained in, their bodies appeared to have a selective affinity for the cæcum and large bowel, as it was remarkable that in all these cases of dysentery the blood and organs and mesenteric glands were sterile. Recognising the apparent elective affinity which the pathogenic strains had for certain parts of the intestinal tract when injected subcutaneously, and also the failure to bring about the same effects when the bacilli or their toxins were introduced directly into the alimentary canal, some interesting observations had been made as to the possibility of there being some toxin-fixing or neutralising substance in the epithelia of the intestinal tract of the rabbit. Emulsions in salt solution were made under antiseptic precautions of a virulent culture of the dysentery bacilli with tissues from various organs of a healthy rabbit, such as the spleen, liver, kidney, voluntary muscle, and the epithelium scraped from some ten inches of the cæcum and large bowel. After centrifugalisation five cubic centimetres of the clear liquid were injected into five rabbits, a sixth being taken for a control injection with an emulsion of the bacilli alone. The control died on the third day, the rabbits which had received the bacilli with emulsions of spleen, liver, kidney, and muscle died on the fourth day with characteristic lesions, while the animal inoculated with the mixture of bacilli and emulsified intestinal epithelia survived until the eighth day. In a second experiment the antitoxic influence of the intestinal epithelia was more marked, the animal surviving. Some facts had been established as to the viability of these dysentery organisms outside the body, indicating that, desiccated in soil or on rags, the bacilli could survive some 21 days, while from tap water kept at 22° C. they were recoverable up to 55 days and at 37° C. up to 28 days. If spread on ordinary bread these bacilli survived a week. The inquiry justified the conclusion that the dysentery bacilli were a specific group capable of producing definite lesions in the cæcum and large bowel of varying degrees of severity, such as catarrh, simple petechial patches, punctiform ulcers, large erosions, and even complete sloughing of large areas of the mucous membrane. In accordance with these lesions the clinical entities called dysentery produced by these pathogenic bacilli represented a group rather than a single class of cases and might range from the infective diarrhœas of infants and adults through the various degrees of ileo-colitis to the typical acute dysentery of camps and the tropics. There was still something to be done to explain the precise antecedents essential to infection, as, arguing from these experiments on the rabbit, it was difficult to explain the epidemiological facts by the orthodox channels of polluted drink and food only, without premising some condition which antecedently either inhibited or lessened the apparently normal defence against infection inherent in the intestinal mucous membrane.

Major W. B *LEISHMAN*, R A.M.C., read a communication on Deep Chromatin Staining in Malaria. After alluding to the great advance in knowledge of the structure and development of the parasites of malaria due to the specific colouration of the chromatin by the method of Romanowsky and its numerous modifications, Major Leishman proceeded to describe the effects of deep chromatin staining on the different varieties of malaria parasites, with special reference to the changes which this intense staining demonstrated in the red corpuscles infected by these parasites. By means of diagrams and stained blood films Schuffner's dots in the cells invaded by benign tertian parasites were demonstrated; it was pointed out that a very moderate grade of intensity of staining sufficed to show them and that their presence was constant and was diagnostic of this variety. In quartan malaria, on the other hand, he, in common with other observers, had failed to demonstrate any changes in the red cells by the most intense staining. As regards malignant tertian or tropical malaria, the work of Stephens and Christophers, of Maurer, and of Argutinsky was described and contrasted and stained films were shown demonstrating, first, the dots in the red cells infected by young malignant schizonts; and secondly, the deeply stained capsules surrounding the mature gametes or crescents, as described and figured by Maurer. In view of the apparently contradictory results obtained by Maurer and Argutinsky and of his own failure, except in a few instances, to demonstrate Maurer's dots and capsules, Major Leishman suggested that these discrepancies might be due to there being more than one variety of tropical or crescent malaria and that the differentiation of this fever into malignant tertian and quotidian, although largely abandoned, except by the Italian and American schools, might prove to be correct. The existence of two or more distinct species of malignant parasites would account for the difference in the results obtained, and he suggested that the systematic investigation of these malignant parasites by means of deep Romanowsky staining should be under taken with a view to settle this disputed point. In showing some sketches of the capsulated crescents Major Leishman drew attention to some forms which appeared to him interesting as indicating the probable mode of development of the characteristic crescent from a circular intracorpuscular parasite somewhat similar to the gametes of benign tertian and quartan malaria. Specimens were also exhibited of sections of brain from a case of malarial coma to show the effects of Major Leishman's stain as applied to sections.

Dr. T. J. HORDER showed a pathological specimen in which the chief point of interest was a Massive Form of Consolidation of the Left Lung associated with a Small Aneurysm of the Descending Thoracic Aorta. The sac of the aneurysm, of about the size of a large pea, had ulcerated through the wall of the left bronchus, which was found to be much dilated and filled by adherent, laminated blood clot. The surface of the bronchus was also ulcerated. The lung was uniformly affected, the chief changes being great increase in new fibrous tissue and the filling of the alveoli by large endothelial cells and plasma cells. There was no collapse or any broncho pneumonia. The pleura was much thickened. Microscopic examination of the blood clot showed organisms present; a few could also be demonstrated in the lung. Although the vagus nerve was much compressed no degeneration could be demonstrated in its trunk below the level of the pressure. The patient from whom the specimen was obtained had been suddenly seized with intense dyspnœa, cough, and pain in the chest, but lived eight weeks after this, the chief clinical features being rapidly developing loss of function of the left lung, until this was complete, and quotidian intermittent fever. There was a history of syphilis and examination of the aorta after death showed a condition of syphilitic aortitis. In addition to the naked-eye specimen, lantern slides and microscopical preparations illustrating the case were exhibited.

OPHTHALMOLOGICAL SOCIETY.

Exhibition of Cases.

A CLINICAL meeting of this society was held on March 10th, Sir ANDERSON CRITCHETT, the Vice President, being in the chair.

Mr. J. R. LUNN showed an elderly man with Compression of the Retinal Veins by Thickened Arteries in One Eye, the vessels in the other eye showing also some degeneration. A large area above the macular region was occupied by a hæmorrhage. Owing to the serious view of such cases taken by Mr. R. M. Gunn he proposed to bleed the patient, while Mr. E Nettleship had suggested purging him as well.—Mr. GUNN said that although he looked upon such cases as grave, yet that as in this case there was no albuminuria he thought it rather a favourable one.

Dr. H B. GRIMSDALE exhibited a man, aged 24 years, who had suffered from Gonorrhœal Ophthalmia a year before, resulting in a dense leucoma in one eye. When light was allowed to shine on to the sound eye the pupil contracted, while the other eye rotated distinctly upwards, and when light was withdrawn the reverse took place, the affected eye rotating downwards. This condition had been previously noticed after head injuries but had not before been described as occurring in such a case as the present one.

Dr H. L. EASON showed a case of what he took to be a Persistent Hyaloid Artery. The right eye had defective vision and nystagmus. The vessels were seen emerging from the lower border of the disc, one branch running forwards [illegible]

[illegible] persistent hyaloid artery?—Mr. E. TREACHER COLLINS saw no reason for doubting that it was really a persistent hyaloid artery and that, in addition, there had been atypical development of the vitreous.

Dr EASON also showed a patient with Albuminuric Retinitis who, three years before, had acute nephritis, anasarca, and detachment of both retinæ. His general condition had greatly improved and the detachment in both eyes had subsided.

Mr. CLAUD A. WORTH showed a member of a family in whom Congenital Dislocation of the Lens was present in [illegible] 24 years before Mr. A. Stanford Morton had described the family in a paper in the Royal London Ophthalmic Hospital Reports and since then two more members had been born, both with the same condition —Sir ANDERSON CRITCHETT thought that such a series of cases was most important as bearing on the subject of heredity.—Mr. NETTLESHIP thought that possibly a slight luxation of the lens in young children might account for the high degrees of myopia which were occasionally seen and which did not get worse as time went on.

Dr. A. H. THOMPSON showed a girl, aged 10 years, who had a Congenital Coloboma of the Iris downwards in one eye. Near the periphery of the fundus and well below the macula were a white patch with indefinite edges and a band of healthy choroid crossing it. In view of the condition of the iris Dr. Thompson took it for a coloboma, otherwise he would have been inclined to regard it as a patch of choroidal atrophy. The vision was $\frac{6}{18}$ and the left eye was normal.

Mr. N. BISHOP HARMAN showed a girl, aged five years, with the following Abnormalities: the anterior fontanelle was not closed; a coloboma of each upper lid; a coloboma of the iris and choroid on one side; two dermoids of the globe on the right side; very tortuous retinal vessels; an imperfect mouth; a depression over the sacrum representing the tail (fovea sacralis); and two ears on the right side and four on the left. The child was unable to walk or to say more than a few words.

Dr. A. H. BENNETT showed a girl, aged nine years, who, when first seen in October, 1903, had Keratitis Punctata in the right eye; she was not again seen until she attended as an out-patient under the care of Mr. Claud Worth at the West Ham Hospital on Feb. 18th last. The right eye had been red for a month and the sight had failed without pain. With this eye she could only see hand movements; the vision of the left was $\frac{6}{6}$ The right eye was inflamed with gross, oily-looking patches of keratitis punctata. The iris was yellowish and the pupil was occluded. There were five tuberculous-looking masses growing near the angle of the anterior chamber, varying from the size of a shrivelled barley corn to that of a No. 6 shot. These appeared to be fluffy as though covered with exudation. The eyeball was not tender and there was no fundus reflex. The left eye was normal except for slight ciliary redness. Atropin was applied and hydrargyrum cum cretâ and syrupus ferri phosphatis compositus were given internally. Two weeks later the exudate had mostly disappeared and small blood-vessels were seen on the surfaces of the growths. The left eye when exhibited showed typical pyramidal keratitis punctata; the vision remained the same; the lungs were healthy but the cervical glands were enlarged. The family history disclosed nothing either specific or tuberculous.

Mr. GUNN showed a drawing of an Eye with Maldevelopment of the Suspensory Ligament. The patient complained of symptoms suggestive of a refractive error, but after the use of atropin the upper edge of the lens, instead of being convex, was, roughly speaking, horizontal. At two or three places some fibres of the suspensory ligament came down and were attached to it, thus giving rise to elevations along this edge. There was also a coloboma of the lens downwards.

CLINICAL SOCIETY OF LONDON.

A Case of Polycythæmia with Enlarged Spleen.—Intracranial Resection of the Second Division of the Fifth Nerve for Neuralgia.—Foreign Body impacted in the Left Bronchus.

A MEETING of this society was held on March 11th, Dr. FREDERICK TAYLOR, the President, being in the chair.

Dr. F. PARKES WEBER and Mr. J. H. WATSON communicated a paper on a case of Chronic Polycythæmia with Enlarged Spleen and probably Disease of the Bone Marrow. The patient was a man, aged 58 years, a native of Holland, who had noticed for the last six or seven years a variable amount of cyanosis in the face and extremities. In 1903 he fractured some ribs and afterwards commenced to have delusions of persecution. The peculiar symptom-complex of chronic cyanosis with splenomegaly and polycythæmia was observed at the German Hospital in the latter part of 1903. At Colney Hatch Asylum, to which he was removed, he remained bodily and mentally feeble and during an attack of greatly increased cyanosis died suddenly on Feb. 4th, 1904. Apart from the mental symptoms the chief features of the case were: chronic cyanosis, not to be accounted for by the condition of the heart and lungs; chronic enlargement of the spleen, though the splenic substance appeared little altered at the necropsy; polycythæmia, the blood containing about double the normal amount of red corpuscles and the hæmoglobin value being about 170 per cent. of the normal; increased arterial blood pressure; extreme distension of the small veins with blood, well seen during life in the retina by ophthalmoscopic examination and after death in the viscera; relative dryness of the skin and tissues in spite of there being an absolute plethora of blood in the blood-vessels; urine diminished in amount, highly coloured, and containing a little albumin; frequent digestive disturbance and chronic constipation; tendency to vertigo and to feeling of prostration; and changes discovered after death in the bone marrow of the shafts of the long bones, the red transformation and disappearance of fat indicating doubtless increased activity in the production of blood corpuscles. Dr. Weber and Mr. Watson thought that injuries to bones might increase the polycythæmia (1) by exciting the bone marrow to increased activity, and (2) by rendering rest indoors necessary and thus diminishing the destruction of red blood corpuscles. In the treatment of cases drugs (such as iron compounds) and foods supposed to increase the erythrocyte-forming functions of the bone marrow ought as far as possible to be avoided. A permanent increase of the osmotic tension of the blood would probably account for the main symptoms of the case, but the presence of such increased osmotic tension could only be confirmed or negatived by the investigation of similar cases. By experiments in Professor J. McFadyean's laboratory with fresh horse's blood, in which coagulation had been prevented by the addition of potassium citrate, Dr. Weber and Mr. Watson, using glass thermometer tubing, had succeeded in proving that, other conditions being similar, increase in the proportion of corpuscles to plasma decidedly raised the "viscosity" of blood.—Dr. NORMAN DALTON inquired if any of the ductless glands in the body were similarly enlarged.—Dr. HERBERT S. FRENCH remarked that if the disease was due to an excessive activity of the bone marrow he would have thought that the oxidation of the tissues would have been rendered thereby easier, whereas, on the contrary, cyanosis was one of the most prominent features. This seemed to suggest that the fault lay in the tissues themselves. He thought that experiments upon the comparative tensions of the carbonic acid and oxygen in the expired air in such a case would be valuable.—Mr. LEONARD S. DUDGEON asked if the blood from the small vessels had been examined as well as that from the tissues. He referred to the condition of the bone marrow, which was of a red colour, in a case of congenital heart disease accompanied by cyanosis which he had examined at the East London Hospital for Children.—Dr. W. PASTEUR asked if any thrombosis were present in Dr. Weber's case, as he had met with this condition in two cases of extreme plethora, both of whom died from pulmonary thrombosis at the age of 15 years.—Dr. J. W. RUSSELL (Birmingham) referred to a similar case which he had seen where the spleen was considerably enlarged before any cyanosis appeared. He was also struck with the extreme degree of asthenia present.—The PRESIDENT inquired whether the arteries in the retina were enlarged as well as the veins.—Dr. WEBER, in replying, said that the spleen in these cases might also be regarded as a manometer of the capillary circulation.

Mr. JONATHAN HUTCHINSON, jun., read notes of a case in which he had performed Intracranial Resection of the Second Division of the Fifth Nerve for Epileptiform Neuralgia. The patient had remained free from pain at the end of a year after the operation. The method adopted was that of trephining the temporal fossa, after which the trunk of the superior maxillary division of the fifth nerve was exposed and about half an inch was resected.—Mr. STANLEY BOYD mentioned the case of a woman, aged 69 years, in whom he had performed a somewhat similar operation for intractable neuralgia. In this case some recurrence of the pain took place after the end of the year, though to a much slighter extent than before the operation.

Dr. W. PASTEUR and Mr. T. H. KELLOCK communicated a case of Foreign Body impacted in the Left Bronchus. The foreign body, which was a glass stopper, was removed by operation. An account of the case will be found at p. 795 of our present issue.—The PRESIDENT referred to a case in which pulmonary symptoms were present resembling those of tuberculosis, insomuch that the patient was sent on a sea voyage. One day, however, he expectorated a little blood and a piece of broken tooth, after which the chest trouble which had persisted for some months, disappeared.—Mr. **GEORGE EASTES** remarked upon the value of inversion in these cases, especially when the foreign body was almost on the point of coming up but was sucked back again by inspiration.—Mr. **G. H. MAKINS** said that glass objects sometimes threw definite shadows on the screen He recalled a case of great dyspnœa due to a suspected foreign body in which the cause of death was found to be obstruction due to a caseating bronchial gland —Mr. **HUTCHINSON**, jun., remarked that the glass stopper, though to all appearances clean, was probably virulently septic, hence the formation of pus in the present case. He agreed that the flexible silver-wire loop often succeeded in extracting foreign bodies when all other means had failed.—Dr. **PASTEUR** and Mr. **KELLOCK** replied.

OBSTETRICAL SOCIETY OF LONDON.

Exhibition of Specimens.—The Site of Impregnation.—Abdominal Hysterectomy.

A MEETING of this society was held on March 2nd, Dr. **EDWARD MALINS**, the President, being in the chair.

Dr. **M. HANDFIELD-JONES** showed two specimens of Unruptured Tubal Gestation, both at about the seventh week. In one case death had occurred owing to severe hæmorrhage which had poured out from the open end of the tube. In the other cases only a couple of drachms of blood had escaped into the peritoneal cavity. In both cases much blood clot was found in the distended tube surrounding the ovum.

Mr. **HARRISON CRIPPS** and Dr. **HERBERT WILLIAMSON** described two cases involving the question of the Site of Impregnation. In the first case, after complete removal of the right ovary gestation subsequently occurred in the right tube. There were two possible explanations of this phenomenon—namely, (1) the presence of an accessory ovary on the right side; and (2) external migration of the ovum. These two possibilities were discussed in some detail and the conclusion arrived at was that external migration of the ovum was the more probable. Two similar cases recorded in the literature were quoted. In the second case a patient became pregnant after both Fallopian tubes had been ligatured; to prevent subsequent conception the abdomen was reopened and a portion of each tube was excised In spite of this the patient again became pregnant. Similar cases from the literature were quoted and the manner in which the ovum traversed the distended tube was discussed The bearing of these two cases upon the etiology of tubal gestation was briefly indicated.—Mr. **ALBAN H. G. DORAN** observed that in respect to Case 1 he considered that the existence of ovarian tissue on the same side as the Fallopian tube fully explained the subsequent pregnancy. External migration seemed to him less probable. In regard to Case 2 it was not necessary to assume that the continuity of the entire canal of the partially excised tube must be restored before the tube could resume its functions. These two opinions were supported by the published reports of authentic cases of pregnancy after double ovariotomy. Mr. Doran removed a cyst of the right ovary 14 years after the left had been amputated for cystic disease by Dr. Robert Barnes and noted complete atrophy of the pedicle on the left side. Yet the patient bore a child to term two years later. [illegible] right tube and a trace of ovarian tissue [illegible] to allow of impregnation [illegible] possible. Stansbury-Sutton, [illegible]orris, and Anderson Robertson reported cases where both ovaries and tubes were amputated for cystic or inflammatory disease, yet the patients bore children afterwards. The stump of one tube had become patent (ligatures seldom closed mucous canals securely) and thus an ovum was conveyed from ovarian tissue to the uterine cavity. It followed that in partial excision of the tube for the induction of sterility restored patency of the uterine portion was sufficient to defeat the operator's aims.—Dr. **WILLIAMSON** said that though he appreciated the justice of Mr. Doran's criticism in this particular case he was still in favour of external migration of the ovum —Dr. **G. E HERMAN** said that there was abundant evidence that the ovum might traverse the peritoneum from one ovary to the opposite tube. There was also some evidence that an ovum might traverse the uterus and get from one tube into the other. Knowing that ligature of the tube did not insure sterility he had endeavoured to sterilise patients after Cæsarean section by removing the tubes altogether, tying the stumps close to the uterine cornu, and so far he had not heard of any patient so treated becoming pregnant.—The **PRESIDENT**, Dr. **A. L GALABIN**, Dr. **ROBERT BOXALL**, and Dr. **C. J. CULLINGWORTH** also took part in the discussion.

Dr. **FLORENCE N. BOYD** described two cases of Abdominal Hysterectomy for Fibroids complicated by Pregnancy. The first patient was 42 years of age and had a hard fibroid in Douglas's pouch, almost filling the pelvis. The tumour tended to fall back and at the end of pregnancy was found to be non-replaceable and very tender; it also obstructed the entry of the presenting vertex into the brim. A Porro-Cæsarean section was performed. After delivery of a living child the uterus and several fibroids were removed by supravaginal amputation. The patient died on the third day with great acceleration of pulse and marked distension of the abdomen. The necropsy showed local peritonitis at the site of adhesion, to which a coil of bowel was attached; cultures from the blood and peritoneal fluid proved sterile. The second patient was 41 years of age, her uterus was removed entire in the fifth month of pregnancy, and she made a good recovery.—Mr. **ALBAN DORAN** said that in his opinion hysterectomy early in pregnancy was the safest treatment when the fibroid sprang from the posterior part of the inferior uterine segment —Dr. **HERBERT R. SPENCER** showed a specimen of Degenerative Fibro-myoma, weighing over 17 pounds, enucleated from the broad ligament nine hours before delivery at term. The child was born dead but seemed quite fresh. It was 21 inches long and weighed 6 pounds 2 ounces The mother, who was 41 years of age and had had four children previously, made a good recovery. Dr. Spencer said that although he had seen a considerable number of pregnancies complicated with uterine fibroids this was the only case but one in which he had found it necessary to operate during pregnancy. Tumours which encroached on the pelvis in the early months were often drawn up at the end of pregnancy or in labour. He was of opinion that operations in the early months and mutilating operations were by far too frequently performed in cases of fibroids complicating pregnancy. The specimen showed that even at full time a very large tumour might be successfully removed by the operation of myomectomy. He had no doubt that both the cases shown by Mrs. Boyd required operation but thought that in the second case it would have been better to wait and to see whether the pregnancy could not be allowed to continue until the child was viable or even developed to term. Whether the uterus should have been removed in that case was, perhaps, doubtful, but in the case of a pedunculated tumour, such as in one of Mr. Doran's cases, he thought the conservative operation of myomectomy was preferable —Dr. **AMAND J M ROUTH** spoke strongly against operative interference in the early months of pregnancy unless very urgent symptoms were present, especially as two lives were involved, and all interference must be surgical, myomectomy or hysterectomy, the induction of abortion being unjustifiable for obstructing fibroids.—Dr. **CULLINGWORTH** and Dr. **A. H. N. LEWERS** also took part in the discussion.

ULSTER MEDICAL SOCIETY.

The Present Position of Cardiac Therapeutics.—Exhibition of Specimen.

A MEETING of this society was held in the Medical Institute, Belfast, on March 3rd, Dr. **JOHN CAMPBELL**, the President, being in the chair.

Professor **J. A. LINDSAY** opened a discussion upon the Present Position of Cardiac Therapeutics. He said that he would deal with the subject from three points of view: (1) the treatment of functional affections of the heart; (2) the treatment of valvular lesions during the stage of complete compensation; and (3) the treatment of valvular affections during the stage of failing compensation. As to functional affections, treatment must have regard to cause, whether nervous, heredity, exhaustion from work, worry or indulgence, too free use of tea, coffee, tobacco, or alcohol, or emotional stress. The regulation of diet and habits was more important than drugs. Hydropathy had and if pursued energetically it was sometimes disastrous. Change to upland air was useful. The best drugs were probably strychnine or arsenic. The former should not be given if there was much irritability. Anæmia called for iron. The bromides should be used sparingly as in general a tonic was preferable to a sedative regimen. He did not find digitalis or strophanthus valuable in functional affections. As regarded the treatment of valvular affections during the stage of complete compensation, he deprecated any active therapeutics. The patient's habits and occupation required some supervision. His amusements might call for some restriction. The propriety of sanctioning cycling in these cases was doubtful. Tonics might be useful but the special cardiac remedies should be withheld. These patients should be dissuaded, when practicable, from selecting the career of a soldier, sailor, engineer, or politician. The medical profession was not very suitable for persons the subjects of organic valvular disease but some of the special branches might be selected. Law and divinity were permissible careers. Women the subjects of mitral stenosis or aortic regurgitation should be advised against the risks of matrimony. As regards the treatment of valvular affections during the stage of failing compensation, the first question was the due apportionment of rest and exercise. He believed that rest should in all cases have priority when there were active symptoms. Patients sometimes fancied that they could "walk off their shortness of breath," but it was a serious question whether this did not usually mean a blunting of sensibility rather than the rallying of the heart to the strain thrown upon it. Rest could no doubt be abused but it should come first. When some improvement had been obtained the question of graduated exercises or mitigated labour would arise. The diet of these cases should be fairly dry and mainly proteid in character. A sloppy diet or a diet rich in carbohydrate material was in most cases injurious. If much gastric catarrh was present or if the urine was scanty and concentrated solid food might require to be forbidden temporarily. With regard to drugs, he held that there was one sovereign remedy for failing compensation in valvular disease—viz., digitalis—and he regarded all other remedies as of quite minor importance. He thought that they would be more profitably employed in studying the action of digitalis than in trying to find substitutes for it. He advised the use of the remedy by itself and preferably in the form of the powdered leaf. Mercury and iron were the most important drugs to be given in combination with digitalis but he preferred to give the latter drug as a rule without accompaniment, using mercury, iron, or other combination from time to time as the patient's condition and symptoms might require. It was a question whether the "intensive" plan of giving digitalis—viz., in doses of one and a half grains of the powdered leaf every two hours for two or three days—with the view of bringing the patient rapidly under the influence of the drug was a good one. Douglas Powell thought that this plan led to "premature arterial contraction and cumulative effects." It must be remembered that digitalis was a very slow-acting drug. It was useless where an immediate effect was required. He was in the habit of advising occasional intermissions in the use of the drug in the case of a prolonged course of digitalis and he had never seen a well-marked case of cumulative effects. Many patients could take the drug continuously for long periods without ill effects but as a general rule occasional intermissions were desirable. If gastric symptoms proved troublesome digitalis should be suspended for a time and then tried again. In most cases of the continuous exhibition of digitalis an occasional mercurial purge was requisite. In some cases attended by much cyanosis and distension of the right heart the abstraction of a few ounces of blood by leeching was an important adjuvant to the action of digitalis. In senile patients iodide of potassium was sometimes an indispensable addendum to a course of digitalis. Digitalis was most valuable in mitral regurgitation and in aortic regurgitation with secondary mitral reflux. He did not share the fears sometimes expressed regarding the safety and value of digitalis in aortic regurgitation. His experience was that the remedy was of great service in this lesion. In mitral stenosis he had found digitalis disappointing and sometimes injurious, which was not surprising when they reflected that increased force of the systole of the right ventricle might aggravate the patient's sufferings in this lesion. He had been much disappointed with the effects of strophanthus but in some cases of mitral stenosis it might prove more valuable than digitalis. Strychnine was a most valuable remedy in failing compensation but it must be given hypodermically and with a free hand. The usual tonic doses given by the mouth were almost useless. It shone most conspicuously in emergencies—i.e., in circumstances where digitalis was of least service. He had seen some benefit from caffeine. He thought it a waste of time to give convallaria, spartein, cactein, or casca. In the treatment of cardiac insomnia he thought that the moderate use of morphine by hypodermic administration to be much the most important remedy. He could not endorse the high place assigned by some observers to paraldehyde in this condition. He had found it a most uncertain remedy but sometimes it acted well. The question of the use of nitro-glycerine in failing compensation was a most important and much controverted one. He thought that the use of this drug in ordinary cases was bad practice. Its value in anginoid states was, of course, undoubted. The treatment of valvular disease by graduated exercises and by baths was an important question of which much had been heard in recent years. He had paid one visit to Nauheim but could not speak from any considerable experience of the Nauheim methods. He thought that the special form of exercise in cardiac cases was less important than the determination of the prior question whether any given case was one for exercise or for rest. It was a question whether "resistance" exercises possessed any decided advantage over properly regulated exercise in the fresh air upon the flat or on certain inclines, according to the special indications of the individual case. In the successful management of cardiac cases much depended on the docility of the patient, the state of his tissues, and the *savoir faire* of the profession.

In the discussion which followed the following members took part: Sir William Whitla, Dr. J. McCaw, Dr. R. W. Leslie, Dr. A. Dempsey, Dr. H. L. McKisack, Dr. J. S. Morrow, and Dr. D. P. Gaussen.

Professor Lindsay briefly replied.

Dr. Dempsey showed a Fibro-myoma of the Uterus successfully removed.

West London Medico-Chirurgical Society.—A meeting of this society was held on March 4th, Dr. Seymour Taylor, the President, being in the chair.—Mr. G. A. Garry Simpson read a paper entitled "Adenoid Growths, When and How to Operate." He recommended breathing exercises for those patients who had a temporary engorgement of some already existing lymphoid tissue due mainly to an attack of acute rhinitis; such cases, however, should be watched for any further developments. Frequently recurring attacks of deafness were strong indications for operative interference and a chronic otitis media would clear up much more rapidly if any existing adenoid growths were removed. Deaf patients with retracted drum membranes were benefited by an operation, provided that the mischief had not existed for too long a period. The nose ought to be examined in every case, because if any obstruction was overlooked the operation would fail to restore nasal respiration. An operation ought to be performed if a child was a habitual mouth-breather. Mr. Simpson had never found that patients suffering from enuresis were benefited by the operation. He preferred to operate with the patient lying on his right side near the edge of the table, with the legs slightly drawn up. The head, which rested on a low pillow, was thus made dependent and no blood or fragments of the growths could enter the larynx. He preferred chloroform for children under ten years of age and nitrous oxide gas and ether for older patients.—Dr. E. Furniss Potter said that he believed the carrying out of breathing exercises as described to be quite inapplicable in private practice and considered that much less worry as well as a more certain result were likely to accrue from the radical operation for removal of the adenoids. Thoroughness of removal was more important than rapidity of operation and thoroughness could not be assured in the short time allowed by "gas only." Nitrous oxide gas followed by ether he considered to be much more satisfactory and if properly administered there need be no anxiety on account of the anæsthetic. With chloroform there was a much larger proportion of cases which gave rise to this anxiety. On the whole the forceps was a more certain and trustworthy instrument than the Gottstein curette although its use entailed a greater expenditure of time.—Mr. Stephen Paget maintained that the risk of increased loss of blood was a serious argument against performing the operation very deliberately and that there was no positive evidence of the necessity for a protracted operation.—Dr. G. E. Shuttleworth said that breathing exercises were of value in counteracting the habit of mouth-breathing which frequently persisted after adenoid operations, as well as remedial in the milder cases which were not submitted to operation. Such was his experience in the case of feeble-minded children, with whom he was specially conversant and for whom he prescribed these exercises in the upright position as part of their daily school drill.—Dr. J. B. Ball, the President, and Mr. A. B. Kingsford also took part in the discussion.—Mr. Paget read a paper on the Uses of Paraffin in Plastic Surgery. He had employed this method in more than 60 cases of sunken nose and in several cases of prolapse of the bowel. In the treatment of sunken nose it was necessary to avoid attempting to do too much. Everything depended on the state of the skin. If the skin were fairly free, soft, healthy, not scarred, and not adherent the surgeon might anticipate doing a great deal of good and the risk was that he might do harm by trying to do too much good. In cases of prolapse of the bowel a great deal of good could also be done. In operating on the nose the presence of ozæna or of perforation of the septum did not hinder a successful result, provided only that the skin were healthy, free, and fairly abundant.—Dr. Ball said that he had operated in 14 cases of depressed bridge of the nose by this method with satisfactory results. He agreed with Mr. Paget as to the necessity for not injecting too much paraffin. It was better to be under the mark than over it.

Otological Society of the United Kingdom.—A meeting of this society was held at 11, Chandos-street, London, W., on March 7th, Dr. Thomas Barr, the President, [illegible] He opened the resumed dis- [illegible] on the Etiology and Treat- [illegible] In his opinion vertigo was not to be relied on as an indication for operation, nor did erosion of the inner walls of the tympanum and antrum always imply fistular communication between those cavities and the labyrinth. Patients often recovered from these conditions after the complete post-aural operation and without exploration of the labyrinth. On these grounds and because the mastoid operation itself was a long and tiring one he advocated operating in two stages. He thought that the posterior limb of the external semicircular canal was a better way of approaching the labyrinth than either the anterior limb of that canal or the inner wall of the tympanum on account of the proximity of these structures to the facial nerve and bulb of the jugular vein respectively.—Mr. A. L. Whitehead gave an analysis of 691 cases of complicated middle-ear suppuration dealt with by himself and colleagues at the Leeds General Infirmary. There were 27 cases of suppuration of the labyrinth. Of these 14 had facial palsy, five had vertigo, and 11 had no special symptoms; 11 died—six from cerebellar abscess, three from meningitis, and two from marasmus. He cautioned members against too early attempts to remove large sequestra.—Dr. Urban Pritchard supported the views expressed by Mr. Cheatle and suggested the use of a 1 per cent. solution of nitric acid, as practised by himself for many years, for the decalcification of sequestra.—Dr. J. Dundas Grant discussed the difficulty of exploring supposed fistulæ in the labyrinthine walls without producing the very disease the existence of which was feared. Latent labyrinthitis was very difficult to diagnose.—Mr. C. H. Fagge said that in his opinion the posterior limb of the external semicircular canal was the best route for the exploration of the labyrinth.—Mr. Richard Lake referred to the frequent causation of deaf-mutism by necrosis of the labyrinth, especially in scarlet fever.—The President spoke of the intimate relations of the cerebellar fossa and the labyrinth and the consequent frequency of intracranial lesions in labyrinthine suppurations. He also referred to the fallacies of Weber's test for nerve deafness, instancing a case in which the sound of the tuning fork was referred exclusively to the affected ear, although it was proved by necropsy (death occurred from meningitis) that the labyrinth had been destroyed.—Dr. Dundas Grant reported a case of Thrombo-phlebitis of the Sigmoid Sinus in which recovery took place after removal of the suppurating clot from the sinus and without ligation of the internal jugular vein.—Mr. Lake showed four patients with drawings of the Membrana Tympani. One case had herpetic vesicles on the lip, the concha, and the membrana tympani. The other three had aural pain and papules on the membrana tympani which were "nearly allied to, if not actually, herpes."—Dr. E. Furniss Potter showed a patient with signs of Hereditary Syphilis in whom appreciable improvement of hearing had occurred apparently as the result of treatment by subcutaneous injections of pilocarpine.—Mr. Cheatle and Dr. Pritchard expressed the view that pilocarpine was of less value than repeated blistering behind the ear even in cases of labyrinthine deafness due to hereditary syphilis.—Dr. Peter McBride and Mr. Lake maintained that pilocarpine was useful in labyrinthine deafness.—Dr. Dundas Grant said that pilocarpine was valuable where there was evidence of hyperæmia of the labyrinth but was strongly contra-indicated where the evidence pointed to anæmia.—Various specimens were shown by Dr. Herbert Tilley, Mr. Hugh E Jones, Dr. L. H. Pegler, Mr. Cheatle, and Dr. W. Jobson Horne.—It was announced that the next meeting of the society would be held at Glasgow.

British Gynæcological Society.—A meeting of this society was held on March 10th, Dr. John W. Taylor, the President, being in the chair.—Dr. H. Macnaughton Jones exhibited for Dr. T. Gelston Atkins of Cork specimens from two cases treated by Hystero-salpingo-oöphorectomy. The first case was one of large bilateral ovarian abscesses and the patient made a good recovery. The other case was one of bilateral papilloma of the ovaries with cancer of the cervix and the woman made a good recovery from the operation but died from tachycardia on the ninth day.—Other specimens were shown by Dr. William Duncan, Dr. J. Inglis Parsons, and Dr. Bedford Fenwick.—Dr. Dudley W. Buxton read a paper on the Vernon-Harcourt [illegible] observers on its effects upon the isolated mammalian heart and upon the nervous and vaso-motor systems (Sherrington, Sowton, Waller, Rudolph, and Embley). With low percent- [illegible] s had described [illegible] ur was found to [illegible] narcosis, while an even lower percentage maintained anæsthesia. After a careful comparison of "incomplete" or "irregular" and "light" anæsthesia, Dr. Dudley Buxton showed that most of the perils of chloroform arose from incomplete and irregular anæsthesia. He exhibited the inhaler devised by Mr. A. Vernon-Harcourt to supply a vapour of 2 per cent. or any lower degree that might be desired; by using it the after-effects were lessened while the dangers were minimised. The results obtained by its intelligent employment had proved most satisfactory.—Mr. A. W. Mayo Robson said that from his experience of the Vernon-Harcourt inhaler in a large number of serious cases he could confirm all that Dr. Dudley Buxton had said in its praise; it would, in his opinion, completely revolutionise the giving of chloroform.—Dr. Macnaughton Jones, also speaking from experience, said that the induction of anæsthesia with it did not take more time than with the Junker apparatus nor was it ever necessary to continue the full 2 per cent. vapour to maintain anæsthesia.—Dr. R. T. Bakewell eulogised the inhaler, especially for children, but explained that on account of the dislike that children had to any form of mask it was convenient to commence the anæsthesia with a few drops of chloroform on lint.—Mr. Vernon Harcourt said that he had found it better to substitute metal valves for the celluloid ones which he employed at first, as the latter were affected by the vapour of chloroform and lost their shape; moreover, being transparent their action could not be so satisfactorily observed as with metal valves. He inquired whether some form of stand to keep the instrument upright and the interposition of about 20 inches of tubing between it and the face-piece might not be beneficial in saving the administrator fatigue in long operations or in obstetric cases.—Dr. Dudley Buxton said that to one accustomed to the instrument the fatigue was not great even in long operations but that such an addition might prove useful in some instances.

Harveian Society of London.—A meeting of this society was held on March 10th, Dr. C. Theodore Williams, the President, being in the chair.—Dr. S. Vere Pearson read a paper on the Diagnosis of Pulmonary Tuberculosis in Infants and Young Children. The diagnosis of intrathoracic tuberculosis was considered under four heads. 1. Broncho-tracheal gland affection. The differentiation and classical symptoms were described. The differentiation from a persistent cough following whooping-cough was dealt with; it depended upon the exclusion of the two common causes of such persistent cough—namely, adenoids and habit combined with a tendency to repeated catarrhal attacks. If these were appropriately treated the cough usually soon disappeared unless tuberculous glands were present within the chest. 2. Miliary tuberculosis of the lungs. The diagnosis of this form depended upon a study of the general features, the history and course of the case, not upon any special local signs. An insidious and progressive wasting without adequate cause should arouse suspicion. The state of the skin, especially the presence in it of small hæmorrhages or of subcutaneous tubercles, the condition of the hair, irregular pyrexia, quiet demeanour, enlarged spleen, and the variety of anæmia present were important. The wasting had to be distinguished from simple marasmus and that due to septic infection, &c. 3. Tuberculous broncho-pneumonia. Certain peculiarities of this type were described and its differentiation from the simple form with its complications and from localised empyema, purulent pericarditis, and abscess of the lung was reviewed. 4. Rarer types of pulmonary tuberculosis. The varieties, the times of occurrence, and the nature of these types were dealt with briefly.—Mr. E. Laming Evans read a paper on the Treatment of Congenital Club-foot in Early Infancy and showed a number of cases. He advocated manipulation immediately after birth and early recourse to tenotomy of the tibials (anterior and posterior) and flexor longus digitorum for the cure of the varus, followed then by tenotomy of the tendo Achillis to overcome the equinus, with prolonged after-treatment in some apparatus and constant observation by the surgeon.—Mr. Noble Smith congratulated Mr. Evans upon his firm support of the principle of maintaining the fixation of the heel until the inversion of the foot had been entirely overcome. Until the great toe was brought into or beyond a straight line with the inner border of the patella the inversion could not be considered completely corrected. He supported early treatment and reverted to the difficulty of treating neglected cases. He strongly deprecated extensive operation and everything which tended to destroy the natural movement of the foot. Lately he had practised Lorenz's method which differed from the former forced manipulation by the persistency of the surgeon's efforts at the time of operation. He showed some casts and photographs illustrating excellent results obtained by the improved method of treatment.—Mr. J. Jackson Clarke agreed with Mr. Evans's method of treatment which he thought was now followed at all the orthopædic hospitals in London. There were a few exceptional cases in which other methods were required in order to obtain a perfect result. That of manipulation and fixation in plaster of Paris as practised by Lorenz was, in Mr. Clarke's experience, the most valuable. It should not be done until the child was able to walk. Preparatory cleansing of the skin should always be undertaken and sterility aimed at in case of rupture of the skin occuring during the manipulation. Such wounds in these circumstances gave no trouble and healed well under dry dressing.

Edinburgh Obstetrical Society.—A meeting of this society was held on March 9th, Professor A. R. Simpson, Vice-President, being in the chair.—Professor Simpson referred to the great loss the society had sustained through the death of Dr. R. Milne Murray. It was more than a year since pneumonia laid him low and deprived the society of his bright and always stimulating presence. He had recovered from the dangerously acute attack and was battling bravely with the after-consequences, so that when they heard of his working at a text-book they hoped that he was on his way to a full recovery. The surgical intervention that might have hastened his cure failed of its desired effect and his brilliant career came to an untimely close. He began the study of medicine with a singularly clear and well-trained mind disciplined first by his father at Fettercairn and afterwards in the University of St. Andrews, where he took the M.A. degree. He early showed himself at home in chemistry and physics and he became an acknowledged master in electricity. During his medical course he showed special interest in midwifery and gained a medal in that class. After graduation he devoted himself specially to obstetrics and gynæcology. He was a born lecturer and when he opened classes of his own he speedily took a foremost place among the teachers in the Edinburgh School of Midwifery. In 1882 he read a paper to the society on a difficult face case where he had used axis-traction forceps with satisfactory results. In 1891 he read an important memoir on the principles on which the axis-traction forceps acts and gave a definite mechanical construction to the instrument based on those principles. He afterwards read papers on forceps with adjustable axis-traction and forceps for occipito-posterior positions of the vertex. He advocated a modification of the forceps with which his name deserves to be associated permanently and which consists in having the traction bar fitted on the traction rods at different carefully measured distances nearer the handle, or further from it, according to the inclination of the pelvis. Another paper was on a Form of Post-partum Incontinence of Urine and its Treatment by Faradism. In later years he advocated the value of electric currents in the treatment of uterine fibroids and other pelvic diseases. His inventiveness showed itself in improvements in electric apparatus and the managers of the Royal Infirmary made the best of choices in placing him at the head of their newly instituted electric department. He contributed many papers to various journals; one especially might be referred to—that on the Physiological and Therapeutic Effects of Water at Different Temperatures, with special reference to Obstetric and Gynæcological Practice. It was a model of scientific work and placed the employment of the hot douche as a hæmostatic on a physiological basis. He filled with diligence, dignity, and courtesy the different offices of secretary, vice-president, and president of the society. His summing up of a discussion was often singularly illuminative and when he had occasion to criticise—and he could at times be keen and trenchant—his criticism was never unkind. His introductory and valedictory addresses as president were eloquent, pregnant with instruction, and presented with the charm of a rare literary style. Professor Simpson concluded by saying that the memory of a life so unselfish, so strenuous, and inspired by such high ideals would long remain as a stimulus to noble effort.—As a tribute to Dr. Milne Murray's memory the meeting of the society was adjourned for a month.

Society of Anæsthetists.—A meeting of this society was held on March 4th, Mr. C. Carter Braine, the President, being in the chair.—Dr. G. B. Flux read notes on a Case of Post-anæsthetic Coma in a patient, aged 40 years, who was anæsthetised for an hour by the A.C.E. mixture preceded by ethyl chloride. Death occurred on the fourth day. The urine contained a trace of albumin and many granular casts. On post-mortem examination the kidneys and heart were found to be diseased seriously and in the brain were the remains of old emboli. The patient had, curiously enough, never remembered having had a day's illness in her life. The anæsthesia was uneventful. Dr. Flux suggested that the coma (uræmic) was due to the general disturbance caused by the severe operation, an amputation of the breast.—Miss L. B. Clapham, M.B., related a similar case in which death occurred after four days. The patient was a stout woman, the operation being repair of an umbilical hernia. The A.C.E. mixture was given for an hour, followed by ether for three-quarters of an hour. The patient never recovered consciousness but vomited and became cyanosed and restless and the respiration became stertorous and of the Cheyne-Stokes type. Bronchitis and dilated heart ensued. Post mortem were found old mitral disease, diseased kidneys, great congestion of the brain, and three small cortical hæmorrhages.—Dr. Dudley W. Buxton and Dr. J. F. W. Silk discussed these two cases.—The President communicated a case of Goitre in which Nitrous Oxide was given and subsequently Ethyl Chloride. A young, healthy-looking woman was given nitrous oxide for the extraction of teeth. During deep anæsthesia asphyxia ensued without apparent cause. The patient recovered when laid horizontally and then an engorged goitre was discovered which had been concealed by the mackintosh apron. After an interval ethyl chloride was administered most successfully, as also on two subsequent occasions. The President suggested that the neck should always be exposed as far as the suprasternal notch in all administrations. He believed that in this case there was a sudden occlusion of the trachea from downward pressure on the goitre and that this was relieved when the patient was on the floor. The tongue probably had been somewhat pushed back and the jaw depressed in getting a good hold of a lower molar tooth.—Dr. A. G. Levy showed an adaptation for Administering Ethyl Chloride by Clover's Ether Inhaler. A graduated glass tube was cemented into the vulcanite stopper of the inhaler and the dose was then sprayed into the tube which at first was dependent and then inverted. The ethyl chloride vapour was gradually mixed with air by rotating the inhaler as far as the point marked 3. The indicator was kept at this point until the wished for degree of narcosis ensued. Ether could afterwards be added to continue narcosis.—Dr. Dudley Buxton then read a paper entitled "Some Reflex Dangers in Early Narcosis."—The discussion on this paper was adjourned.—Afterwards the annual general meeting of the society was held. The reports of the council and treasurer were read and adopted. The following officers were then elected for next session: President: Mr. Carter Braine. Vice-President: Dr. Silk. Treasurer: Dr. R J. Probyn-Williams. Members of Council: Mr. Harvey Hilliard, Dr. T. D. Luke (Edinburgh), and Dr. J. Blumfeld. Honorary secretaries: Dr. W. J. McCardie and Mr. H. O. Crouch. Honorary auditors: Miss L. B. Aldrich-Blake, M.D., and Dr. C. J. Woollett.

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on March 2nd, Dr. J. S Bury, the President, being in the chair.—Dr. I. Walker Hall read a paper on the Effect of Decapsulation on Kidneys in which a degenerative nephritis had been induced. He said that the removal of the capsule in such conditions was always accompanied by laceration of the cortical tubules and hæmorrhage. In from eight to 14 days later the kidney capsule had formed once more and was thicker than the normal capsule. The hæmorrhages and lacerations were replaced by cellular tissue. The details of capsular changes in two human kidneys after partial removal of the capsule were given.—Mr. E. Stanmore Bishop read a paper on Gall bladder Surgery. He attributed the recent impetus to surgical work in this region to three things—namely, asepsis, clearer diagnosis, and improved technique. The older teaching which laid stress in cases of biliary calculi upon the presence of tumour, jaundice, intermittent pain, results of exploratory puncture, the discovery of calculi in fæces, and sensations of grating was ins[illegible] was usually abs[illegible] and deeply se[illegible] puncture was [illegible] dangerous. Jaundice was frequently absent; when present it was evanescent and in all cases it depended upon the position of the stone. Pain might be of two kinds—namely, either continuous and dull aching or intermittent, sharp, and intense. The latter was followed by tenderness and this was utilised in the two tests of Robson and Murphy both of which Mr. Bishop had found trustworthy. Improvements in technique included the free exposure of the biliary tract to sight and touch by careful separation of adhesions and occasionally by rotation of the liver. The danger of undue traction upon the vena cava was pointed out. Immediate and thorough clearance of all calculi was recommended in preference to the earlier two-stage method. For the control of hæmorrhage chloride of calcium and adrenalin were useful. Mr. Bishop's remarks were based upon an experience of 31 cases.—Dr. Ernest S Reynolds mentioned a family in which the eldest daughter had died insane, the second daughter had aberrant disseminated sclerosis, the third child (male) had [illegible] sclerosis of the ataxic [illegible] (female) and the fifth child (male) were normal, and the sixth (male) had aberrant disseminated sclerosis. The father had recently suffered from melancholia, his first cousin (once removed) had died from disseminated sclerosis, and a distant cousin of the last had exophthalmic goitre Dr. Reynolds mentioned also the case of a girl who had both disseminated sclerosis and exophthalmic goitre fully developed at the same time.

LARYNGOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on March 4th, Dr. P. McBride, the President, being in the chair.—The President showed a Knife for Slitting up the Tonsil of the Lacunæ and a Pair of Punch Forceps for Removing the Stumps of Polypi.—Dr. E. Furniss Potter showed a case of Immobile Right Vocal Cord in a youth, aged 19 years. The condition was probably of a tuberculous nature, though there were no definite signs of disease in the chest or sputum.—Dr. A. Smurthwaite showed a specimen of Tuberculosis of the Larynx and Trachea of rapid course in a man aged 67 years.—Dr. H. Tilley showed three cases in which radical operations for Empyemata of the Accessory Sinuses had been carried out. All three cases had been severe in their symptoms and the final result of operation in each case was cure.—Dr. J. Dundas Grant showed a case of Ulcer of the Tonsil, probably the primary lesion, in a young woman with well-marked cutaneous syphilides; also a case of extreme Laryngeal Œdema in a man, probably secondary to tertiary specific lesion, and treated by mercurial inunction and local incision (nearly recovered).—Dr. Atwood Thorne showed a man, aged 32 years, with Adhesion of the Soft Palate to the Posterior Pharyngeal Wall. The interest of the case was that when first seen there was a mere pinhole aperture but that instead of the opening closing it had without operative interference become larger month after month, apparently by contractions of the adhesions towards their fixed points in the periphery.—Mr. R Lake showed a case of Chorditis Tuberosa and a woman with Tuberculous Ulcer on the Left Vocal Cord.—Dr. W. H. Kelson showed a girl suffering from a Nasal Sinus situated about an inch from the tip in the mid-line.—Dr. Fitzgerald showed a man, aged 34 years, with a Swelling of the Right Ventricular Band and a small Papillomatous like Growth on the Anterior Margins of the Right Cord He also showed a patient, aged 28 years, who had suffered from what he considered to be Necrosis of the Premaxillary Bone.—Dr. William Hill said that in his opinion the sequestrum was not the premaxilla itself but the Stensonian portion of the premaxilla.—Dr. H. J. Davis showed a patient with a Large Swelling between the Arytenoids and an Œdematous Mass of raised Mucous Membrane resembling a large mucous polypus and extending below the cords. The question was whether the case was one of acute œdema resulting from syphilis alone or one of mixed tuberculous and syphilitic infection.

GLASGOW SOUTHERN MEDICAL SOCIETY.—A meeting of this society was held in the board-room of the Victoria Infirmary, Glasgow, on March 3rd, Dr. Thomas Richmond being in the chair.—Mr. A. Ernest Maylard delivered an address on Abdominal Surgery, Retrospective and Prospective, based on 14 years' personal experience in the wards of the Victoria Infirmary. The growth in numbers of abdominal operations performed per annum was traced through the period, demonstrating the marked and rapid [illegible] that had taken place in this respect. Treating chiefly [illegible] with which Mr Maylard [illegible] recent years, numerous [illegible] operations not dreamed of but a short time ago were now successfully performed. Congenital hypertrophic stenosis of the pylorus, chronic gastric catarrh, gastric ulcerations simple and malignant, idiopathic dilatation of the colon, mucous colitis, &c., were treated of and the operations for their relief or cure were described. More than a dozen cases of operations upon the stomach were shown, comprising a most striking one of gastro jejunostomy performed five years ago for pyloric obstruction due to adhesions following upon chronic gastric ulcer. The patient is now in robust health, actively engaged in his occupation, and without any symptom referable either to his stomach or any other organ. Prior to the operation in May, 1899, he had been a chronic invalid for years, much emaciated and weakened, and totally incapacitated for work on account of gastric trouble Other cases illustrated the incisions employed in various gastric and intestinal operations.—Dr. E. Duncan and Dr. G S Middleton, who spoke afterwards, were of opinion that surgery had gone an unnecessary length in the treatment of the diseases of the stomach and especially in the case of chronic dyspepsia and chronic gastric ulcer.—Mr Maylard, in reply, referred the speakers [illegible] Dr. Russell's statistics concerning gastric ulcers and urge[illegible] physicians to watch such cases throughout a period [illegible] years and to note the ultimate results which were, [illegible] felt convinced, much more serious than were genera[illegible] supposed.

WIGAN MEDICAL SOCIETY.—The annual [illegible]ing of this society was held on Feb. 18th, when [illegible] following were elected office-bearers for the ensuing [illegible] President: Mr. J. Chronnell. Committee: The Presi[illegible] Dr M Benson, Mr. T. M. Angior, Dr. J. Blair, Dr. F. [illegible] and Mr. Wolstenholme. Honorary treasurer: Mr. E. Monks. Honorary secretary: Mr. W. Berry. A series [illegible] Clinical Photographs illustrating Nervous and [illegible] Diseases was shown on the screen by Dr. E. Reynolds.

Reviews and Notices of Books.

Diseases of Women. By ALFRED LEWIS GALABIN, M.A., M.D.Cantab., F.R.C.P.Lond., Consulting Obstetric Physician to Guy's Hospital, &c. Sixth edition, with 284 Illustrations. London: J. and A. Churchill. 1903. Demy 8vo, pp. 695. Price 16*s.* net.

So many years have elapsed since the appearance of the last edition of this work that the present volume is practically a new book. Considerable additions have been made and detailed descriptions with illustrations have been introduced of the modern methods of performing the various abdominal, vaginal, perineal and gynæcological operations. Dr. Galabin's extensive clinical experience and his long association with students, both as a teacher and as an examiner, render him peculiarly fitted to write a work on gynæcology. This new edition has many merits, not the least of them being the fact that it contains a judicious mixture of old and new theories and modes of practice. At the present day, when surgery plays so large a part in most text-books dealing with diseases of women, we are inclined to forget that a great many gynæcological patients can be quite efficiently treated by medical measures alone. The author has laid due stress upon this important fact and yet all the most approved surgical methods of treating such cases will be found in the book.

As an antiseptic for general use in gynæcological work Dr. Galabin recommends lysol and points out that if it be used with cold boiled water it will remain clear enough not to obscure the instruments. In sewing up the abdominal wall he prefers three layers of sutures, the first passing through the whole thickness of the abdominal wall and of the two remaining layers one uniting the anterior layer of the fascia of the rectus muscle and the other the skin. The view that only the most superficial layers of the mucous membrane are thrown off during menstruation is taken, and an illustration of a section of the mucous membrane of a uterus during menstruation removed by hysterectomy is given which tends to confirm this view. In the chapter on Stenosis of the Cervical Canal it is a pity that the author has allowed so many figures of old-fashioned metrotomes to remain. Although their use is not recommended the mere fact that they are figured will lead the student to attach an undue importance to them. In discussing the effect of cold in rendering the uterus more vulnerable to the action of organisms which under normal conditions are only saprophytic in character a very interesting case is related in which muco-purulent discharge issuing from the cervical canal in a virgin, so severe as to suggest a suspicion of gonorrhœa, was found to contain almost a pure culture of the influenza bacillus. In very virulent forms of septic endometritis leading to purulent peritonitis the author says that the most rational form of treatment would be to remove the uterus by vaginal hysterectomy, thus getting rid of the primary focus of infection. The best chance of saving life by this means would be to perform the operation as soon as the diagnosis of septic peritonitis had been made. It is recommended that in cases where the patient is not likely to live through a hysterectomy the tubes should be ligatured as they are often the avenue of infection. The interesting question of the etiology of cases of chronic endometritis is very fully discussed in the chapter devoted to this subject. That there is a microbic origin for at any rate some of these cases is undoubted but in many instances where organisms can no longer be found changes in the nutrition of the tissues, either of a hyperplastic or degenerative character, often remain. In other cases it is suggested that the condition may not be due to any organism but to trauma, to some toxin, or even to nerve influence alone.

The author prefers intraperitoneal shortening of the round ligaments to Alexander's operation, since it affords a reasonable certainty of cure with the least disturbance of the normal relations. Under what is called adenoma of the uterus Dr. Galabin records the fact that he has removed by enucleation multiple encapsuled tumours of the fundus uteri which were thought to be ordinary encapsuled fibroids but which presented the microscopic structure of adenomatous tumours. It seems extremely likely that these tumours were really adeno-myomata. We fail to find any mention of this interesting variety of fibroid tumours of the uterus in the account given of those tumours, nor is there any reference to such tumours in the index.

The operative treatment of fibroid tumours of the uterus is considered very fully and the various methods of removing them, both ancient and modern, are described in detail. Indeed, in this chapter we think the long description devoted to the use of the wire écraseur and the details of Apostoli's method of treatment might have been eliminated with advantage. In considering the causation of a pelvic hæmatocele attention is drawn to the fact rather likely to be overlooked at the present day—viz., that intraperitoneal hæmorrhage from inflamed peritoneum, from the lining of a Fallopian tube without any evidence of tubal pregnancy being present, and hæmorrhage from an ovary have been demonstrated by abdominal section to occur. It is, however, extremely doubtful if such a condition is ever due to reflux of blood from the uterus, or to excessive bleeding from a ruptured Graafian follicle, as has been described by some writers.

Dr. Galabin's well-balanced judgment has enabled him to present the two sides of many debateable questions with much fairness and as a result of this the whole work forms a very valuable addition to gynæcological literature and will be of much value to the practitioner, to the student, and to the gynæcologist. The illustrations are on the whole very good, many of them being reproductions of the beautiful drawings in Dr. C. Hubert Roberts's Outlines of Gynæcological Pathology. There are some, however, which might have been omitted with advantage, as, for example, the very poor drawings of a sarcoma of the ovary on p. 527. The page has been enlarged to a much more convenient size than that of former editions.

The Nutrition of the Infant. By RALPH H. VINCENT, M.D. Durh. London: Baillière, Tindall, and Cox. 1904. Pp. 295. Price 10*s.* 6*d.*

IN his work entitled "The Nutrition of the Infant" Dr. R. Vincent has made an ambitious attempt to improve on the ordinary methods of modifying cow's milk on the percentage system. It must be remembered, however, that no matter how elaborately cow's milk may be modified it can never be converted, or even approximately converted, into human milk. Indeed, the more closely we attend to the chemical properties the more likely are we to lose the physiological resemblance. The infant who derives his nourishment from the natural source has this advantage over one who is artificially fed—namely, that the extremely complex molecular combinations which exist in his food, such, for instance, as the natural ferments of milk, the various proteid constituents, and the combined salts, have not been disintegrated and disorganised by the disturbing processes connected with artificial modification. If cow's milk is to be used as a substitute for human milk, and if it be admitted that modification of its chemical constituents is necessitated by reason of the differences which distinguish the one from the other, then surely our first object should be to secure chemical similarity at as little sacrifice of the physiological properties of natural milk as is possible in the circumstances. Now a considerable part of Dr. Vincent's book is taken up with a description of a method of home modification which is practically the same as that employed in milk laboratories. He proposes to adjust the differences which exist between cow's milk and human milk by a series of manipulative processes which must very seriously interfere with the normal molecular combinations existing in fresh milk. For the preparation of his accurate percentage mixtures he requires a cream which has been separated by centrifugalisation, and further he requires a cream-free milk which is also obtained by the same mechanical means. In the next place, for many of his mixtures he requires whey which can only be obtained by the action of rennet. The three chief constituents, therefore, of his mixtures are preparations of milk which have all been seriously tampered with so far as their natural physiological properties are concerned. By the graduated combination of these stock materials and by the addition of milk, sugar, lime-water, and distilled water specimens of modified milk may be prepared of almost any desired percentage composition, and not only is the total percentage of proteids thus completely under control but the relative proportions of whey-proteids and caseinogen may be modified at will. No doubt it is often a very great advantage to be able to reduce at will the bulky coagulum of cow's milk but even this advantage can be obtained at too great a cost. The general principle of percentage modification is probably perfectly sound; in fact, it is the only possible method of obtaining accuracy and securing uniform results, but for our part we regard a method so complicated as that suggested by Dr. Vincent as calculated to defeat the very ends which it has in view. In other respects we regard Dr. Vincent's little book as altogether admirable. He supplies complete directions for modifying the food in accordance with the needs of the infant and he describes at length the normal development of the child and the general methods of testing and examining the physical condition of children.

The Purification of Sewage and Water. By W. J. DIBDIN, F.I.C., F.C.S. Third edition, revised and enlarged. London: The Sanitary Publishing Company, Limited. 1903. Pp. 379. Price 21*s.*

MR. Dibdin was one of the earliest champions of the bacterial system of purifying sewage and his interest in the matter took a very practical shape in the experiments which he undertook in the capacity of chemist to the London County Council on the bacterial treatment of the London sewage at Barking Creek in 1892. In 1887 Mr. Dibdin referred to the possibility of bacterial agencies being employed to do the work of purification and his observations were met with considerable scepticism. Now not only has the chemical treatment of sewage been given up in a great many places in favour of bacterial methods but the question had become of such importance that a Royal Commission was appointed to inquire into this subject four years ago and its labours are not yet at an end. Mr. Dibdin's view of the work of this Commission may be quoted from his preface. "What the ultimate decision of the Commission may be," he writes, "it is impossible to forecast with safety, but from the information available in their official reports and the cross-examination of witnesses it is clear that bacterial systems have 'come to stay' and that the desired result may be secured by either of several methods of applying that principle and that the natural process of the survival of the fittest will gradually result in the establishment of certain methods applicable to different classes of sewage with certainty and success." Mr. Dibdin knew from the results of his early experiments at Barking Creek that the attitude which he adopted was amply supported by practical results and we cannot fail to recognise that he has done much to bring the system of purification of sewage by bacterial agencies to its present satisfactory position. The volume before us in the light of these facts is calculated to be valuable and, as a matter of fact, we find the author's practical experience of various schemes fully detailed. He has also taken the opportunity of giving full information upon the subject by summarising some of the more important evidence given before the Royal Commission on Sewage Disposal. The first five or six chapters are practically historical and give an account *de novo* of the advances that were made with bacterial methods. In subsequent chapters he deals with the bacterial treatment as applied to effluents containing trade waste. The questions of purification of rivers, the discharge of sewage into the sea, and the filtration and examination of potable water are all adequately dealt with in succeeding sections. Finally, there are chapters on the action of soft water upon lead, the absorption of atmospheric oxygen by water, analyses and their interpretation, and the ventilation and deodorisation of sewers. In the appendix the author describes a micro-filter which he has devised for estimating the quantity of suspended matters in drinking water—a method which has given important data in regard to determining whether waters under examination have been exposed to contamination.

It is quite obvious that this book will serve as a very valuable source of reference upon the subject of purification of sewage by organisms. It will be of service to those interested both in the theory and the practice of the resolution of complex waste injurious compounds into simple innocuous substances. The sanitary engineer and the bacteriologist will, as a matter of course, avail themselves of the very practical and valuable experience recorded by Mr. Dibdin.

The Physiological Feeding of Infants. By G. ERIC C. PRITCHARD, M.D.Oxon., M.R.C.P.Lond. Second edition. London: Kimpton. 1904. Pp. 197. Price 3*s.* 6*d.* net.

THERE is a weakness of construction in this book disclosed by the secondary title "A Practical Handbook of Infant Feeding and Key to the *Physiological Nursery Chart*," for the author has essayed the difficult task of attempting to combine a thoroughly professional treatise for physicians with an elementary handbook on the feeding of babies for the use of "nurses," by which term is meant not the modern dignified attendant on the sick, but the more humble, though possibly more important, servant who rules in the nursery. As a consequence there is much matter in this volume which spoils its taste when read by the trained student of pediatrics, such as the painstaking explanation of the term "percentage" and other elementary expositions, while, on the other hand, there is a good deal of commentary, excellent and sound in itself, on such points as the inherited attributes of offspring, which is most useful for the parents but which it is not always advisable to place in the hands of an imperfectly educated woman.

Half the volume is devoted to the artificial feeding of infants and the bulk of that space is filled by a careful consideration of the teaching of Rotch and the practical and simple combinations arranged under his influence in the modern milk laboratories pioneered by the Walker-Gordon laboratories in America. The modified milks prepared according to Rotch's formulæ are now obtainable in London from several of the dairy companies; the elements of the reconstructed milk are (1) cream containing 16 per cent. of fat; (2) separated milk freed from its cream by centrifugal process; and (3) milk sugar, in a standard 20 per cent. solution. These constituents can obviously be combined in any proportion and tables have been constructed, one of which is given by Dr. Pritchard in full, showing the percentage composition of milk which should, as an average experience shows, be employed during each week of the first year of infancy. The author recommends the use of the forms for prescribing the variations in the constitution of this "built-up" milk which are issued by the dairy companies; in these the percentage of each constituent is given and to the laboratory employés is left the working out of the amounts of each constituent in any given quantity for each day's service. In order to make it possible for a nurse to combine the standardised constituents at home a further table is given of the quantity of milk, standard cream, and milk sugar necessary to make one pint of percentage mixture for each week of life. Dr. Pritchard points out, we think wisely, that there is no advantage in using a syrup of milk sugar, but that the solid sugar, which may now be purchased in pound tins, can be quite easily measured by bulk and is in this form more easily protected from decomposition

No claim is made in the volume that this system of preparing standardised milk is perfect; the author is quite alive to its dangers and limitations, to which attention has in the last six months been drawn in contemporary periodicals by Dr. T. D. Lister, Dr. H. Ashby, Dr. E. Cautley, and others. These writers have, however, rather approached the subject from a democratic point of view and have shown the risks attending the haphazard issue of "humanised" milk from municipal depôts. Dr. Pritchard is writing for the well-to-do classes in large towns and he accentuates very clearly the important point that the use of these artificial milks must be in the hands of physicians and nurses with some skill to recognise when the feeding is at fault The lack of skilled supervision of the infant is already bringing into discredit praiseworthy efforts on the part of many municipal bodies, so much so, that some municipalities, such as Liverpool and Battersea, are already making attempts to get their local medical charities to supervise the results of their municipal infant feeding.

Some 60 pages, and they are the best in the book, are devoted to the forms of modification of milk necessary to suit different physiological requirements. Excellent illustrative cases are given of the conditions which should, to the watchful attendant, indicate errors of digestion or absorption: vomiting, its causation and forms; abnormalities in the stools; constipation, its manifold causation—such points are considered with care and knowledge. The temptation which is so often presented to practitioners by those in charge to combat habitual constipation by drugs, enemata, and suppositories is wisely avoided in these pages and its true cause and proper correction are indicated. The directions for testing the conditions of general nutrition, such as the proper increase in weight, the state of the skin, the muscular development, and the condition of the anterior fontanelle, are given in such terms that any intelligent nurse should be able to appreciate them. The necessary modification of food in difficult cases has led the author to introduce many elaborate preparations and formulæ, most of them excellent, but the danger in a work of this kind presents itself that parents and nurses might dabble in them without expert instruction. Such preparations as Prideaux's casumen, virol, or Lahmann's vegetable milk have undoubtedly a great value when properly combined with ordinary milk for infants who present inferior powers of absorption, but unskilled authorities in the nursery should not be allowed to play with them.

The second half of the volume contains a large body of suggestive observations on the development of infants which are not found in most text-books of disease as manifested in childhood and it is well worth careful perusal. The general style of the author's writing is simple, straightforward, and phrased with care. We have no hesitation in saying that no practitioner will regret the expenditure of the small sum which the book costs and that its careful perusal will well repay the time spent thereon.

LIBRARY TABLE.

Compounding and Dispensing made Easy: an Aid for the Promotion Examinations in the Subjects for Non-Coms. and Men of the Royal Army Medical Corps By H. Harold Scott, M.B. Lond., Lieutenant R.A.M C. London: Gale and Polden, Limited. (Military Series.) 1904. Pp. 316. Price 7*s.* 6*d.*—Before the author of this little work entered the army he held the appointment of assistant demonstrator in materia medica and pharmacy at St. Thomas's Hospital. He might therefore be supposed to be unusually well fitted to write and to instruct on a subject which while not requiring any original work yet needs to be presented in as attractive a form as possible In studying such a subject the arrangement of the different sections and the grouping of the preparations are of the greatest consequence in facilitating progress. Mr. Scott's book is an expansion of the notes which he has been giving to the members of his classes of would-be military compounders and he has published it owing to complaints from members detailed for classes of instruction that the subjects laid down in the syllabus for their examination were not to be found in any one book and that they knew not where to look for them. The present work embraces all the points required with the exception of the elementary chemistry. The book is divided into six sections. The first is purely introductory; it is full of encouragement and impresses that golden rule in dispensing, "Be careful, clean, and accurate"; it also contains useful paragraphs on the incompatibility of drugs and the explanations of the Latin and Greek terms which compounders may expect to meet with. The five subsequent sections deal respectively with: (2) Inorganic Materia Medica and the Carbon Compounds; (3) Pharmaceutical Processes and Groups of Pharmacopœial Preparations; (4) Organic Materia Medica, Vegetable and Animal; (5) the Commoner Forms of Poisoning, their Symptoms and Treatment; and (6) the Army Forms used by Compounders. It is evident that the author's early training as a teacher has been of the greatest service; the arrangement of the materials in the book is excellent, the information is correct, and the whole tone is judicious. A feature of the book is a number of tables which show the sources of many of the preparations and which must tend greatly to facilitate study. The section on Poisons is short but the symptoms and directions for treatment are clearly set forth. Useful directions are also given for the cleansing and sterilising of surgical instruments and sponges and for the keeping of rubber instruments. We congratulate the author on his work and we are glad to see that an officer of the Royal Army Medical Corps has had the good sense to produce such a book—it must prove to be most helpful to those for whom it is intended.

Studies for the Bakehouse. By A. Kirkland (Irvine). London: The Baker and Confectioner, Limited. 1903. Pp. 172.—This book contains a series of lectures, 19 in all, which were delivered before a practical class in Ayrshire. The author takes a sound position in enjoining upon his readers that special attention should be given not only to the sanitary environment under which bread is made but also to the choice of materials and machinery. Bread-making, says the author, is not a lost but a new art. To this statement we imagine that a good many people might demur with reason, for it cannot be said that the average white loaf of the present day, made by machinery or by hand from roller-milled flour, is as good as the bread of a generation or so ago. Presumably it is the fault of the public that a white loaf is demanded but we have our doubts as to whether this is so, for expressions of regret may be heard on all sides that the old-fashioned farmhouse loaf with its rich nutty wheaten flavour and golden colour is as extinct as the dodo. Even when some people take the trouble to make bread at home the flour is generally of the anæmic order in spite of improved methods of milling. In saying this we do not detract from the value of this book, for the author has pursued his subject on sound scientific and hygienic lines. We should, however, like to have seen the question touched upon of the old farmhouse loaf made from the old fashioned ground flour *versus* bread made from the roller-milled article. It may be a heresy but the empirical loaf is regarded by many with more favour than that prepared on exact lines. It should be added that some medical men have advanced the idea that the flours imported from America have something to do with the prevalence of appendicitis and it is stated that some of these flours yield hard pellets of gluten which it is thought may possibly start the inflammatory process.

New Conceptions in Science. By CARL SNYDER. New and revised edition. New York and London: Harper and Bros. 1904. Pp. 361. Price 7*s* 6*d*. net.—We reviewed the first edition of this book in THE LANCET of Oct 31st, 1903, p. 1239, and there is little to add that could be fresh criticism in regard to the second edition the issue of which has so quickly followed the first. Beyond a little revision of phraseology here and there, there is no difference between the two editions. The book is an American view of the relations of science and progress and on the whole the story is told in a bright and attractive way, though perhaps the author occasionally falls into a line of interpretation which is a somewhat elastic presentation of actual facts This is a common tendency of popular disquisitions on scientific progress.

Food for the Tropics. By T. M. MACKNIGHT. London: W. Thacker and Co. 1904. Pp. 116. Price 3*s*. 6*d*. net — This is a valuable book and, as Mr. Macknight implies in his preface, fills a gap. We are glad to see, also, that he lays stress on the point that the indigenous products of a tropical country are more suitable food for the inhabitants than any which can be imported from a country having a totally different climate. The food stuffs described in the book are classified into those which are eaten respectively for their hydrocarbons, proteids, fats, sugars, salts, and for their flavour and carminative properties, such as spices and curry powder. The book is a useful addition to the cuisine of a household in the tropics.

Calendar of the University Correspondence College, 1903-04. Cambridge: Burlington House. Pp. 64, plus 142 Price 1*s* net.—Besides the usual contents of an educational calendar the one before us contains a number of examination papers with their solutions. We may point out that the solution to the first question in the paper in English is rather confusing, for the question set is to write an essay on the mountain ranges of *Europe*, while the solution talks about the mountains of the *Old World* and says that "the great axis runs from the coast of Spain to the Pacific seaboard" In the next paragraph the student is told, "Nothing higher than Mont Blanc." Such a muddled solution as this would not be much help to the ignorant seeker after knowledge. Otherwise, so far as we have tested them, the solutions are clear.

Recent Excavations in the Roman Forum, 1898-1904 By E. BURTON BROWN. London: John Murray. 1904. Pp. 223 —Rome, Athens, and Constantinople are the three cities about the history of which no educated man is ever tired of hearing and every year adds to our knowledge of the first two if not of the last named. Mrs Burton Brown's little book, which is prefaced by an introduction written by the Commendatore Boni who has been in charge of the excavations, gives a very clear account of the findings in the Forum during the period with which the work deals. From a medical point of view the most interesting discovery was that of the fountain of Juturna which was almost from the first credited with healing properties and became in comparatively late times, 293 B.C., connected with the cult of Æsculapius. Of the many other objects of interest we have no space to speak but we would counsel anyone who goes to Rome in a proper spirit to provide himself with this little book and to use the information therein contained wisely.

JOURNALS AND MAGAZINES.

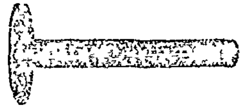
The Practitioner.—The issue of this journal for March continues the series of articles relating to Typhoid Fever. A contribution upon the diagnosis of that disease from the pen of Dr. Claude B. Ker contains a careful discrimination of the many conditions that have to be considered as well as a strong defence of the value of the Widal test which Dr. Ker pronounces after three years' experience to be practically infallible. Dr. Ker ascribes much importance to the bronchitis and the epistaxis of the early days of the illness from a diagnostic point of view. Dr. Arthur Whitfield's lectures on Eczema are concluded in this number. The illustrations are disappointing, a fact which appears to us to be usually the case when it is attempted to reproduce the appearance of lesions of the skin by photographic processes. A series of cases of Cancer of the Mouth and Fauces by Mr. Stanley Boyd and an excellent monograph on Black Urine by Dr. A. E. Garrod are also contained in this issue.

Medical Electrology and Radiology.—This journal, which is the official organ of the British Electro-Therapeutic Society and is now entering on Volume V., will from the beginning of the present year be published monthly instead of quarterly as hitherto. The change is made chiefly with a view of enabling the reports of the proceedings of the Electro-Therapeutic Society to be placed in the hands of members more promptly than before. Several excellent articles begun in the January number are continued in February—such as the review by Dr. W. S Hedley, the editor, on the Advances made in Electricity and Radio-activity in 1903, Dr. George Herschell's Practical Lessons in the Treatment of Affections of the Gastro-intestinal Tract by Electrical Methods, and the Proceedings of the Thirteenth Annual Meeting of the American Electro-Therapeutic Association. The annual address delivered by Sir Isambard Owen at the conversazione of the British Electro-Therapeutic Society is reported in full in the January number. The February number contains editorial remarks on M. Blondlot's "n" rays and the first instalment of an article by Mr. Clarence A. J Wright on the Methods of Application of High-frequency Currents.

New Inventions.

INDIARUBBER ANTRUM PLUG.

FOR some years I have had made for me a solid indiarubber plug in sizes corresponding to the English catheter gauge Nos. 3 to 12. I found that they were more comfortable and satisfactory than the hollow metal tubes. At first I had trouble in getting them made sufficiently strong and at a price suitable for all classes of patients. Messrs. Mayer and Meltzer, of 71, Great Portland-street, London, W., have now undertaken to supply them, moulded in one piece and at a reasonable price. The round shield on



the base can be cut to any shape, so allowing them to be used both for the operation through the alveolar process and above in the canine fossa. After the operation opening has closed to the required size the plug is inserted, the shield being cut wherever it appears to press uncomfortably. The patient is then given a Higginson syringe with a soft catheter attached corresponding in size to the plug selected. This forms an effective and convenient apparatus for daily washing out the affected cavity.

Harley-street, W. CLAUD WOAKES.

Analytical Records

FROM

THE LANCET LABORATORY.

CASTOREUM BROMIDE.

(AGENCY: HARTMANN, HOHMANN, AND CO., MOULTON-STREET, STRANGEWAYS, MANCHESTER, AND 33, SEETHING-LANE, LONDON, E.C.)

THE formula of this preparation is novel, comprising bromide, valerian, and castor. Its employment is suggested in nervous disorders and hysteria and in particular it is stated to have been prescribed successfully for epilepsy, chorea, and sleeplessness. "Castoreum bromide" consists of an effervescent powder and affords a convenient way of taking two drugs which are disagreeable to the taste. Castor is rarely prescribed now, although it has some reputation as serving to control the spasms of hysteria and other convulsions.

ANTURIC BATH SALTS.

(THE ANTURIC SALTS COMPANY, LIMITED, 12, SUFFOLK-STREET, PALL MALL, LONDON, S.W.)

This preparation, according to its vendors, is the solution of the great problem—gout. The "remedy" proves to be a powder composed principally of carbonate of sodium with a trace, probably as an impurity, of common salt. Our readers will know what value as a remedy for gout to set upon this article, the price of which is 3*s.* 6*d.* per tin. We advise those sufferers from gout who are quoted as having given testimonials in favour of this preparation to try carbonate of sodium which is much cheaper. A pinch of salt might be added to the bath in order to imitate more closely the Anturic preparation. Patients are advised by the Anturic Salts Company to take care before getting out of the bath to place a wet towel over the side in order that they may take a firm grip on emerging as the "Anturic salts combining with the matter exuded by the skin render the body slippery." There is no warning given as to the probably harmful action of the strong alkali contained in these "salts" upon some skins.

"ATOMO" CIGARETTES.

(S. COHEN AND CO, 1 AND 2, SNOW HILL, LONDON, E.C.)

The tobacco of the cigarettes examined has been subjected to a strong draught of air which removes adherent sand, clay, light fluffy particles, and other mechanically adherent matters. The tobacco leaf is thus not only improved in colour but in flavour also when smoked. The effect of the process is clearly demonstrated in the following results of analysis. The untreated tobacco contained 12·05 per cent. of mineral matter, of which 4·15 per cent. proved to be sand, &c. The tobacco subjected to the forced draught contained 10·75 per cent. of mineral matter of which 2·65 per cent. was sand. The process thus removes nearly 50 per cent. of useless and probably irritating mineral matter. The dust so removed proved to contain 29·65 per cent. of mineral matter of which no less than 21·30 per cent. was fine sand. It is not only mineral matter that is removed, for on microscopical examination particles of fibre were observed as well as a fluffy material which might easily prove to be a source of irritation to the throat. It is possible that cigarette smokers derive an inflamed throat from drawing into the mouth the irritating light and easily removed particles present in the tobacco leaf. Some persons state that though they are inveterate smokers of the pipe or cigar and suffer no inconvenience thereby their throats are at once affected when they smoke cigarettes. The removal of dust by this process indicates that it is a possible factor in such cases.

Looking Back.

FROM

THE LANCET, *SATURDAY*, March 18, 1826.

LONDON MEDICAL SOCIETY.

THE Anniversary Meeting of the Members of this Society was held on Wednesday last, at the London Coffee-house, when the *following ORATION*[1] *on the Study of the Human* Mind was delivered by Dr. HASLAM.

Of ordinary minds, the memory consists, for the most part, of *excited recollections*, and the character of this faculty in animals seems to be wholly of this nature. Study, in its proper sense, is the fixation and endurance of the attention to any particular subject, and this attention, as has been before observed, is a voluntary act, acquired by repeated and even painful exertions. If we attentively watch the proceedings of our own minds, even under the endeavour to pursue a subject of delighting investigation, we become shortly aware that we are interrupted by external circumstances distracting the attention, or by the intrusion of reveries, entirely irrelevant to the direct object of our meditations, which frequently engage us so earnestly, that the original subject escapes beyond the power of immediate recovery. Since, by a candid confession, these intrusions to a greater or less degree are common to all minds, we must consider the control or voluntary power which the intellect can exercise over its thoughts, so as to confine and direct them, to be the highest effort of human perseverance and attainment. It is this concentration of mind and promptitude of thought—this undiverted pursuit of the desired object, that persuades in council, rallies in debate, averts impending disaster, and, in the moment of perilous conflict, turns the balance to victory. The nature of volition, in a medical point of view, is of the greatest importance, nor is it less interesting in a moral aspect, for the just consideration of this subject will tend to throw additional light on tremor, paralysis, chorea, tetanus, and other morbid affections of the same class; it will explain the states of sleep, dreaming, and somnambulism, and conduct us to the proper investigation of those affections of the intellectual part of our nature, that render man incompetent to exercise his volition, or disqualify him for the management of himself and his affairs; for it is evident that man, as a responsible agent, is equally involved by the determinations of his will, in committing such actions as he ought to avoid, and in leaving undone that which it is his duty to perform. In the successful prosecution of this subject, we may expect a nicer discrimination between crime and insanity than has been hitherto established, and anticipate the explosion of that baneful doctrine of the mind's unsoundness, the mischievous contrivance of forensic subtilty, the refuge of ignorance and the tool of fraud—the blazon of materialism, an insult to common sense and a libel on the Christian religion.

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[1] Only a portion of the report of the oration has been transcribed. A footnote states that "This Oration was received with reiterated shouts of applause."

PROPOSED CENSUS IN 1906.—At a meeting of the Royal Statistical Society held on March 15th it was announced that the council of the society was about to represent to the Board of Trade the desirability of taking a census in the year 1906 instead of waiting till 1911. A motion on the subject will probably be submitted to the House of Commons.

THE LANCET.

LONDON: SATURDAY, MARCH 19, 1904.

The Homeless Poor of the Metropolis.

SOME years ago a subject such as this might have been regarded as almost alien to the pages of THE LANCET but the gradual expansion of the subject of public health and a growing recognition of the intimate association which obtains between certain diseases, such as tuberculosis, and poverty, overwork, and under-feeding have opened up channels for inquiry which formerly were regarded as being outside the sphere of influence of preventive medicine. Moreover, the admirable efforts of Mr. CHARLES BOOTH and Mr. B. S. ROWNTREE to call public attention to the conditions under which the poor of this country labour and live have awakened an intelligent interest in these problems. Mr. ROWNTREE'S figures with respect to the number of persons in York who are without the means to purchase the "maintenance of merely physical efficiency" suggest extended inquiries in other directions with a view to ascertain how far these conditions of deprivation are prejudicial to the public health. Indeed, many of the more scientific exponents of preventive medicine are beginning to recognise that in promoting the resistance of the individual they may be doing more for the progress of the public health than by devoting all their energies to coping with special diseases.

In the matter of absolute destitution Mr. SHIRLEY MURPHY has recently made some investigations which are of considerable interest. Most Londoners are aware that night by night the figures of the apparently homeless may be seen huddled together upon seats on the Thames Embankment, in Piccadilly, and elsewhere, but hitherto we have had a very vague conception of the proportion which this social malady bears either to the population as a whole or to that uncertain margin of it which is nightly to be found in the lodging-houses and shelters of this great metropolis. Mr. SHIRLEY MURPHY has therefore attempted, with the aid of the inspectorial staff of the London County Council, to estimate the number of those who are at least so near an actually penniless state as to be unable to afford a night's rest in a bed. The fact that these unfortunate people are bedless does not of necessity imply that they are also penniless. It is not unlikely that in some instances they elect to spend the only pence they possess on food rather than on a bed; the former is necessary for the maintenance of life, the latter is not. It seems that the homeless of London are for the most part to be discovered between 1 and 5 A.M. and that their peregrinations are largely confined to an area bounded by Hyde Park on the west, the further end of Whitechapel-road on the east, High Holborn, Old-street, and Bethnal Green-road on the north, and on the south by the river Thames. The destitute gravitate to this area because within its limits there are numerous and capacious common lodging-houses, Salvation Army and other "shelters," and last, but not least, free suppers. Moreover, the theatres, markets, and printing offices offer opportunities for the casual labourer or the loafer which are not afforded elsewhere. The night selected for the census of the bedless was Jan. 29th last, on which night 23,443 persons slept in the common lodging-houses of London. Of this number 21,058 were single men, 1517 were single women, and 390 were married couples. But before 12.30 A.M. these places contained a larger number than this. It is the custom in the East-end to allow all who wish to do so to congregate in the spacious kitchens of the common lodging-houses, and to enjoy the warmth of the fire. But at 12.30 the London County Council insists that those who are not prepared with the necessary bed hire must pass out into the street. In obedience to this summons there shuffled out on the night of Jan. 29th no fewer than 832 single men, 11 single women, and seven married couples. Those who witnessed this sorry exodus are not likely to forget it. These "turn-outs," as they are called, appear to join one of the streams flowing in different directions to places where the charitable organisations are accustomed to dispense free meals of soup and bread and, having accepted the hospitality of one centre, some of them may be seen making for another centre which opens its doors a little later. After this the homeless walk the streets or seek the shelter of railway arches, staircases, or doorways, and with a downpour of rain the streets empty and the staircases fill. On the night of Jan. 29th, and within the limits above referred to, the officers of the London County Council counted just under 2000 of these homeless wanderers. Are these 2000 persons habitual loafers who, night in, night out, thus rest and are fed, or does the *personnel* of this crowd vary nightly and represent, as it were, the wrecks of the day's work, the units of which differ from night to night? Do the tides of life of these unfortunate people on one day rise above the bed-line and on another ebb below it? Again, does this figure of 2000 represent an average state of affairs for the winter months or is it an indication of abnormal distress? To what, too, would the summer census amount? According to the lodging-house keepers, who have met to consider the situation, there are nightly in their houses many vacant beds, and it is stated that at a lodging-house recently erected by the London County Council to accommodate 600 lodgers at 6*d.* per head per night there have been recently but 90 applicants. Others allege that the dimensions of the army of the destitute are the result of the higher standard insisted upon by the London County Council and of its inflexible rule that, whatever the elements, those who are unable to pay must seek the streets at midnight. But all those who are familiar with the admirable reforms effected by the London County Council in the lodging-houses of the metropolis will be in no hurry to see the former unsatisfactory state of affairs reproduced.

An extension of the inquiry initiated by Mr. SHIRLEY MURPHY is required with a view to ascertain in what manner the present eminently undesirable state of affairs may be remedied. Those who have read Mr. BRAMWELL BOOTH'S sympathetic and practical letter in the *Times* will be in agreement with him as to the necessity of further inquiry. The facts that it is alleged that there were hundreds of sixpenny beds vacant on the night in question and that at the Salvation Army shelters, where the beds cost but *2d.* or *3d.*, from 400 to 500 men willing to pay were turned away suggest that in philanthropy alone will the solution of the difficulty be found. It would have been instructive if the figures of each of the shelters had been furnished. According to Mr. Bramwell Booth the cost of providing accommodation for these 2000 homeless ones would involve, on the present standard, a capital expenditure of from £80,000 to £100,000 and he suggests that half that sum should be borrowed on the security of the property which it would represent and half should be contributed by the public—i.e., that the whole should, directly or indirectly, be thus contributed. Of course, the question at once suggests itself, What is the difference between this and the Poor-law? But Mr. Bramwell Booth thinks that if a man can afford only a penny he should be provided with some sort of accommodation. Would he still maintain his point if the man had but a farthing? The problem is one of very great difficulty. Above all, we must not promote degeneration, and it is this thought which makes us hesitate to accept Mr. Bramwell Booth's humane and obviously not impracticable proposals. What we desire to know is, whether many of the 2000 are incapable of work. There is need of workers in many parts of the British Empire and a quarter of the sum proposed would transfer these homeless ones to places where they could have both work and a home. There are, too, "labour colonies" nearer home to which those who are physically capable of work might be transported at a very small cost.

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O'Duffy v. Jaffe, Surgeon Dentists, Limited.

Attention was called in a letter published in The Lancet of March 12th, p. 754, to the unfortunate result of the prosecution in Ireland of certain unqualified persons practising as dentists and of the company under the name of which they so practised. It is, of course, well known both to the medical profession and to the public that it has been the policy of the legislature with regard to medicine and dentistry to order the registration of qualified practitioners and to punish those using titles implying registration. In like manner under the Pharmacy Acts for England and Ireland no one may keep open shop for the sale of poisons without qualification and registration and the use of such titles as "chemist and druggist" by unregistered persons is forbidden. The evasion, however, of all such provisions has for long formed a subject for the ingenuity of the quack and the charlatan who are naturally hampered in their efforts to advertise themselves by restrictions upon the use of the most desirable and appropriate titles, and one of the means which the unregistered person has adopted in these circumstances seems to have been suggested by the development of the law of limited liability and by the legal recognition of what are known as "one man companies," a term the meaning of which is obvious.

The quack has found it easy to obtain the number of signatures necessary for registration; he has selected such a name as that in the heading of this article, possibly incorporating his own patronymic, and under it he has carried on dentistry or whatever form of practice he may have chosen. This he has done and no doubt will do still more in the future, relying on the contention that a joint-stock company cannot be registered as a medical man, a dentist, or a pharmaceutical chemist, and that consequently it cannot by the use of any name or title imply that it is so registered. This view has been before the courts before and has now been upheld by the King's Bench Division in Ireland which has ruled that the word "person" in the Dentists Act, 1878, relates only to an individual and does not embrace a corporation or company and that a company by assuming a name which includes the words "surgeon dentists" does not become liable to a prosecution under the Act for using a name, title, addition, or description implying that it is registered under the Act. This decision is in accordance with previous ones in England and in Ireland[1] and, in so far as it is undesirable for trading associations of laymen to be formed for the purpose of practising medicine or dentistry, or for the sale of drugs by the agency of their nominees or employés, these cases make it clear that alteration of the law is necessary. But the Jaffe case and the others referred to (which were concerned with the sale of drugs) do not go so far as to give entire immunity to the unregistered person, although the company which he registers may as such be unassailable. The London and Provincial Supply Association and Boyd and Co. both employed qualified persons to keep their shops and to compound and to sell their drugs and in the former case the qualified person was a shareholder in the company. It was held in that case that whether the word "person" in a statute could be treated as including a corporation depended upon consideration of the object of the statute and that the defendant associations were not liable to prosecution as if they had been persons, but it was at the same time pointed out by the House of Lords that if the persons actually dispensing poisons were found not to be registered they could be prosecuted for the offence as individuals and that in this way the public would not be without protection. Looking at the Jaffe case from this point of view we might certainly have expected to find that any unregistered person of the name of Jaffe, or of any other name, pretending to practise dentistry would have been convicted as a matter of course in a court of petty sessions upon proof that he performed his operations and received payment for them in a house with such an inscription on the door as "Jaffe, Surgeon Dentists, Limited."

Those responsible for the prosecution on behalf of the Irish branch of the British Dental Association left nothing undone, so far as we are aware, in order to attain this end, for they summoned two individuals as well as the company. We do not know what the evidence may have been as to one of them, M. L. Jaffe, but as to the other, distinguished as S. Jaffe, it was proved that a man went to a house with his daughter and saw a person upstairs who, in reply to a question, said that he was the dentist and who afterwards extracted a tooth from the girl. He received for this a fee of 2*s.* 6*d.* and gave a receipt for it signed "S. JAFFE." The house had over its door the inscription "JAFFE, Surgeon Dentists, Limited," and on a brass plate at the side of the door the words "London and New York Dental Institute, conducted under the supervision of Messrs. JAFFE, Surgeon Dentists, Limited." There was also evidence of a newspaper advertisement of "JAFFE, Surgeon Dentists," from which, apparently, the word "limited" was omitted. With this evidence before them the Limerick magistrates were of the opinion that the defendants did not either of them personally take or use the word "dentist" or any other term implying registration and they dismissed the two complaints with £1 costs in each case. This was a finding of fact and as the defendant's counsel pointed out at the hearing of the appeal it was not open to the court to review it. We cannot do more in criticising it than say that local magistrates do, not infrequently, arrive at conclusions from which other people differ, and that we hope that such a finding will not have the effect of preventing other prosecutions in similar circumstances elsewhere. In the *Times* of Jan. 9th will be found the report of a case heard at the Bow-street police court where the prosecution of an unregistered person practising dentistry was based upon the insertion of advertisements in newspapers under the name "Dental Institute, Limited." This was clearly not so strong a case as that heard at Limerick but Mr. FENWICK, the magistrate, convicted the defendant as an individual, although he recognised that the company, registered for the purpose of evading the Act, could not be held to have committed an offence under it. This, again, was a finding of fact against which successful appeal would not be easy and the conclusion to which these two cases lead us is that the registration of a company for the purpose of sheltering unqualified practice affords but imperfect protection to him who uses the device. He may be convicted of using a name or title implying that he is registered or that he is a practitioner recognised by law if there is evidence to show that he has done so, whether the name or title so used forms part of the registered name of a company or not. The question is one of fact for the bench and some prosecutions may fail where others succeed. On the other hand, in order to prevent companies from engaging in medical or dental practice under speciously selected names legislation is undoubtedly needed but to the protection of the unwary against quackery the legislature is not easily moved.

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[1] The Pharmaceutical Society v. the London and Provincial Supply Association, Limited, 5 App. Ca. 857. The Pharmaceutical Society of Ireland v. Boyd and Co (1896), 2 I. R. 394.

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The Treatment of Operation Wounds.

THE recent Lettsomian lectures of the Medical Society of London were of no little interest for they were the well-considered opinions of an acute surgical mind on the most important problem in surgery—that is to say, the treatment of operation wounds. Operations nowadays hold the foremost place in the treatment of disease, for in addition to those lesions always looked upon as surgical many conditions formerly acknowledged by all to be in the domain of the physician are now equally certainly handed over to the treatment of the surgeon. Mr. C. B. LOCKWOOD, the Lettsomian lecturer, took as his subject Aseptic Surgery in Theory and Practice, and his conclusions are greatly enhanced in value by the fact that he gives very fully the reasons for his opinions. It is often thought that antiseptic surgery came into the world fully formed like ATHENE from the head of ZEUS and that it was incapable of development and evolution. The case, however, was far otherwise. The first beginnings of antiseptic surgery were based on the idea that suppuration in a wound is entirely the result of the presence of micro-organisms and all the means that Lord LISTER devised and employed were directed to the sole end of excluding so far as possible the entrance of micro organisms into a wound and of killing all those which might have already gained entrance. The cleansing of the surgeon's hands and of the hands of his assistants, of the patient's skin, and of the instruments and dressings employed was effected by the use of antiseptics. Elaborate means were also adopted to exclude from the wound micro-organisms floating in the air and to destroy those in the wound itself. The employment of solutions of antiseptic substances for flushing the wound and, above all, the use of the carbolic spray were based on the idea that many minute organisms are falling every minute from the air into the wound. It is undoubtedly true that large numbers of bacteria and moulds fall continually into every open wound but experience has shown in the first place that the majority of these are not pathogenic to the human body and the truly pathogenic microbes in the air are comparatively few in number and, in the second place, that the living tissues are capable of dealing with a certain number of even pathogenic bacteria, especially if there has not been left in the wound any non-living exudate in which the bacteria can develop. All the changes which were made in his method by Lord LISTER have been the result of experience. The carbolic spray has disappeared to the great comfort of the operator and his assistants and to the relief of the anæsthetist who in many operations, such as laparotomies, received no small share of the spray. Thus antiseptic surgery has undergone true development, true evolution. It discarded details which were shown by experience to be unnecessary. The dressings were modified and new antiseptics and antiseptic dressings were devised. All these changes were made with one definite idea: to simplify antiseptic treatment without sacrificing the perfection of the results.

Some 15 years after the epoch-making introduction of Lord LISTER'S "antiseptic" method "aseptic" surgery was first heard of as a rival. Without doubt an antagonism was intended between it and the "antiseptic" surgery of Lord LISTER. It was put forward as a new method by which better results could be obtained than those that followed the "antiseptic" practice, and many, even in the medical profession, have imagined that there is some essential difference between the two methods, very much in the same way as in more recent times an enthusiastic but unknowing public hailed with enthusiasm the introduction of the "bloodless" method of LORENZ for the reduction of congenital dislocation of the hip as the dawn of a new era in surgery. Even if all that is claimed in theory for the "aseptic" method were true it would be nothing more than a further stage of evolution of "Listerism." In the true meaning of the word "aseptic" it is extremely probable that no such thing as an absolutely aseptic wound ever existed. Supposing even that the hands of the operator and his assistants have been freed from germs, that the skin of the patient has been rendered absolutely sterile—and these are suppositions which can probably never be realised in practice—we are yet confronted with the certainty that even in the shortest operation a few organisms at least must fall into the wound. Should the operation be prolonged the number of intruding bacteria must be very great and though formerly we may have overestimated the pathological importance of most aerial bacteria yet they are certainly not a negligible quantity. Finally, it is worth noting that DODERLEIN examined bacteriologically some cases of laparotomy at various stages and in all bacteria were present.

Since, then, an operation in which no germs can possibly gain admittance is almost a practical impossibility, what does "aseptic" surgery mean? It means simply the abstinence from the introduction of antiseptics into the wound. That the skin of the patient and the hands of the surgeon and of his assistants should be sterile is common both to antiseptic and aseptic surgery, as is also the sterility of the instruments. Whether the instruments have been rendered free from germs by boiling or by immersion in a solution of an antiseptic can make no difference if none of the antiseptic employed is carried over into the wound. The nature of the dressings applied is also of but little importance provided that they are themselves free from germs, that they exclude germs from the wound, and that they do not affect harmfully the margins of the wound or the rest of the skin which they cover. There is no reason why the name "aseptic" should not be retained so long as it is recognised that the difference is not one of principle but of means. The Lettsomian lectures were devoted mainly to a consideration of the most valuable methods of making a wound aseptic and keeping it in an aseptic condition. The best modern criterion of the care of a surgeon is the proportion of the wounds inflicted by him which heal by first intention without any trace of suppuration. This can be accomplished only by the most rigorous attention to many minute details, for Mr. LOCKWOOD well says that "every operation is a delicate bacteriological experiment." To test the efficacy of the methods employed for sterilising the skin of the surgeon's hands Mr. LOCKWOOD snips off with scissors a small portion of skin after the hands have been prepared for operation and this is dropped into a culture tube. Should a colony appear there is proof positive that the means employed were not effective in rendering the skin sterile. In this way a fairly accurate knowledge can be gained of the value of the various methods of cleansing the skin. These methods are numerous and a few years ago CARL HAEGLER wrote a book of over 200 pages on the disinfection of the skin. It is well to bear in mind that the elimination of every unnecessary pair of hands lessens the danger of infection, therefore the surgeon alone should handle the instruments, the ligatures, the sutures, and the dressings. Mr. LOCKWOOD does not like gloves in an operation as they seriously impair the sense of touch and he has found it practically impossible to complete an operation without tearing or puncturing the fingers of the gloves. The most suitable materials for sutures and ligatures were discussed and Mr. LOCKWOOD expressed the opinion that it is advisable to use catgut for the control of hæmorrhage in all septic wounds in preference to materials which do not speedily soften and disappear. Sponges and drainage and dressings were also passed in review. Mr. LOCKWOOD further supplied statistics of the results which he had obtained in his operations; he showed in what proportion of cases he had succeeded in preventing any manifestation, even the slightest, of sepsis in wounds, and the improvement in this respect which had followed a still greater attention to detail. It is on this care bestowed on the minutiæ of an operation that success in the treatment of wounds depends whether the method be "antiseptic" or "aseptic." Any advance in the future can only be made by an even more careful study of the modes in which septic organisms find entrance to wounds.

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The Sale of Whisky.

IN THE LANCET of Jan. 9th, p. 109, we announced that an all-malt whisky Bill was to be introduced into Parliament this session. On March 7th a Bill "to amend the law relating to the sale of whisky and to provide for the marking of casks and other vessels containing whisky" was presented to the House of Commons by Sir HERBERT MAXWELL, supported by Colonel KENYON-SLANEY, Captain BALFOUR, and Mr. J. E. GORDON. The practice of substitution in the spirit trade prevails to such a scandalous extent (a fact to which we have repeatedly drawn attention) that it is time some serious steps should be taken to check it. Only this week in an action brought in the King's Bench Division it was stated by the person who brought the action who was the manageress of a public-house, that the reason why she was dismissed was because she complained "of the mixing of bottle whisky and brandy with spirits from the Mile-end distillery." Two barmen further alleged that a bottle of whisky of a well-known firm was turned into six bottles by the aid of Mile end whisky. The jury, however, did not give credence to these statements as they gave a verdict for the defendant. The Sale of Whisky Bill represents the first attempt to bring legislative control to bear upon the sale of substitutes for malt spirit and, so far as we understand its terms, the Bill should be effective at least in securing to purchasers of whisky a clear statement as to whether the whisky supplied to them is a spirit made from barley malt alone or is in part a spirit made from unmalted grain. In considering the health aspects of this proposed measure we are bound to recognise that whisky is a very popular alcoholic stimulant; deplore that fact as we may, it has to be faced. Bad as, generally speaking, we must recognise the prevalent practice of whisky drinking to be, we cannot leave out of consideration the question as to whether the spirit generally supplied is of good quality and whether it is that which it pretends to be or that which its name implies.

The consumption of alcohol being a terribly serious factor in the health of the nation it is the duty of the nation to insure that the forms of alcohol which it chooses to drink are at least honestly described and are as free as possible from deleterious ingredients. There is a marked difference between the physiological action of spirits derived from different sources and this difference is probably to be ascribed to substances other than alcohol. The potentialities of these substances for good or for evil depend upon the materials from which the spirit is produced. When we reflect upon the great number of raw materials from which alcohol may be prepared it is not altogether surprising that this product of distillation should vary widely in regard to its physiological effects. In short, upon these raw materials depends the nature of the by-products which may contribute to the maddening effects of "drink" or which may, on the contrary, even modify favourably the action of the alcohol. Whatever may be the precise explanation of these opposite effects there seems to be a general agreement that age is essential in order to reduce spirits to a state fit for consumption. Initially, of course, an all-malt spirit is impure because it contains certain by-products of distillation and the action of a freshly distilled spirit is physiologically bad. Even genuine malt whisky must be matured, whereas grain spirit fresh from the patent still is very pure alcohol, featureless as regards flavour, and consequently age can have no advantageous change to effect in it. The fact that patent spirit does not require maturing is one very good reason—though it is not the only reason—why grain whisky is cheaper than malt whisky; it contains no by-products which long storage can modify. Grain whisky, therefore, either has to be flavoured by adding a small proportion of full-flavoured malt whisky, or else the expedient of storing it in sherry casks in which malt whisky has been ripened is resorted to. It is greatly to be regretted that the proposed Sale of Whisky Bill contains no reference to the age of the spirit. It seems to us that it avails nothing to the consumer to be sure of getting all-malt spirit when he asks for it if he cannot at the same time receive some guarantee also as to its age. The whole object of the Bill would be destroyed if, in compliance with its clauses, it were possible to supply true malt whisky so immature as to be injurious to health. The detractors of all-malt whisky might be expected for their own purposes to supply what was asked for—namely, pure malt whisky—at the same time taking care to offer an article which, though genuine, could lay no claim to the very important qualification of age. The public would complain and the obvious answer of the grain whisky dealer or blender would be, "I told you so, blended whisky is best."

We cannot anticipate that the dealer in grain whisky will object to Sir Herbert Maxwell's Bill. Practically all it requires is that casks, bottles, and taps on the counter shall be honestly labeled "malt whisky" or "grain whisky" as the case may be, the former term being used to mean spirits manufactured from barley malt and the latter spirits sold as whisky other than malt whisky. It is obvious that the blender cannot object to this requirement, since he is never tired of telling the public that grain whisky or a blend of grain and all-malt whisky is much more wholesome than a pure malt spirit, although, oddly enough, he is careful never to record upon the label of the bottle the fact that the whisky which he sells is blended with a large proportion of grain spirit. The Bill would give protection for the sale of pure malt whisky as the Margarine Act does for the sale of genuine butter. The Inland Revenue authorities know full well under the existing law the materials used in each distillation and they have by means of the permits or certificates required for the removal of spirits and the stock books which have to be kept by rectifiers, dealers, and retailers the information necessary for tracing the whisky until it reaches the retailer. The coöperation, therefore, of the public analyst and the Revenue authorities should insure honest dealing in the sale of whisky. We presume that it is considered that brandy may be left to take care of itself and that owing to a successful prosecution under the Sale of Food and Drugs Act at Glasgow where a dealer was convicted for selling a spirit as brandy which analysis proved to be not genuine, no further legislative machinery is needed. Difficulties, however, are certain to arise as further proceedings are taken in other parts of the country, chiefly with regard to the question of the power of analysis to deal with the matter. We are by no means sure that, if a sample of brandy was taken under the provisions of the Sale of Food and Drugs Act and was shown to be not genuine and an appeal to the Government referees was made, they would undertake to give an opinion; they might refuse on the grounds that chemical analysis was not sufficiently advanced to enable them to do so. We have already expressed the belief that by paying more attention to the chemical composition of spirits analysis will be found to be a trustworthy means of differentiation. We heartily approve the object of Sir Herbert Maxwell's Bill but at the same time we strongly urge upon him the desirability of making it more comprehensive, so that, in fact, it will be a Bill to amend the law relating to the sale of all spirits.

Annotations.

"Ne quid nimis."

THE SOCIAL PROBLEM IN JAPAN.

Within the past 40 years, roughly speaking, Japan has changed from a mediæval and feudal country to one imbued with all the advances of modern Western civilisation, a point which has been pressed home to European countries with great force since the outbreak of the war with Russia. But modern civilisation, as we know from bitter experience, may bring curses as well as blessings in its train and we are led to wonder whether the route of Japan's triumphant progress has not been strewn with some of that human wreckage which in Europe has ever marked the path of empire. Light is thrown upon this question in a recent work, "Le Japon, Politique, Économique, et Social," by Dr. Henry Dumolard, a former professor in the Imperial University of Tokio. Since 1868, when the present Emperor was crowned, the whole manner of life of a large proportion of the people has changed. In the words of Dr. Dumolard "luxury has enormously increased among the upper and middle classes and as a consequence there has ensued an inequality which daily becomes greater and a separation always growing more profound between the different elements of society. Under the hard effects of these changes the good nature of the people has disappeared and their classical courtesy and gentle manners have given place to the Western ways, for in Japan, as elsewhere, the struggle for existence develops egoism and cruelty." Japan, therefore, is now faced with some unsteadiness of gait with tenderness of the calf muscles, her speech was slightly stammering, and there was tremor of the facial muscles. Weakness of the legs grew more marked and distinct polyneuritis with muscular atrophy of the affected muscles supervened. The knee-jerks were absent but the cutaneous plantar reflex was lively. Her mental confusion grew worse and she remained bedridden with neuritis for some months, after which a slight improvement set in. In seven months distinct improvement began to show itself, memory began to improve, her physical weakness and incapacity disappeared, and in June, 1903, after a year's steady improvement she was discharged from the asylum as recovered. In Case 2 the patient was a man, aged 63 years, a cab-driver. He was admitted to Colney Hatch Asylum four weeks after the onset of his illness, which was probably a mild mental delirium, in the course of which he would get out of his bed at night, wander aimlessly about the ward (of the workhouse infirmary), stating that he heard cab bells ringing and demanding fares from the other inmates on the ground that he had just driven them in a cab. Here was an example, adds Dr. Cole, of an "occupation delirium," a very characteristic feature of Korsakoff's psychosis—viz., defect of observation and memory, illusions as to the identity of persons, false ideas as to his relation to time and space, and pseudo-reminiscence. His gait was unsteady and ataxic and the knee-jerks were exaggerated. There was profound loss of memory for recent impressions extending back for many months. After several months' stay in the asylum he began to improve slightly but a permanent degree of mental defect remained. Dr. Cole points out that in almost all his cases the amount of mental derangement as to the patient's position in regard to his surroundings was such as to constitute a marked delusion. His waking life was quiet and dream-like; he lived in the past and had no memories of recent events. In a case recorded by Liepmann this loss of memory was more far-reaching and extended back to about 30 years. Dr. Cole concludes by emphasising the paramount influence of alcohol as an etiological factor. Dr. Soukhanoff and Dr. Boutenko, in their contribution already referred to, state that Korsakoff was not only the first psychiatrist to draw attention to the disease but published the largest number of studies on the subject. His teachings had been accepted by Regis, Seglas, Ballet, and others in France; Jolly, Bonhoffer, and Wernicke in Germany; Krafft-Ebing in Austria; and Percy Smith and Turner in England. They also give statistical tables as to age and sex showing that the fourth and fifth decades of life are most frequently affected with this disease; that it is rare before the age of 20 years or after the age of 60 years. As regards the sexes, while the majority of cases in males occurred between the ages of 40 and 50 years, the disease was most prevalent in women between the ages of 35 and 40 years.

THE "PAINFUL PRONATION" OF CHILDHOOD.

IN a recent number of the *Gazette des Hôpitaux* of Paris Professor A. Broca has drawn attention afresh to a condition of no little practical importance. The patient, who is always a child, after a slight injury keeps the arm hanging down by the side, the elbow is slightly flexed, and the forearm is pronated so that the thumb touches the side of the thigh. Any attempt to change from this position is resisted with cries and evidently gives rise to severe pain. The condition has been described by Daverney, Malgaigne, and Chassaignac, and more recently by other writers, but there has been much uncertainty as to the exact lesion present. So complete appears to be the loss of use of the limb that Chassaignac attributed the lack of movement to some lesion of the nervous system. A careful examination of a case shows that the want of mobility of the limb depends entirely on a fear of pain, the seat of which is in the neighbourhood of the elbow, there being especial tenderness over the head of the radius. The mode of origin is wonderfully uniform. It is produced by sudden traction on the hand. Often there is a history of a fall and the injury is attributed to this but it is really produced by the effort to raise the child from the ground by traction on the forearm. The age of the patient is nearly always under five years and in most of the cases under three years. Of 189 cases only 11 were more than five years old and 141 were under the age of three years. The injury occurs in young children because they are lifted up steps or on to a pavement by the hand of the mother grasping the child's hand. Of 130 cases 80 occurred on the left side and Professor Broca considers that this is due to most people leading a child by their own right hand and so grasping the child's left hand. Of 207 cases 137 were girls and 70 were boys but Professor Broca offers no explanation of this preponderance of girls. The treatment is extremely simple. Even if nothing be done, in a few days the child's arm will have regained its mobility. However, the condition can be immediately put right by a very simple procedure The surgeon takes the child's hand in his left hand and extends the elbow and then sharply supinates the forearm. Then he bends the elbow while he presses firmly on the head of the radius with the thumb of the right hand; at the same moment a "click" is heard and the child's arm becomes perfectly mobile, the movements being restrained only by the remembrance of the pain he has already suffered. This rapidity of recovery shows that there can be no question of fracture of the neck of the radius, as has been suggested by some. Denucé has suggested that the pain is due to a fold of synovial membrane being caught between the annular ligament and the transverse ligament but this is very unlikely. It has also been suggested that the bicipital tuberosity in extreme pronation passes behind the outer border of the ulna and finds it difficult to return. This theory, also, is far from probable. Professor Broca believes that the lesion present is a subluxation forwards of the head of the radius and he thinks he can feel a slight prominence anteriorly. Unfortunately, a skiagram affords no information, for both the capitellum and the head of the radius are cartilaginous and give no shadows. There is a slight tendency to a return of the condition should the exciting cause recur but Professor Broca considers that after reduction no splint nor even a sling is needed.

BRAKES FOR TWO-WHEELED CARTS.

IN the early hours of Friday morning, March 11th, an accident occurred in London which was fortunately attended with no loss of human life although it involved a certain destruction of property and the loss of a horse. At about 3 A.M a horse drawing a cart loaded with building rubbish was being led down St. James's-street when from some cause it became frightened. The carter being unable to control it let it go and the horse and cart going fast down the hill failed to make the complete turn and dashed against the parapet of the Oxford and Cambridge Club. This gave way and the horse and the shafts of the cart fell into the area, some 20 feet below the street level. The unfortunate animal was killed. Some years ago a similar accident happened in Bedford-street when the fore part of the horse disappeared into Messrs Dent's window and cellar in the Strand. We have never been able to understand why the very simple two-wheeled brake which is universally used for two-wheeled vehicles in France is not adopted here. Now that nearly every part of London is being grubbed up or rebuilt the contractors' carts which are seen about the streets are innumerable and the strain on the horses going down a hill, such as that of Piccadilly or St. James's-street, is very great. From a merely pecuniary point of view we should have thought that it would have paid contractors to fit their carts with the brake to which we have referred. Such an appliance would save the horses and so would savĕ the contractors' money, to say nothing of obviating the chances of such an accident as that described above with its opportunities for destruction of life and property. But the average Briton is so—shall we say conservative—that he will not use anything new or to which he is unaccustomed. We think that the legislature should step in and should make the use of such a brake compulsory. It is true that some modification would have to be made to allow for the cart being tipped but surely this would not be beyond the powers of our mechanicians.

SENILE FORMS OF MENTAL FAILURE.

THOUGH old age brings with it a decline in mental as in physical power and capacity the alteration is a gradual process and is on the whole unattended by serious mental disturbance. Senile dementia is that form of mental decay occurring after the fifth decade of life, in which various forms of mental disorder of a somewhat grave character manifest themselves. It is very rare before the age of 50 years in men and it is found that at least two thirds of all patients over the age of 50 years admitted to public asylums are cases of senile dementia. In the *Journal of Nervous and Mental Disease* for February Dr. William Pickett, instructor in neuro-pathology and insanity at Jefferson Medical College, Philadelphia, publishes an article on the subject of the mental decay and disorders of old age in which an attempt is made to analyse and to classify the various forms and to furnish a practical basis for prognosis, the material studied comprising 200 cases—100 males and 100 females. Senile insanities other than dementia are rare; they comprise a delusional form and a melancholic form which are liable to occur, strictly speaking, in the pre-senile period which corresponds with the climacteric period in women (from 45 to 50 years of age) or with a slightly later period (from 50 to 55 years of age) in man. Analysis of the clinical symptoms shows that the following are the general characteristics of oncoming senile dementia: enfeeblement of attention and slowness in the association of ideas, inexact perception of relations to surroundings and to time (disorientation), marked defects of memory (amnesia) for recent events, poverty of ideas, blunting of the feelings of affection, and irritability of disposition with exacting and tyrannical tendencies. The essence of senile dementia is quantitative but irregular reduction of the mental and moral capacities and the degenerative process is usually accompanied by attacks of temporary excitement, emotional depression, and delusion, so that the superficial symptoms of mania, melancholia, and paranoia are simulated, though these affections rarely occur in old age. "Mental confusion of some degree is present in all types of senile dementia; it appears episodically in many (66 per cent. of) cases, being one cause of the familiar street wandering of such dements." The excited, depressed, and delusional types rank next in order of frequency. Physical wasting and weakness are greatest in the common or confusional type and are progressively less marked in the other types mentioned, a point which is of prognostic value. On the other hand, the depressed and paranoid types are of less favourable prognosis as regards the mental life than are the other two types of dementia. The exaltation or ephemeral excitement of some cases is not true mania; "probably, says Dr. Pickett, "true mania never arises in old age" The following table gives a summary of the symptoms and the peculiarities of conduct of the 200 patients investigated. Some of the peculiarities of conduct have a medico-legal interest as the degree of responsibility may be hard to determine.

Symptoms and peculiarities of conduct.	143 cases of the simple confusional type.	17 cases of the excited type.	14 cases of the depressed type.	26 cases of the delusional type
	Per cent.	Per cent.	Per cent	Per cent.
Street wandering.	40	24	14	12
Hallucinations.	23	12	64	85
Vertigo.	19	6	14	27
Headache	8	6	0	19
Night prowling.	8	6	28	8
Suicidal attempts.	6	12	14	16
Exaltation.	8	6	7	42
Delusions of poisoning.	2	18	7	35
Delusions of conspiracy.	2	6	7	46
Other delusions of persecution	10	24	28	38
Delusions of marital infidelity.	0	6	0	12

The delusional cases are especially important from a medico-legal point of view, as these patients may become troublesome and even dangerous to their families, though when placed in asylums they soon subside into the category of "uninteresting" senile dements. The chief delusions to which they are liable are those of persecution by unseen and malign agencies, poisoning, and marital infidelity, the last of which may cause much distress and trouble to the patient's family.

THE METROPOLITAN STREET AMBULANCE ASSOCIATION.

THE following is an abstract of suggestions approved by the committee of the Metropolitan Street Ambulance Association as the basis of a plan for providing London with an efficient street ambulance service.—

1 That there should be one controlling authority responsible for a uniform and well organised ambulance service and that that body should be the London County Council.

[illegible] areas"

This

[illegible] hand

[illegible] most

advantageously carried out conjointly.

4. That where possible these ambulances *under the control of the* London County Council fire brigade should be stationed at, or in immediate connexion with, the principal London hospitals.

5 That the police should be kept efficient in "first-aid" training; should be available, as at present, for rendering first aid to the injured, [illegible] an ambulance by telephone, and taking charge of the [illegible]

[illegible] not, as

[illegible] all other

[illegible] these

[illegible]

[illegible] many

others is

[illegible] under-

provide

[illegible] removal

adequately for the [illegible]

each year.

8. That there should be no charge for the use of the ambulance.

The suggestions, it will be observed, are only set forth as a basis for a scheme and we are not quite clear as to whether the committee suggests that the whole of the work should be undertaken by the fire brigade or only that the ambulances, whether horse or motor, should be kept at the fire stations. But then we see that suggestion 4 proposes that the ambulances should be kept at, or in immediate connexion with, the hospitals. In that case where does the fire brigade come in? Everyone knows how admirably organised is the fire brigade and no doubt the machinery of that body would do the ambulance work excellently but we have not yet heard the brigade's opinion on the matter. If the fire alarm posts and the machinery of the brigade are utilised it seems to us that there will have to be an increase in the staff and more room provided in the stations for ambulances. Motors would be the best means of traction unless a separate stud of horses were provided, for the ordinary fire-engine horse, though an excellent animal for its own work, is not exactly a suitable form of motive power for the conveyance of a seriously ill or wounded patient.

ROAD-SICKNESS.

THE much-abused sea may claim in these days of fast travelling that the land has its terrors and that in all fairness the measure of blame should be more equally distributed. Since the introduction of the long Pullman dining-car (more especially on the foreign railways which are perhaps not so well laid as some of our chief lines are, though the rate of speed is at times even greater) we have heard of many instances of sickness and nausea closely resembling the forms of sea-sickness with which most are only too familiar. Passengers to the Riviera not infrequently fall victims to the peculiar motion of the long bogie carriages which are used for dining and sleeping, a thing not to be wondered at when we consider that there must be very special undulatory risings and fallings in the body of the long car which is only supported at its ends on the peculiar bogie arrangement of the wheels, whilst in rounding sharp curves the long axis of the carriage is in a different direction from that of the mechanism on which it is placed. The pitching and rolling movements which set up *mal-de-mer* are, in fact, though to a less amplitude, imitated in the luxurious wagon-lit, and if it happens that dinner is going on whilst a tortuous piece of the line is being negotiated it is not unlikely that the services of the steward will soon be requisitioned. Road-legs have to be acquired as much as sea-legs, and in the various forms of locomotion, from the jolting omnibus to the quick-stopping tube and air-braked trains, frequent opportunities arise for estimating the varying amounts of agility, clutching of stay-straps, and compensating bodily movements made by the cognoscenti in the particular class of vehicle of which they are for the time endeavouring to form an integral part. That all forms of travelling are tiring is evident from the common tendency to sleep in railway carriages, and the proverbial sleepy state of the country carter is due perhaps not so much to his early rising as to the constant work of the muscles which automatically endeavour to compensate for the surprises of their fellows in the disturbed equilibrium caused by bad roads and weak springs. If a person must live in the suburbs of London the wear and tear caused by daily travelling backwards and forwards are certainly less on the northern lines than upon the southern, with the exception of the South-Western, because of the excellence of the permanent way and the weight of the carriages. The vagaries of the travelling public are curious: some cannot ride except facing the engine or the horses, others cannot travel at all by railway, some have faint feelings when going at a high speed, others are made actually sick, and we have known the utmost confusion caused to some unfortunates by the seats opposite the direction in which the train is moving being occupied, though, curiously enough, the same feeling is not set up when the passenger can have a seat placed parallel with the direction of progress. There is reason to believe that the action upon the eye muscles of the rapidly changing parallax and the quick passage of objects that are met and left have much to do with the production of tired feelings and of headaches caused by long journeys, and great relief is often experienced by simply closing the eyes or by refraining from looking out of the windows, and if reading is to be indulged in the daylight should be chosen and a large and clear type of print selected. The morning and evening papers of the suburban travellers have much to answer for, especially when tempted by the cheapness he indulges in those printed in small type. The question of the cause of sea-sickness—and the same may be said of road-sickness or *mal-de-terre*—has never been quite satisfactorily determined. The blood system of the body is a closed circuit and it has been plausibly suggested that the pitching of the boat and the up-and-down movement of a long carriage like a wagon-lit tend to disturb the balance of the circulatory system somewhat in the same way as the mercury in the barometer rises and falls suddenly with the degree of pitching (not rolling) of the vessel. If this is the case it is not difficult to understand why faintness and sickness are set up and even why morbid apprehensions of travelling may arise. In fact, nothing more calculated to derange the viscera and the nervous system can be well imagined than the oscillatory movements of trains travelling over badly laid roads at high speed. There is a habit now much in vogue of taking very long journeys without any intervals of rest. People are so anxious to "get it over quickly" that they rush through from train to steamer, from steamer to train, without taking the intermediate break which is generally possible and which is so useful for allowing the circulation to regain its balance, the nervous system to quiet down, and the viscera to resume their normal functions. The temptation to get quickly away to other scenes and climes is great and when carried out with reasonable care is very proper, but physicians who have to order invalids abroad for the sake of their health cannot too strongly impress upon them the validity of the German byword—*immer langsam.*

THE PROGNOSIS AND CURABILITY OF EPILEPSY.

A NUMBER of recent and valuable observations bearing on the prognosis, pathology, and curability of epilepsy were contributed by various authors in a discussion on the subject at the New York Academy of Medicine, an account of which is published in the *Medical Record* of Feb. 6th. Dr. William P. Spratling, the medical superintendent of Craig Colony, New York, stated that epilepsy was curable in from 5 to 10 per cent. of cases, "but it required, as a rule, a long-continued course of treatment, never less than two to three years." From carefully investigated records of 1325 cases during the past four years he had found that 34 cases of epilepsy at Craig Colony were undoubtedly cured in that period. Epilepsy was essentially a disease of early life. In 20 of the 34 cases which were cured it began in infancy, in nine it occurred between the ages of 10 and 20 years, in four between 20 and 40 years, and in one after the age of 40 years. Psychical epilepsy was a rare affection, being met with only in four cases among 1325 patients. Of all the types of epilepsy the Jacksonian demanded the earliest treatment. Idiopathic epilepsy required long-continued care and treatment, material improvement being sometimes observed after a year. The epileptic aura occurred in 51 per cent. of all cases, the disturbance being almost invariably a "sensory" aura. There were some varieties of epilepsy which destroyed all the faculties of the mind in a very short time, while others left the mind comparatively unimpaired. The younger the patient when epilepsy manifested itself and the longer the period without proper treatment the more grave and unsatisfactory would be the prognosis as regards the mental condition. Professor Allen Starr, who followed in the discussion, said that those who treated epilepsy in dispensary and outdoor hospital practice knew how difficult it was to accomplish anything in the way of cure—even treatment of the rich under the most favourable surroundings failed to give good results. The vast majority of patients did not recover and only a small percentage improved. Among 250 consecutive dispensary cases of epilepsy seen and treated by him only one recovered and remained permanently free from fits for several (seven) years. "It was very rare," added Professor Starr, "to see a patient go for a year without either a series of attacks or at least one or two fits." The reason for this pessimistic attitude in prognosis was because epilepsy was a slowly progressive organic disease of the brain associated with congenital maldevelopment of the organ. Many of the patients showed anatomical and mental "stigmata" of degeneracy. He found the closest analogy between Jacksonian epilepsy and idiopathic epilepsy and there were all intermediate states between these two. Dr. L. Pierce Clark, assistant physician at Craig Colony, agreed with Dr. Spratling that a recovery-rate of from 5 to 10 per cent. could be obtained among "colony" patients but that in private practice a higher percentage (nearly 25 per cent.) of recoveries was obtainable. He agreed with Professor Starr that it was an organic disease. Dr. Frederick Peterson stated that 6 per cent. of cases were curable, especially when the epilepsy supervened in adult life and without such associated symptoms as hemiplegia or cerebral softening. Idiopathic epilepsy was, in respect of its periodicity, like dipsomania. Dr. Ralph Parsons took a gloomy view as to the curability of epilepsy and Professor Joseph Collins stated that he thought 10 per cent. of alleged cures was an extravagant estimate. Dr. Leszynsky approved of the "colony" treatment of epilepsy and believed that it would become more popular as public knowledge increased and ignorance died away. Dr. Bernard Sachs stated that the term "organic" disease as applied to epilepsy did not necessarily connote incurability and agreed that from 5 to 10 per cent. represented the average limits of curability under proper care and treatment.

THE INFECTIVITY OF THE TUBERCLE BACILLUS.

THE fifth annual general meeting of members of the National Association for the Prevention of Consumption and other Forms of Tuberculosis was held at 20, Hanover-square, London, W., on March 10th, when Sir William S Church, President of the Royal College of Physicians of London, made some valuable remarks. He said that the unreasoning and unreasonable dread that some people seemed to have of the infectivity of the tubercle bacillus had been strongly brought to his attention in the course of the last year. That, in his opinion, was to be deprecated and the more so because it occurred among the more or less educated classes who, unfortunately, were influenced by some of the sensational writing on the subject. Many of these persons had kept themselves at a distance from the tubercle bacillus, imagining that that was all that was necessary, and had neglected those proper hygienic measures which place them in a condition to resist the attacks of the enemy. The National Association for the Prevention of Consumption had put two lines of defence side by side. It had recommended general hygienic measures and at the same time had indicated the means by which people might specially protect themselves and the general public from the danger of infection. Sir William Church also referred to the extreme interest with which the medical profession were watching the results of the working of the plan of compulsory notification of tuberculosis at Sheffield, just as they were noting with care what the results were of the voluntary notification of tuberculosis which was proceeding in many other districts. Another point touched on by Sir William Church was the way in which the Journal of the National Association for the Prevention of Consumption had emphasised the view that sanatoriums should be inexpensive buildings, and in connexion with this he made the suggestion that it would be of great advantage if the National Association for the Prevention of Consumption would act as an advisory board to county councils, boards of guardians, and other public bodies upon the important questions of construction, sites, and situations of sanatoriums. He considered that bricks and mortar should not take up vast sums of money when inexpensive buildings would not only fulfil the same object but would do it very much better.

THE medical officer of health of the Cape Colony states that for the week ending Feb. 20th no case of plague in human beings was reported throughout the colony. Plague-infected rodents were found at Port Elizabeth and at East London, but of 254 rats examined during the week in the Cape Town and Harbour Board area none was affected with plague. As regards the Mauritius, a telegram from the Acting Governor received at the Colonial Office on March 11th states that for the week ending March 10th there were three cases of plague and two deaths from the disease. As regards Hong Kong, a telegram from the Acting Governor, received at the Colonial Office on March 15th, states that for the week ending March 12th there were two cases of plague and two deaths from the disease.

DR. T. W. Eden has succeeded Mr. Alban H. G. Doran as editor of the *Journal of Obstetrics and Gynæcology of the British Empire*. The success which has been achieved since the founding of this journal some two years ago is a testimonial to the merits of Mr. Doran as an editor, his wide knowledge of the literature of obstetrics and gynæcology no less than his linguistic attainments having fitted him exactly for the post. Dr. Eden has no doubt an easier task before him than Mr. Doran had, in that he has to drive a machine that is running and has not to start the machine. At the same time he suffers under the disadvantage of following an editor of unusual attainments. We wish the *Journal of Obstetrics and Gynæcology* a continuance of prosperity.

AT a meeting of the Senatus of the University of Aberdeen, held on March 9th, it was resolved to confer the honorary degree of Doctor of Laws upon Dr. C. J. Cullingworth, obstetric physician to St. Thomas's Hospital, London. A similar degree is also to be conferred upon the Right Hon. C. T. Ritchie, M.P., Mr. William Watson, the poet, Sir George Watt, the officer in charge of the Industrial Museum, Calcutta, and Professor W. Dunstan, F.R.S., the director of the scientific and technical department of the Imperial Institute. The graduation ceremony is provisionally fixed for Wednesday, April 6th.

MISS Caroline Frith, who at the time of her death was a staff nurse in St. Bartholomew's Hospital, has left to the hospital the whole of her residuary estate, of the estimated value of upwards of £2000, to show her appreciation of the benefits which she had received from her training there and of the kindness and consideration accorded to her during her four years' residence in the hospital.

SIR Lauder Brunton has resigned his position as physician to St. Bartholomew's Hospital and has been elected an honorary consulting physician and a governor. Sir Lauder Brunton has been connected for 33 years with St. Bartholomew's Hospital, having been four years casualty physician, more than 20 years assistant physician, and nearly nine years full physician.

THE annual general meeting of the Coal Smoke Abatement Society will be held on Tuesday, March 22nd, at 3 P.M., at Stafford House, St. James's, London, S.W. (by the kind permission of the Duke of Sutherland). Sir William Richmond, K.C.B., R.A., will preside.

THE annual general meeting of the Medical Graduates' College and Polyclinic will be held at the College, 22, Chenies-street, Gower-street, W.C., on Monday, March 28th, at 3.30 P.M. Dr. C. Theodore Williams will preside.

ON Wednesday evening next, March 23rd, at 8.30 P.M., Dr. Marmorek will deliver an address at St. George's Hospital upon Antituberculous Serum.

THE country has learned with sincere regret the news of the death on Thursday morning of the aged Duke of Cambridge.

WE regret to have to state that Sir Samuel Wilks has shown signs of weakness since our previous and favourable note of his condition.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

THE annual meeting of the General Council of King Edward's Hospital Fund for London to receive the accounts and report of the General Council for the year 1903 was held on March 8th at Marlborough House, H.R.H. the Prince of Wales being in the chair. Those present were the Bishop of London, the Chief Rabbi (the Rev. Dr. Adler), Viscount Duncannon, Lord Iveagh, Lord Farquhar, the chairman of the late London County Council (Lord Monkswell), the President of the Royal College of Physicians of London (Sir William S. Church, Bart.), Sir Savile Crossley, Bart., M.P., Sir Joseph Dimsdale, Bart., M.P., the Right Hon. C. Stuart Wortley, K.C., M.P., Sir Trevor Lawrence, Bart., Sir John Aird, Bart., M.P., Sir Henry Burdett, K.C.B., Sir William J. Collins, Sir John Craggs, Mr. Sydney Buxton, M.P., Mr. F. M. Fry, Mr. Albert G. Sandeman, and Mr. Hugh Colin Smith.

In the absence of Lord Rothschild SIR JOHN CRAGGS presented the certified accounts of the Fund for the year ending Dec. 31st, 1903. These showed the details of the receipts to be as follows, neglecting fractions of £1: annual subscriptions, £52,834; contributions to be retained as capital, £16; donations, £8082; grant from the trustees of the London parochial charities for the maintenance of convalescent homes, £1000; contribution from League of Mercy, £10,000; received on account of the Coronation gift, but not included in last year's report, £863; legacies, £3048; income from investments, £27,639. The total receipts for the year amounted to £83,483, and the council's decision to recommend that £100,000 should be distributed among the hospitals and convalescent homes involved drawing upon the reserves to the amount of £18,751. Some particulars of the work of the Fund during the first 11 months of the year were given at an interim meeting of the council held at Marlborough House under the presidency of the Prince of Wales on Dec. 14th, 1903. A report of this meeting appeared in THE LANCET of Dec. 19th, p. 1748, and a full list of the grants and donations made by the Fund for the year was published in our issue of Dec. 26th, p. 1831.

The PRINCE of WALES having moved the adoption of the accounts, Mr. SMITH in seconding the motion, said that as compared with the year 1902 the annual subscriptions in 1903 were £4100 more, the League of Mercy gave £2000 more, and the income from investments was £16,200 more, owing to the munificent gifts of Lord Strathcona and Lord Mount Stephen, though, on the other hand, the donations were less.

Sir HENRY BURDETT, in supporting the adoption of the accounts, said that as treasurer of the League of Mercy it was a pleasure for him to point out that the £10,000 given by the League of Mercy to the Fund last year might be taken broadly as representing contributions of small sums and from this it was evident that small subscribers—in fact, the humbler people of London—were really taking a very practical interest in the Fund through the League of Mercy.

The motion was carried unanimously.

Mr. SMITH, chairman of the executive committee, read the report of the General Council for the year ending Dec. 31st, 1903.

The PRINCE of WALES said: My Lords and Gentlemen, I have much pleasure in moving the adoption of the report for the past year and on the whole I think we may be well satisfied with the results achieved for it could not be expected that the contributions to the Fund would be equal to those of the previous year—that of the Coronation. As I stated at our last meeting in December I regret very much that it has been necessary to draw upon our reserves and I trust that the ensuing year will enable us to provide £100,000 out of income without again having recourse to what may be considered an undesirable expedient. I shall be only echoing the unanimous opinions of the council in expressing our gratitude to all who, whether in large sums or small, have supported the Fund during the seventh year of its existence. As stated in the report, the investments of the Fund now standing in the names of Lord Rothschild and Mr. Hugh Colin Smith, taken at cost, comprise £234,037, while the securities received by the Fund, as valued at date of receipt, amount to £430,218, making a total of invested capital now owned by the Fund of £664,255. This position of affairs may be considered satisfactory. But we must endeavour to improve it. And I think you will all agree that we have already obtained very great encouragement when I tell you that within the last few days, to my surprise and gratification, I have received from a personal friend who desires to remain anonymous a letter which I should like to be allowed to read :—

SIR,—I regret to learn that the assured income of the King's Hospital Fund from investments and other permanent sources only amounts to about £36,000 a year, which is £14,000 a year less than, two years ago, it was hoped the fixed income of the Fund from endowments, &c., would have reached by this time. It is clear to me that there is no better way of benefiting the sick poor of London than by supporting the King's Hospital Fund, and that it is a matter of the greatest importance to the London hospitals generally, as well as to the success of the Fund itself, that it should as speedily as possible be placed in a position to enable it to make an annual distribution among the London hospitals of not less than £150,000. If the King's Fund had an assured income from investments and other permanent sources of, say, £50,000 a year, I believe that it would not be very long before the income from subscriptions and other sources would amount to £100,000 a year, making a total of £150,000 a year available for distribution, and placing the King's Fund in a position to exercise a most beneficial influence and control over the management of every London hospital. To help this most desirable object I have decided to anticipate a provision in my will and instead to hand over to the King's Hospital Fund by way of gift securities representing the capital sum required to provide one-third of the £14,000 a year deficiency on condition that the remaining two-thirds, £9332 per annum, is provided for. This offer to be good and to remain in force till Dec. 31st next, 1904. I do not attach any other conditions to this offer, but would like to express a hope that Your Royal Highness, as President of the King's Hospital Fund, may see your way to prevent any portion of the funds subscribed for the relief of the sick poor being diverted to purposes of medical education. Trusting your Royal Highness may be placed in a position to enable you to avail yourself of my offer.

As a rule I am reluctant to make personal appeals. But, having received this munificent offer, I feel that it is my duty to invoke the support of those who are in a position to follow the example of this anonymous benefactor and so enable us to secure the full results of his generous proposal. The total number of subscribers to the fund is over 4300. To this must be added the many subscribers to the League of Mercy. These statistics are satisfactory, as showing that while we receive large donations the Fund is also becoming understood and, I hope, appreciated by the people. To bring this about was the original purpose of the Fund. I take this opportunity of referring to one particular class of the community from which the London hospitals derive substantial help. I mean the dramatic profession. I sometimes think we do not fully realise how much of their valuable time is gratuitously given by the members of the stage for charitable purposes.

The report, on the motion of the PRINCE of WALES, seconded by Sir JOHN AIRD and supported by the BISHOP of LONDON, was received and adopted.

Lord MONKSWELL then moved a vote of thanks to the Prince of Wales for presiding. This was seconded by the CHIEF RABBI and after His Royal Highness had expressed his acknowledgements the proceedings terminated.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on March 10th, Mr. HENRY MORRIS, Vice-President, being in the chair.

The Council having been consulted by the Physical Deterioration Committee as to the details of a scheme for an anthropometric survey of the United Kingdom had referred the matter to the Committee on Physical Disabilities and a report was now received from that committee, in which it recommended that the Council should express its approval of the general idea of the scheme as being well calculated to elicit those facts of which a knowledge is essential to the formation of any opinion as to the physical improvement or deterioration of the race, and that the committee moreover believed that the results of the investigation would be of great scientific value and interest. It was resolved to send a reply in the terms contained in the report.

The Council expressed its warm appreciation of the very great services rendered to the Council by Mr. Thomas Bryant as the representative of the College on the General Medical Council for the long period of 13 years. The Council appointed Mr. Henry Morris as the representative of the College on the General Medical Council for five years. The chairman of the Museum Committee reported that Staff-Surgeon C. Marsh Beadnell, R.N., M.R.C.S., of H.M.S. *Powerful*, had presented to the College 13 Filipino skulls collected from the battlefields of Luzon, Philippine Islands. The best thanks of the Council were given to Staff-Surgeon Beadnell for his gift.

The VICE PRESIDENT reported the delivery of the following Hunterian lectures—viz.: three lectures by Mr. T. Crisp English on the After Effects of Head Injuries; three lectures by Dr. Arthur Keith on the Evolution and Action of certain Muscular Structures of the Heart (illustrated by specimens from the Physiological Series of the Hunterian Collection); and three lectures by Mr. L. B. Rawling on Fractures of the Skull.

The VICE PRESIDENT reported that the President had appointed Dr. John Barlow as the delegate of the College to the Congress of the Sanitary Institute to be held at Glasgow in July.

The VICE-PRESIDENT reported that the President had been placed upon the list of vice-presidents of the English organising committee for the International Congress on School Hygiene to be held at Nuremberg in April and that Dr. Clement Dukes had been appointed as the delegate of the College to the Congress.

The VICE-PRESIDENT reported that the College had been invited to send a representative to the jubilee of the University of Wisconsin to be held in Madison on the first five days of the week beginning June 5th.

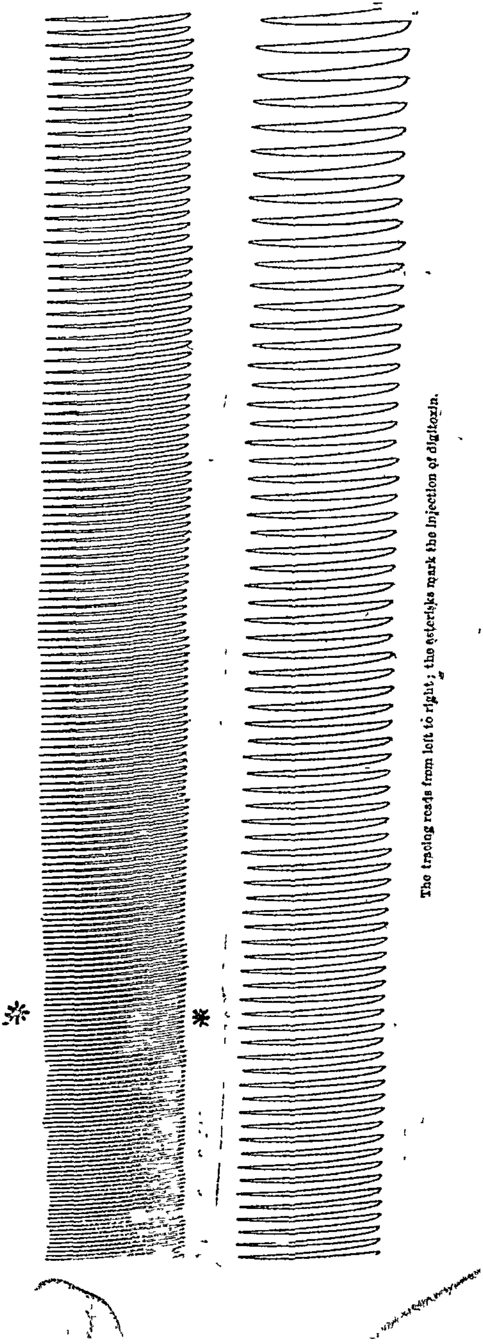
The following letter was read from the Registrar of the General Medical Council, reporting the following resolution adopted by the Executive Committee of that Council:—

> That the Executive Committee learn with regret that Mr. Bryant [illegible] of office as repre- [illegible] arch 12th, [illegible] of his [illegible], and in [illegible] an of the Examination Committee.

A letter was read from Mr. Morris resigning his membership of the Board of Examiners in Dental Surgery in anticipation of the expiration of his period of office on May 11th. The vacancy thus occasioned will be filled at the meeting of the Council in April. Mr. Morris resigned his seat on the Court of Examiners to take effect at the end of the pass examination for the Membership in April next. The vacancy thus caused will be filled at the meeting of the Council on May 12th and May 4th will be the last day of application.

AN INTERESTING DEMONSTRATION AT CAMBRIDGE.

THE accompanying figure is a reproduction of a tracing taken in the presence of their Majesties the King and Queen on the occasion of their visit to the Medical Schools at Cambridge on March 1st. The experiment, which was conducted in the Pharmacological Department, consisted in the perfusion of an excised rabbit's heart with an oxygenated Ringer's solution by a method slightly modified from that of



The tracing reads from left to right; the asterisks mark the injection of digitoxin.

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Metropolitan Borough of Finsbury.—Dr. George Newman is to be congratulated upon the early appearance of an interesting annual report for 1903 and it would add materially to the value of all annual reports if they could be issued with something approaching the same celerity and, at the same time, thoroughness. In the statistical portion of the report a table is furnished as to deaths in relation to tenements and as it is of very considerable and general interest from a public health standpoint we reproduce it here :—

Finsbury, 1903. Death-rates per 1000 from all and Certain Causes in Houses or Tenements of Several Sizes.

Size of tenement.	Census population (1901).	All causes.	Zymotics.	Phthisis.	Respiratory diseases (excluding phthisis).
One-roomed tenement	14,516	38·9	5·6	4·5	9·3
Two " "	31,482	22·6	3·8	2·8	5·3
Three " "	21,280	11·7	1·8	1·2	2 4
Four " " (and upwards of four rooms)	33,185	5·6	0·54	0·63	0·84

The poorest and unfittest classes will naturally be found in the one-roomed tenements but nevertheless this table shows what an enormous factor conditions of living form in determining the death-rate and how much of such death-rate is really preventable in a social sense. We are fully aware that the usual criticisms as to age, sex, and occupation may be levelled against this table, but we agree with Dr. Newman that it points to the fact that "the conditions of life obtaining in one-room tenements are such as tend towards poor physique, disease, and death. The density of population is higher, the physical restrictions are greater, and there is less fresh air and more uncleanliness." The figures in our view tend to emphasise the fact that in better conditions of living we have perhaps the most potent instrument of all sanitary measures. Some interesting figures relative to pulmonary tuberculosis are furnished in the report before us. The history of 129 cases of the disease was investigated and in 118 the source of infection is regarded as having been a relative. In many of these cases, Dr. Newman states, the history indicated family infection through several generations, as many as four or five near relatives dying from this disease at intervals of two or three years. We are not told whether in these cases the patients were members of the same house or only of the same family. There are, of course, not a few instances on record where members of a family with a tuberculous proclivity have all died within a few years of one another, although they had not met for many years. But Dr. Newman evidently attaches importance to any opportunity for infection, however long ago it may have occurred. For instance, here is an illustration of this point. "F., 66 years. Phthisis four years. 11 years ago worked in orphanage at Bournemouth where many of the inmates were phthisical." Of course, if exposure 11 years previously is to be held to account for infection in this case it would not be difficult to find an explanation for every case that occurs, and a slight extension of this sort of argument would bring us to the views recently enunciated by Behring that infection is practically always contracted in early childhood, but that the infection remains in most instances latent until some degeneration or alteration of the tissues enables the bacillus to increase and to produce what we recognise as tuberculosis. The section of Dr. Newman's report which deals with Protection of the Food-supply is very instructive and we could wish that every annual report contained a section on the same lines. Finsbury is one of the chief centres in the metropolis for the manufacture of ice-creams and 1065 Italians, many of whom are engaged in this industry, reside in the "Italian quarter" of that borough. Much attention was given during 1903 to the subject of tinned peas, and peas which had been subjected to a "new" process of preservation came in for much discussion in the law courts. Some difficult questions were raised at the trial but the evidence tended to show that although in several cases the tins were not "blown," their contents had not been thoroughly sterilised in the first instance. Probably some sporing organism had escaped destruction. There are in Finsbury 232 restaurants and eating houses and in these 400 men and 600 women, exclusive of waiters and waitresses, are engaged in the preparation of food and some 60,000 persons resort thither daily for refreshment. Of these places not less than 68 per cent. were found defective in one or other sense during 1902—a fact which shows how important is their thorough supervision. A most instructive section on the milk-supply of the borough is furnished by Dr. Newman and all interested in the question will do well to read it. When we are told that some 1200 farms situated in different parts of the country send their milk into Finsbury it is not difficult to realise what are the risks attending the consumption of raw milk. The greater portion of the Finsbury milk is derived not from the home counties but from the great milk-producing counties of Derbyshire, Staffordshire, Leicestershire, Warwickshire, and Wiltshire—i.e., 95 per cent. of the milk coming into the district is a very considerable time in the train, the average journey from farm to milkshop being from ten to 12 hours. In many cases, indeed, the milk does not actually reach the consumer until it is 24 hours old. Dr. Newman deals with the history of the milk from the cow to the consumer and he shows in what manner it is liable to contamination at the farm, in transit, in the milkshop, and at the home of the consumer. As regards the shop attention is drawn to the risks which are run from the storage of milk in uncovered vessels in places where spices, paraffin oil, blacking, potatoes, and a host of other articles are exposed for sale. Dr. Newman regards the contamination by the repeated dipping into the milk of small receptacles as more or less inevitable, but, of course, a small churn with a tap would entirely do away with this risk. The bacteriology of milk is as yet in its infancy, but Dr. Newman, as the result of the examination of several samples collected in different parts of London and examined at once, found that the average number of bacteria per cubic centimetre ranged from 4,800,000 to 340,000, this latter number being probably due to the plentiful use of preservatives; the number of liquefying colonies per cubic centimetre ranged from 120,000 to *nil*, the putrefactive organisms including the bacillus coli communis and streptococci. The appendix to the report contains some interesting observations upon aliens in Finsbury in 1903 and Dr. Newman quotes from the recent report of the Royal Commission to show how erroneous the popular notions are as to the "dumping" of aliens on our shores. The table furnished by the Commission shows that the percentage of aliens to total population is lower in the United Kingdom than in any other country of Europe with the exception of Sweden and Spain, while in no country in Europe does the proportion approach that in the United States where the percentage of aliens to total population is no less than 13·71, as against 9·58 in Switzerland, 1·38 in Germany, and only 0·69 in the United Kingdom—i.e., the number of aliens in this country is considerably under 300,000.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8908 births and 5577 deaths were registered during the week ending March 12th. The annual rate of mortality in these towns, which had been 18·5, 17·5, and 18·6 per 1000 in the three preceding weeks, further rose last week to 19·0 per 1000. In London the death-rate was 20·1 per 1000, while it averaged 18·6 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 6·9 in Tottenham, 9 6 in Hornsey, 10·3 in Walthamstow, 11·7 in Newport (Mon.), 11·8 in Leyton and in Tynemouth, 12·0 in Smethwick, and 12·3 in Reading; while the highest rates were 23·0 in Manchester, 23·2 in Birkenhead, 23·4 in Swansea, 23·5 in Brighton, 23·9 in Norwich, 24·6 in West Hartlepool, 24 9 in Wigan, and 25·8 in Preston. The 5577 deaths in these towns last week included 500 which were referred to the principal infectious diseases, against 493, 420 and 503 in the three preceding weeks; of these 500 deaths 169 resulted from whooping-cough, 148 from measles, 65 from diphtheria, 54 from diarrhœa, 31 from scarlet fever, 27 from "fever" (principally enteric), and six from small-pox. No death from any of these diseases was registered last week in Hornsey, Hastings, Southampton, Reading, Great Yarmouth, Burton-on-Trent, Smethwick, Barrow-in-Furness, or Newport (Mon.); among the other towns the highest death-rates from the principal infectious diseases were recorded in Norwich, St. Helens, Warrington, Bolton, West Hartlepool, Gateshead, Rhondda, and Swansea. The greatest proportional mortality from measles occurred in Norwich, Birmingham, Aston Manor, Stockport, St. Helens, Oldham, Rochdale, and Rotherham; from scarlet fever in Warrington; from diphtheria in Portsmouth, Walsall, and Sunderland; from whooping-cough in Wolverhampton, Handsworth (Staffs.), Birkenhead, Liverpool, Bootle, St. Helens, Warrington, Bolton, Bury, West Hartlepool, Gateshead, and Swansea; from "fever" in Nottingham; and from diarrhœa in Middlesbrough. Three fatal case of small-pox were registered last week in Nottingham, one in London, one in Warrington, and one in Gateshead, but none in any other of the 76 large towns. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 29, 31, and 41 on the three preceding Saturdays, had further risen to 54 on Saturday last, March 12th; 21 new cases were admitted during last week, against nine, five, and 13 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 1601, against 1620, 1587, and 1578 at the end of the three preceding weeks; 192 new cases were admitted during the week, against 143, 150, and 153 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 349, 322, and 371 in the three preceding weeks, further rose last week to 414, and were 156 in excess of the number in the corresponding period of last year. The causes of 67, or 1·2 per cent., of the deaths registered in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bolton, Leeds, Newcastle-on-Tyne, Cardiff, and in 39 other smaller towns; while the highest proportions of uncertified deaths were registered in Portsmouth, Birmingham, Liverpool, Warrington, Rochdale, Blackburn, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 22·2, 21·8, and 21·2 per 1000 in the three preceding weeks, increased again to 21·5 per 1000 during the week ending March 12th, and was 2·5 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 11·2 in Greenock and 15·4 in Perth to 23·5 in Glasgow and 31·6 in Paisley. The 710 deaths in these towns included 21 which were referred to whooping-cough, 20 to measles, 13 to diarrhœa, five to small-pox, four to scarlet fever, four to diphtheria, and one to "fever." In all, 68 deaths resulted from these principal infectious diseases last week, against 75, 79, and 89 in the three preceding weeks. These 68 deaths were equal to an annual rate of 2·1 per 1000, which was 0·4 per 1000 in excess of the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 26, 21, and 36 in the three preceding weeks, declined again last week to 21, of which eight occurred in Aberdeen, three in Glasgow, three in Dundee, three in Paisley, and three in Leith. The deaths from measles, which had been 19, 27, and 22 in the three preceding weeks, further declined to 20 last week, and included ten in Glasgow, six in Paisley, and four in Dundee. The fatal cases of diarrhœa, which had been 18, 11, and 19, in the three preceding weeks, decreased again last week to 13, of which five were registered in Glasgow, three in Dundee, two in Edinburgh, and two in Aberdeen. The deaths from small-pox, which had been five, six, and three in the three preceding weeks, rose again to five last week, and included three in Greenock and two in Glasgow. The fatal cases of scarlet fever, which had been three and two in the two preceding weeks, increased again last week to four, of which two occurred in Paisley. The deaths from diphtheria, which had been five in each of the two preceding weeks, declined to four last week, and included three in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 167, 165, and 155 in the three preceding weeks, increased to 156 last week, and were 39 in excess of the number in the corresponding period of last year. The causes of 33, or nearly 5 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 29·7, 27·2, and 26·4 per 1000 in the three preceding weeks, rose again to 28·3 per 1000 during the week ending March 12th. During the past four weeks the death-rate has averaged 27·9 per 1000, the rates during the same period being 18·1 in London and 18·7 in Edinburgh. The 206 deaths of persons belonging to Dublin registered during the week under notice were 14 in excess of the number in the preceding week and included 11 which were referred to the principal infectious diseases, against 16, 15, and 13 in the three preceding weeks; of these, six resulted from whooping-cough, three from "fever," one from scarlet fever, and one from diarrhœa, but not any from small-pox, measles, or diphtheria. These 11 deaths were equal to an annual rate of 1·5 per 1000, the death-rates last week from the principal infectious diseases being 1·7 in London and 0·5 in Edinburgh. The fatal cases of whooping-cough, which had been nine, 11, and ten in the three preceding weeks, further declined last week to six. The deaths from "fever" which had been two in each of the two preceding weeks, rose to three last week. The 206 deaths in Dublin last week included 39 of children under one year of age and 63 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons were considerably in excess of the respective numbers in the preceding week. Five inquest cases and three deaths from violence were registered, and 68, or nearly one-third, of the deaths occurred in public institutions. The causes of seven, or more than 3 per cent., of the deaths registered in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING FEBRUARY, 1904.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 4·8 per 1000 of the population, estimated to be 4,649,088 persons in the middle of the year. In the three preceding months the rates had been 6·0, 5·4, and 5·1 per 1000. The rates were considerably below the average in Hampstead, Holborn, the City of London, Lewisham, and Woolwich; while they showed the largest excess in Bethnal Green, Stepney, Poplar, Battersea, and Deptford. The prevalence of small-pox last month showed a slight increase over that recorded in the two preceding months; of the 19 cases notified during the month, four belonged to Battersea, three to Bermondsey, and two each to Islington, Hackney, Bethnal Green, and Southwark. The Metropolitan Asylums hospitals contained 31 small-pox patients at the end of last month, against 40, 26, and 21 at the end of the three preceding months; the weekly admissions averaged six, against eight, four, and four in the three preceding months. Scarlet fever was slightly less prevalent than it had been during the preceding month; the greatest proportional prevalence of this disease was recorded in Paddington, Chelsea, Bethnal Green, Stepney, Poplar, Bermondsey, and Deptford. The number of scarlet fever patients under treatment in the Metropolitan Asylums hospitals, which had been 1738, 1606, and 1626 at the end of the three preceding months, had declined again to 1560 at the end of last month; the weekly admissions averaged 153, against 184, 168, and 182 in the three preceding months. The prevalence of diphtheria corresponded almost exactly with that recorded in each of the three preceding months; among the various metropolitan boroughs this disease was proportionally most prevalent in Hackney, Bethnal Green, Stepney, Poplar, Battersea, and Deptford. The Metropolitan Asylums hospitals contained 782 diphtheria patients at the end of

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING FEBRUARY, 1904.

(*Specially compiled for* THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1904.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,649,088	19	695	534	—	111	—	21	338	—	1718	4·8	2	142	21	59	190	—	19	—	73	506	1·4	5959	16·7	124
West Districts.																										
Paddington	146,975	—	32	7	—	3	—	1	11	—	54	4·8	—	13	2	1	1	—	—	—	—	17	1·5	181	16·1	139
Kensington	179,236	—	18	14	—	1	—	1	8	—	42	3·9	—	12	—	1	1	—	—	—	2	16	1·2	192	14·0	100
Hammersmith	117,412	—	7	10	—	5	—	2	12	—	36	4·0	—	11	—	1	—	—	—	—	1	13	1·4	140	15·5	83
Fulham	162,482	—	24	19	—	2	—	—	6	—	51	4·4	—	8	—	5	1	—	1	—	2	17	1·5	197	16·8	136
Chelsea	74,329	—	15	5	—	2	—	1	4	—	27	4·7	—	7	2	—	3	—	—	—	2	14	2·5	117	20·5	119
City of Westminster	177,321	—	18	17	—	5	—	2	12	—	54	4·0	—	3	—	—	1	—	2	—	7	13	1·0	212	15·6	118
North Districts.																										
St. Marylebone	130,337	—	18	7	—	—	—	1	13	—	39	3·9	—	4	—	2	2	—	1	—	6	15	1·5	177	17·7	78
Hampstead	86,663	—	9	7	—	—	—	—	3	—	19	2·9	—	2	—	1	2	—	—	—	1	6	0·9	86	12·9	244
St. Pancras	235,936	—	34	28	—	9	—	1	16	—	88	4·9	—	11	3	4	3	—	2	—	1	24	1·3	290	16·0	133
Islington	341,044	2	48	28	—	4	—	4	13	—	99	3·8	1	1	1	5	15	—	1	—	3	27	1·0	429	16·4	105
Stoke Newington	62,445	—	7	6	—	—	—	—	3	—	16	4·0	—	—	—	2	—	—	—	—	—	2	0·5	54	13·4	70
Hackney	226,266	2	33	37	—	6	—	2	22	—	102	5·9	—	—	2	6	5	—	1	—	—	14	0·8	271	15·6	112
Central Districts.																										
Holborn	57,161	—	4	5	—	4	—	—	3	—	16	3·6	—	3	—	—	1	—	—	—	—	4	0·9	64	14·6	88
Finsbury	98,958	—	18	5	—	3	—	—	7	—	33	4·3	—	2	1	—	2	—	—	—	1	6	0·8	135	17·8	89
City of London	23,482	—	2	1	—	2	—	—	1	—	6	3·3	—	—	—	—	—	—	—	—	—	—	—	26	14·4	87
East Districts.																										
Shoreditch	117,033	1	13	12	—	3	—	—	12	—	41	4·6	—	1	—	1	8	—	—	—	2	12	1·3	178	19·8	129
Bethnal Green	130,207	2	34	46	—	1	—	—	9	—	92	9·2	—	1	—	3	6	—	—	—	4	14	1·4	194	19·4	134
Stepney	303,791	1	65	47	—	12	—	1	26	—	152	6·5	—	7	2	5	15	—	2	—	3	34	1·5	445	19·1	135
Poplar	169,905	1	34	30	—	4	—	1	20	—	90	6·9	—	5	—	5	13	—	—	—	1	24	1·8	247	19·0	143
South Districts.																										
Southwark	207,937	2	17	19	—	10	—	1	18	—	67	4·2	1	7	1	1	18	—	2	—	6	36	2·3	323	20·2	160
Bermondsey	129,397	3	27	12	—	3	—	—	14	—	59	6·9	—	6	—	1	11	—	—	—	3	21	2·1	207	20·9	144
Lambeth	310,359	—	32	32	—	7	—	1	18	—	90	3·8	—	14	3	4	1	—	2	—	7	31	1·3	396	16·6	100
Battersea	175,465	4	26	35	—	12	—	—	12	—	89	6·6	—	5	—	2	12	—	2	—	8	29	2·2	211	15·7	149
Wandsworth	257,586	1	46	32	—	5	—	—	21	—	105	5·3	—	3	2	2	6	—	1	—	1	15	0·8	304	15·4	113
Camberwell	268,384	—	35	21	—	1	—	—	25	—	82	4·0	—	10	—	—	16	—	1	—	4	31	1·5	315	15·3	130
Deptford	113,509	—	28	26	—	1	—	1	12	—	68	7·8	—	3	1	5	10	—	—	—	1	20	2·3	169	18·3	117
Greenwich	101,651	—	12	12	—	1	—	—	9	—	34	4·4	—	—	1	—	14	—	—	—	1	16	2·1	130	16·7	141
Lewisham	140,401	—	20	6	—	2	—	1	4	—	33	3·1	—	1	—	—	10	—	—	—	2	13	1·2	124	11·5	139
Woolwich...	123,416	—	19	8	—	3	—	—	4	—	34	3·6	—	2	—	2	13	—	1	—	4	22	2·3	155	16·4	147
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

last month, against 763, 734, and 752 at the end of the three preceding months; the weekly admissions averaged 107, against 109, 104, and 97 in the three preceding months. Enteric fever was rather less prevalent during February than in the preceding month; the greatest proportional prevalence of this disease was recorded in Hammersmith, Holborn, the City of London, Stepney, Southwark, and Battersea. The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 286, 246, and 166 at the end of the three preceding months, had further declined to 125 at the end of last month; the weekly admissions averaged 15, against 45, 30, and 16 in the three preceding months. Erysipelas was proportionally most prevalent in Hammersmith, St. Marylebone, Shoreditch, Poplar, Bermondsey, and Deptford. The 21 cases of puerperal fever notified during the month included four in Islington and two each in Hammersmith, City of Westminster, and Hackney.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various boroughs, the deaths occurring in public institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ending Feb. 27th the deaths of 5959 persons belonging to London were registered, equal to an annual rate of 16·7 per 1000; in the three preceding months the rates had been 16·2, 17·2, and 18·2 per 1000 respectively. The lowest death-rates in London last month were 11·5 in Lewisham, 12·9 in Hampstead, 13·4 in Stoke Newington, 14·0 in Kensington, 14·4 in the City of London, and 14·6 in Holborn; while the highest rates were 19·1 in Stepney, 19·4 in Bethnal Green, 19·8 in Shoreditch, 20·2 in Southwark, 20·5 in Chelsea, and 20·9 in Bermondsey. The 5959 deaths from all causes included 506 which were referred to the principal infectious diseases; of these, two resulted from small-pox, 142 from measles, 21 from scarlet fever, 59 from diphtheria, 190 from whooping-cough, 19 from enteric fever, and 73 from diarrhœa. In the City of London no death from any of these infectious diseases was recorded last month; among the various metropolitan boroughs they caused the lowest death-rates in Hampstead, Stoke Newington, Hackney, Holborn, Finsbury, and Wandsworth, and the highest rates in Chelsea, Southwark, Bermondsey, Battersea, Deptford, Greenwich, and Woolwich. Of the two fatal cases of small-pox registered last month one belonged to Islington and one to Southwark. The 142 fatal cases of measles were 39 below the corrected average number; among the various metropolitan boroughs measles was proportionally most fatal in Paddington, Kensington, Hammersmith, Fulham, Chelsea, and Holborn. The deaths from scarlet fever last month numbered 21, against an average of 49 in the corresponding periods of the ten preceding years; of these 21 deaths, three belonged to St. Pancras, three to Lambeth, and two each to Paddington, Chelsea, Hackney, Stepney, and Wandsworth. The 59 fatal cases of diphtheria showed a decline of 102 from the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Fulham, Stoke Newington, Hackney Bethnal Green, Poplar, and Deptford. The 190 deaths from whooping-cough were 24 below the average number in the corresponding periods of the ten preceding years; the greatest proportional mortality from this disease occurred in Poplar, Southwark, Bermondsey, Deptford, Greenwich, Lewisham, and Woolwich. The 19 fatal cases of enteric fever showed a decline of 27 from the corrected average number; of these 19 deaths two each were recorded in the City of Westminster, St. Pancras, Stepney, Southwark, Lambeth, and Battersea. The 73 deaths from diarrhœa were 20 in excess of the average number in the corresponding periods of the ten preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in the City of Westminster, St. Marylebone, Bethnal Green, Southwark, Battersea and Woolwich. In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was *nearly 30 per cent. below* the average.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 124 per 1000. The lowest rates of infant mortality were recorded in Hammersmith, St. Marylebone, Stoke Newington, Holborn, Finsbury, and the City of London; and the highest rates in Hampstead, Poplar, Southwark, Bermondsey, Battersea, Greenwich, and Woolwich.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Fleet Surgeon Leonard Henry Kellett has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets in His Majesty's Fleet (dated Dec. 5th, 1903).

The following appointments are notified: — Deputy Inspectors-General of Hospitals and Fleets: M. FitzGerald, C.M.G., to Jamaica Hospital and C. Pearson to Haslar Hospital.

ROYAL ARMY MEDICAL CORPS.

Major R. E. Kelly, from half-pay, retires on retired pay (dated March 12th, 1904). Major J. Girvin has joined the Home District for duty. Lieutenant-Colonel T. P. Woodhouse has been appointed to the charge of the Station Hospital, Umballa.

ROYAL ARMY MEDICAL CORPS (MILITIA).

Lieutenant M. A. Cholmeley resigns his commission (dated March 12th, 1904).

VOLUNTEER CORPS.

Rifle: The Queen's Rifle Volunteer Brigade the Royal Scots (Lothian Regiment): Surgeon-Lieutenant J. Scott to be Surgeon-Captain (dated March 12th, 1904).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Maidstone Companies: Surgeon-Lieutenant Colonel J. Cantlie, 7th Middlesex Volunteer Rifle Corps, to be Honorary Lieutenant-Colonel Commandant (dated March 5th, 1904).

ANTICIPATORY ANTISEPSIS.

A war correspondent of the *Daily Mail*, referring to an interview which he had had with Dr. Wada of the hospital at Chemulpho, where there are 24 of the men who were wounded on the *Variag*, makes the following remark. Speaking of the effects of the new Japanese high explosive shells he says that Dr. Wada recommends washing the bodies of the men and disinfecting their clothing before battle to prevent the pieces of cloth causing the wounds to suppurate.

DEATHS IN THE SERVICES.

Surgeon-Major Robert William Woollcombe, A.M.D. (retired), at his residence, Ellesdee, Westbury-on-Trym, near Bristol, on March 7th, in his eighty fifth year. He entered the army as assistant surgeon in March, 1845, and joined the 68th Regiment of Light Infantry. He retired from the service in February, 1857, with the rank of Surgeon-Major.

Correspondence.

"Audi alteram partem."

RAYS PROCEEDING FROM ACTIVE MUSCLES AND NERVES.

To the Editors of THE LANCET.

SIRS,—With reference to the letter from Mr. A. A. Campbell Swinton in your issue of March 5th we willingly admit that when we commenced to make "n"-ray experiments we were not sufficiently careful to try to eliminate heat effects, but it must be remembered that he and others were at that time publicly stating they could get no results at all and were inclined to believe "n"-ray phenomena were subjective. Since the publication of our paper and the confirmation of some of our observations by THE LANCET Mr. Swinton has fallen back on the heat theory and gives heat as a sufficient explanation of the "foot" experiment mentioned in our letter, and such of Professor Blondlot's results as he has been able to repeat. The matter therefore enters into another phase. "N" rays behave admittedly like heat in many of their manifestations and we have only had time to experiment with various heat screens as a means of sifting out the heat. Although we are reasonably sure heat cannot travel through these screens rapidly enough to produce the phenomena we have seen we do not regard the matter as proved with the same certainty as the objective existence of the rays which is easily settled by putting a calcium sulphide screen in front of a large board and getting some one in front to say when an operator at the back moves his wrist up to the rear of the screen. The proof of the non-penetration of heat simply needs time and experiments and on this point we would recommend a perusal of Professor Blondlot's letter in the *Electrician* of March 11th.

We admit that the light of a calcium sulphide screen will be increased by a warm boot, whether on the foot or off it, but in direct opposition to Mr. Swinton we contend the increase of the light is *not* stopped by the interposition of a heat screen if made of a material which is opaque to heat and not to "n" rays. Ordinary cardboard absorbs and holds water like a sponge and we believe the dampness of the cardboard was the cause of Mr. Swinton's failure to see there were muscle rays in addition to heat rays proceeding from the foot. We have repeated the experiment with a shallow false-bottomed wooden box between the foot and the luminous screen and find, as in a number of similar trials, that the light *does* increase from the muscle rays. But we will not take up any more of your space with such early experiments in view of the rapid advance made on the continent each week by a number of French physicists and printed in the *Comptes Rendus*.

Since our last letter we have successfully transmitted the rays along a copper wire and perceived the dull appearance of the light when the screen is held over the poles of a permanent magnet, compared with the brighter light when in the weak field in the neighbourhood. This does not seem to us a proof that the result is due to the magnetism but it is strong evidence against the heat theory.

For the purposes of medical diagnosis the transmission of the rays by means of a wire is much the most convenient method. One end of the wire, attached to a metal button, can be placed on the muscle, while the screen, fixed at a convenient distance away, can be observed at ease. The transmission along the wire travels slowly but the increase in light is quite evident. The reason of the curious pulsation that takes place we have had no time to investigate nor have we been able to find out precisely why all our experiments are occasionally a failure, although we believe our eyes, and not the rays or screen, are at fault. At any rate, we warn readers against attempting any trials except in the early morning or after sunset unless they prepare their vision by shutting themselves in a dark room for about half an hour previously. The easiest muscle ray effect to observe is the increase of light in the screen when it is held in the right hand and the left wrist passed slowly under it. This is, in our opinion, a magnified effect due to eye or brain augmenting a real increase. Unless this can be seen it is useless for the would-be observer to make any further trials with his own eyes. He must work by deputy.

In conclusion, we may point out that the experiments of M. Gilbert Ballet described in the annotation in your last issue (p. 740) seem to us the beginning of new methods of medical diagnosis certain to be developed much further and of which we can only dimly see the importance at present.

We are, Sirs, yours faithfully,
HUGH WALSHAM, M.A., M D. Cantab., F.R.C.P. Lond.
LESLIE MILLER, A.M.I.E.E.
March 15th, 1904.

ASTIGMATISM AND "EYESTRAIN."

To the Editors of THE LANCET.

SIRS,—The letter of Dr. G. M. Gould, of Philadelphia, in THE LANCET of March 12th, p. 755, commenting upon your recent article on his views concerning "eyestrain," is one which I think should not be suffered to pass without notice from English ophthalmologists. As one of the seniors among them, I venture to offer a few observations upon the subject.

It was my privilege to be well acquainted with Professor Donders; and, shortly after the publication of his *Astigmatismus und Cylindrische Glæser*, I furnished a London monthly medical journal, then edited by the late Dr. Alfred Meadows, with what, except for the scarcely known papers of Young and Airy, was, I believe, the first general description of astigmatism which appeared in English. My attention was, therefore, early directed to the subject; and about 12 years ago, in a statistical summary of the cases of 10,000 consecutive private patients, which you were good enough to publish, I mentioned that 1400 of them, or 14 per cent. of the whole, had presented degrees of astigmatism for the relief of which cylindrical glasses were required. I therefore venture to think that I have some practical knowledge of the condition.

My experience has led me to form the following opinions: (*a*) that a small degree of astigmatism discoverable by minute examination is rather the rule than the exception in the human eye; (*b*) that in the great majority of persons an astigmatism not exceeding half a dioptre is easily corrected by the accommodation, and produces no symptoms of any kind; (*c*) that astigmatism of the cornea is often either increased or corrected by similar or opposite astigmatism of the lens, and that astigmatism of the eye as a whole may therefore either appear or disappear at the period of presbyopia, as a consequence of failing accommodation or of lenticular changes; and, (*d*) that the "eyestrain" alleged to exist in America as a consequence of low degrees of astigmatism has no parallel in the experience of English practitioners.

The 14 cases referred to by Dr. Gould do not impress me. They rather remind me of an anecdote concerning a polite and cautious lawyer, placed at the same dinner-table with a fire eating colonel who was relating his wonderful adventures by flood and field. At the conclusion of one of these, the lawyer said, "That was, indeed, a most extraordinary incident. I suppose, colonel, that if you had not seen it yourself you would not have believed it?" "I certainly should not," replied the colonel. "Ah," rejoined the lawyer, "I take entirely your view of the case. I did not see it, and so, &c." Moreover, I am old enough to remember when the many women who were poetically described as "stranded upon the shores of life" were all said to be suffering, not from astigmatism, but from ulceration of the cervix uteri, and to be curable by the local application of silver nitrate, or, in extreme cases, of *potassa fusa*. In our own day, adenoid growths have been exalted to a high place in the pathology of childhood. Like the poor, these things are always with us.

If I also may mention cases, I will select two which I have studied with some care; one of them my own, the other that of a lady whom I have known all her life. I passed through youth and early manhood with vision well in excess of $\frac{6}{6}$ths, reading and writing much, and without consciousness that I had eyes. At about 40 I recognised the beginning of presbyopia, and commenced the use of glasses for evening reading and for operating. My latent hypermetropia gradually became manifest, and before I was 60 had reached the degree of 2·50 D. At about 70, I found my distant vision to be a trifle less clear than it had been; and it was at once restored to its former condition by adding to my + 2·50 distance glasses horizontal cylinders of + 0·50. With these, in my seventy-sixth year, I still have $\frac{6}{6}$ths. I assume the appearance of the astigmatism to have been due either to lenticular changes or to the loss of the last shred of accommodation; but my point is that I have never in my life, either before the astigmatism was corrected or since, experienced a trace of ocular discomfort or incapacity.

The lady is highly hypermetropic, and suffered much inconvenience during childhood. At eight years old, she could only read in the evening by standing on a chair under a gas-burner, so as to bring her book close to the light. When she was about 20, I gave her spherical glasses of + 4 50 D and she wore them constantly, for all uses, for 20 years, and was quite comfortable. She was and is a great reader, but, with the help of the glasses, had sufficient accommodation for near work until she was about 40. At that time, a few months ago, she told me that she wanted more power for reading, and on testing her distant vision I found that, like my own, it was improved by a cylinder of + 0·50. I added this both to her distance and to her somewhat stronger reading glasses, and she sees perfectly. Her astigmatism never had any other effect than a slight diminution of her visual acuteness.

We are not without experience in London of the employment of very weak cylinders. They are often recommended and supplied by unqualified persons who advertise themselves as "ophthalmic opticians" or by similar titles, and who find in the alleged need for cylinders a plea for making high charges for the glasses which they sell. Scores of such glasses have been brought to my consulting-room at different times, with complaints of their inefficiency; complaints often due to the inadequacy of the spherical element rather than to the presence of a negligible cylinder. I am unable, nevertheless, to attach any importance to Dr. Gould's suggested experiment of putting cylindrical glasses upon a non-astigmatic person. I think it probable that the accommodation learns to mask or to overcome a congenital defect, although it might easily be embarrassed by a similar defect *suddenly and artificially produced in an adult.*

One word more. Dr. Gould tells us that "there is no more clearly demonstrated fallacy, no greater scientific error" than the opinion expressed by Professor Donders that astigmatism of less than a dioptre was seldom disturbing to vision. This opinion was neither a fallacy nor an error, but a simple statement of Professor Donders's personal experience, unquestionably trustworthy as far as it went, although, if Dr. Gould be right, the experience may have been insufficient to afford a basis for a general conclusion. But, assuming it to have been either a fallacy or an error, how could it possibly have been both? A fallacy, except in the speech and writing of the vulgar, is a sophism, an erroneous method of argument; while an error is a mistaken conclusion, to which a *fallacy* would naturally lead. To accuse Professor Donders of either, more especially of the "fallacy," is, I think, to fail in the respect due to his memory and to his great services to ophthalmology, and to commit at least an *error of taste, even if not an error of judgment.*

I am, Sirs, your faithfully,

March 14th, 1904. R. BRUDENELL CARTER.

THE MODE OF INFECTION BY NEMATOIDS.

To the Editors of THE LANCET.

SIRS,—I note the amusing suggestion by Dr. G. C. Low that I have failed to discriminate between embryo and adult nematoids but pass on to his statement that I was "peculiarly unfortunate" in referring to Manson's view that young specimens of Filaria nocturna "escaping into the water in which the mosquito died, it is through the medium of this fluid brought into contact with the tissues of man." This certainly was the commonly received view till about three years ago and at the time of writing I had unfortunately forgotten Dr. Low's interesting confirmation of Bancroft's [illegible] might be found in the [illegible] the head of Culex fatigans [illegible] This fact is now well known and has been verified by other observers.

The fact, however, by no means settles the question as to the mode in which infection by Filaria nocturna commonly takes pl[illegible] tion of [illegible] by Dr. [illegible]

partially developed worms happen to be found in the proboscis it seems by no means necessary to adopt the [illegible] parasites so [illegible]ity to enter [illegible] on man."[1] [illegible], "so far as Mr. Low's observations have gone there is nothing in them to negative the theory that filariasis is a waterborne disease," and he brings forward several well-attested facts favouring this latter supposition and opposed to the notion of direct infection through the proboscis of the mosquito.

Then, again, an important consideration advanced by Manson must not be lost sight of. He says: "My belief is that before embryos can be found in the blood by ordinary [illegible] of parent filariæ must [illegible] ny cases we know that [illegible] ent." Which mode of infection is most likely to give rise to the large number of parent worms commonly met with? The drinking of contaminated waters and the passage of embryos through the intestinal canal and into the lymphatic system would seem to favour this multiple infection more than direct infection through the proboscis of the mosquito when the embryo would be as likely to pass into the connective tissue of this or that exposed portion of the body as into one of the blood vessels of the part. I am far from denying the possibility that infection may take place in this latter way, but I believe in the more than equal probability that infection is brought about by contaminated water or food, and think it wrong that this possibility should be ignored. It was with a view to favour this consideration that I have dwelt upon my own experience as showing that young nematoids are from the first well equipped for an independent existence, that they undergo nothing worth the name of a metamorphosis and may therefore need no intermediate host.—I am, Sirs, yours faithfully,

H. CHARLTON BASTIAN.

Manchester-square, March 15th, 1904.

CHLORETONE IN SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS,—Permit me to thank the correspondents who have, in answer to my letter of Jan. 23rd, so kindly contributed to your columns their experiences of chloretone in sea-sickness and at the same time, if not encroaching too much on your valuable space, to make a few remarks.

It is very gratifying to learn that we have now such a reliable prophylactic against the so much dreaded sea- and train-sickness, yet it appears capriciously to fail in a few instances. These failures might be prevented were we better acquainted with the *modus operandi* of the remedy. The anæsthetic effect of chloretone on the gastric mucous membrane suggested by Mr. H. Cameron Kidd is an explanation which seems to me hardly sufficient to account for all the facts. The observation by Dr. O. Clayton Jones of its successful use in cases of nervous origin, its hypnotic effect, and the results obtained with it in my own practice seem to prove that it acts also on the nerve centres.

In one case, for example, the pains of spasmodic dysmenorrhœa, headache, and vomiting all subsided in about half an hour after administration of 15 grains of chloretone and in less than an hour tranquil sleep ensued.

The occasional failure of chloretone to prevent sea-sickness may be due in some instances to its interference with the secretion or action of the digestive ferments and, if so, that source of failure might be avoided by taking a full dose of the drug on an empty stomach and refraining from food for an hour or two afterwards. It is to be regretted that Mr. L E. Ellis did not give information on that point. Hoping that these remarks may be of service to others and that further information on this important subject may be elicited in your columns,—I am, Sirs, yours faithfully,

Seven Kings, Ilford, March 2nd, 1904. JOHN DUNLOP.

PREVENTION OF INFECTIOUS DISEASE IN BATH.

To the Editors of THE LANCET.

SIRS,—Your correspondent *Dr. Preston King*, in a letter on the above subject in THE LANCET of March 12th, p. 755, raises an important legal point with reference to infectious diseases. The point is as to whether Section 126 of the Public Health *Act, 1875, applies to measles and whooping-cough.* Dr. King also refers to diseases which are scheduled. I take *it* that he means by that term the diseases mentioned in Section 6 of the Infectious Disease (Notification) Act, 1889, and any *other* infectious disease to which the Act has been applied. If that be so, *Dr. King says*: "It is a fact, not a question of opinion at all, but simply a matter of fact," that Section 126 of the Public Health Act applies to those di*seases only* mentioned in Section 6 of the Notification Act. That is a very decided position to take up, and as Dr. King is so confident on the matter I shall be glad if he will be good enough to point out through your columns the section and Act upon which he relies. I am not aware of the existence of any section in the Notification or any other Act which limits the operation of Section 126 of the Public Health Act, 1875, to the particular diseases mentioned in the Notification Act.

[illegible] (Prevention) Act, 1890, only [illegible]

A disease [illegible] must be both dangerous and infectious. Mumps is a very infectious disorder, but not dangerous, hence the above section would not apply to it. The word "dangerous," I take it, means dangerous to life. There is no doubt but that the above section applies to scarlet fever. Are not both measles and whooping-cough as infectious diseases even more dangerous than scarlet fever? The following were the death rates for England and Wales during the past year for each of these diseases: scarlet fever, 0·12; measles,

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[1] Brit. Med. Jour., June 16th, 1900, p. 1456.

0·27; and whooping-cough, 0·27 per 1000 respectively. Again, erysipelas is included in the Notification Act. Does Section 126 apply to it and is it a dangerous infectious disorder?—I am, Sirs, yours faithfully,

J. T. NEECH, M.D. Durh..
Medical Officer of Health of Halifax.
March 13th, 1904.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Royal Infirmary: Opening of a New Operating Theatre; Tribute to the late Dr. Alexander Davidson.

A NEW operating theatre, the gift of an anonymous benefactor, was opened on March 9th by Mr. E. R. Bickersteth, the President of the Royal Infirmary. The gift will complete a scheme for four operating theatres and two lecture theatres, equipped with every necessary appliance and all thoroughly up to date. The new theatre, of which Mr. G. G. Hamilton will be the surgeon-in-charge, is all that is desirable. Every effort has been made to insure the maximum of light—both natural and artificial—pure air, and clean conditions of work. The appliances are all under the ready control of the operator and his assistants; in fact the simplicity of everything is most noticeable. A feature of the sterilising equipment is the absence of expensive apparatus in the basement. The close proximity of the sterilising apparatus to the operating table will be an enormous advantage to the patient, as the dressings will go straight from the steriliser on to the wound, none of the assistants, except the surgeon, touching even a needle. Mr. Hamilton gave an interesting demonstration to the ladies and gentlemen present on the simplicity of the arrangements. He laid stress on the presence of the hot steam pipes which enabled rapidity of boiling and the advantage of everything being so close at hand to the operator.—At the recent meeting of the committee of the Royal Infirmary the following motion was carried unanimously:—

> That the committee desires to place on record its sense of the great loss the institution has suffered by the death of Dr. Alexander Davidson, who had been connected with the infirmary for so many years and who took so large an interest in its rebuilding. Dr. Davidson was honorary physician from 1876 to 1897 and he was never lacking in attention to the patients in his wards who during this long period had the benefit of his great skill and knowledge. On his retirement from this position he was appointed an honorary consulting physician and by his death the hospital has lost a devoted friend.

The Liverpool School of Tropical Medicine: A Year's Results

The fifth annual report of the Liverpool School of Tropical Medicine, presented in the form of a large-sized pamphlet, records the completion of a successful year's work. The results of the teaching and operations are now beginning to appear and testimony is constantly arriving from West Africa and other unhealthy regions in the tropics that health conditions have very much improved where the recommendations of the school have been followed. The director of the school (Major Ronald Ross, late I.M.S.), had received from the general secretary of the Compagnie Universelle du Canal Maritime de Suez, Paris, a letter stating that as a result of numerous works of drainage, filling up of ditches, oiling cisterns and pits, and suppressing marshes and pools of water, &c., at Ismailia, the number of fever cases had very sensibly diminished. Complete disappearance of anopheletes had not yet been realised but insects recently captured were found not to be infected. The mosquitoes called culex had, however, been suppressed almost completely, so that in the hottest period of the year it had been possible to abandon the use of mosquito nets. Information from another source as to the actual number of cases of malaria shows that they had been reduced from 2000 in 1902 to 200 in 1903. The marked success of the experiments carried out at Ismailia had attracted much attention throughout Egypt and it was hoped that it would stimulate to increased energy those towns on the coast of Africa which remained infected by malaria. The annual cost to the Suez Canal Company for maintaining this remarkable sanitary condition was about £700. Similarly spontaneous testimony is also borne to the improvements in the general health at Cape Coast, Iquito, Peru, and other places owing to attention to improved sanitary details. The report further enumerates the various expeditions undertaken by Major Ross and others since the formation of the school and gives much interesting information regarding experimental and research work carried on in the laboratories of the University of Liverpool. The committee, while thanking generous supporters, indicates that it would be more encouraging if the number of subscribers were larger.

The Recent Small-pox Outbreak in Liverpool; History of Development; Preventive Measures and Vaccination.

Dr. E. W. Hope, the medical officer of health, has published an interesting report dealing with the conditions existent during the outbreak of small-pox in the city in the latter part of 1902 and the whole of 1903 The scourge appeared in October, 1902, and continued for 15 months, afflicting in all 2032 people. But for the extraordinary vigilance and activity of Dr. Hope and his staff greater havoc must have been caused by the loathsome malady. The prevalence in 1902 owed its origin to importations on 23 occasions by sea and on 16 occasions by tramps. During September, 1902, 15 cases occurred in the city, eight of which were directly connected with previous cases, three having been discovered at their homes by the corporation inspectors. The source of infection of six (three being found in one house) was uncertain. The remaining case was brought into the port from Bilbao. The extension of the outbreak originated with an unrecognised case in Robsart-street—an unvaccinated infant to whom no medical man had been called until it was dying from the disease after an illness of eight days. The child was actually dead by the time an intimation had been received by the medical officer of health. On visiting the house all the other occupants, six in number, were found to be suffering from the initial stage of small-pox. All were removed to hospital and the house was thoroughly disinfected by the sanitary staff. A house-to-house visitation resulted in 20 more cases being discovered by the officers, most of them being friends of the family. From this time onwards, in spite of the measures taken to check it, the disease continued slowly to gain ground; the number of cases which occurred in the vicinity of Robsart-street during the three months ending January, 1903, was 99, of which 68 were discovered by the staff as a result of house-to-house visitation. Accompanying Dr. Hope's report is a series of interesting maps and charts showing the gradual spread of the disease. From one case in Lansdowne-street the infection was traced to 29 cases. Doubt as to the nature of the illness proved another fruitful source of dissemination. Owing to the fact that a large number of cases, modified by vaccination, were regarded by the medical adviser as chicken-pox it became necessary to schedule chicken-pox as a notifiable disease in order that doubtful cases might be visited by a medical officer experienced in small-pox. The value of this measure was confirmed by the fact that 54 cases of small-pox which were under treatment as chicken-pox were discovered and dealt with. During the time that small-pox was most prevalent as many as 2000 families were visited daily by the inspectors, with the result that 470 cases were discovered that otherwise would have escaped detection. The report deals with the efficacy of vaccination and the dangers of infection carried in public conveyances, &c. The maximum number in hospital at any one time was 335 on March 19th, 1903. The report also deals with the small-pox hospitals and the Vaccination Acts.

March 15th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

University of Glasgow: Honorary Degrees.

AMONG the names published of those on whom the Senate of the University of Glasgow has resolved to confer the honorary degree of Doctor of Laws (LL.D.) are two of special interest to the medical profession—viz, William Stirling, B.Sc., M D., Brackenbury professor of physiology and histology, the Owens College, University of Manchester, and Sir William Taylor, K.C.B., M.D., Director-General of the Army Medical Service, War Office, London. The graduation ceremony will take place on Tuesday, April 19th.

The Royal Philosophical Society of Glasgow.

At a meeting of this society held on March 9th Professor Robert Muir of the University of Glasgow delivered the fourth of the centenary series of lectures, the subject of his address being Some Advances in Medical Science during the Nineteenth Century. The lecturer dealt chiefly with the development of the science of bacteriology and its influence on medical and surgical practice. He passed in review the work of Virchow, Pasteur, Lister, and Koch and then dealt with some of the important events of recent years—for example, the discovery of the bacillus of plague and Ross's establishment of the mosquito cycle of the malarial parasite and the success of the American Army Commission in stamping out yellow fever. He then referred to the subject of bacterial toxins and antitoxins and the application of the latter in the treatment of disease, particularly diphtheria; also to the methods of protective inoculation introduced by Pasteur for fowl cholera, anthrax, and rabies, and their further elaboration and application in the treatment of cholera, plague, and typhoid fever; and lastly, to recent researches which had shown the existence of a class of micro organisms invisible as yet to the microscope—a subject of immense interest in connexion with those infectious diseases the etiology of which is still unsolved

Small pox in Glasgow.

The medical officer of health (Dr. A. K. Chalmers) in his last report shows that 26 patients were admitted to hospital during the week ending Thursday, March 10th, being seven more than were admitted during the previous week. The numbers are, however, diminishing, as is shown by comparing the number under hospital treatment for each of the last three weeks—viz., 157, 121, and 113.

Western Infirmary, Glasgow.

The Partick dean of guild court on March 10th passed plans for the erection of an additional wing to the Western Infirmary which it is estimated will cost £20,000. This new wing will form the first part of a new block which the governors propose to erect and which altogether will cost £100,000. This is in addition to the new dispensary which is now approaching completion. The building, the plans of which have just been passed, will give ward accommodation for 59 beds, while the other two wings required to complete the whole new block will give further accommodation for 88 beds and will include two large operating theatres and a fully equipped gynæcological department.

Reconstruction of the Royal Infirmary, Glasgow.

The first list of subscriptions to the supplementary fund opened on [illegible] he Royal Infirmary [illegible] in all to £97,655. [illegible] the new scheme hav [illegible] ves fully £100,000 still to be obtained.

Memorial to the late Professor Nicol, Aberdeen.

Dr. W. Mackie, 13, North-street, Elgin, who has been appointed secretary and treasurer of a movement for the purpose of getting up a memorial to the late Professor Nicol of the University of Aberdeen, has been doing his best to promote the scheme and a committee has been formed for the purpose of collecting subscriptions and of advising as to a suitable form for the memorial, a suggestion being that it should be a memorial brass similar to those erected to the memory of his predecessor and his successor, the late Professor Macgillivray and the late Professor Nicholson. It is felt that a suitable memorial should be erected to the memory of the distinguished stratigraphist who did valuable work during his 25 years' tenure of office in the University of Aberdeen. The members of the arts class of 1874 to 1878 are taking a keen interest in the movement.

Montrose Asylum and Infirmary.

The managers of the Montrose Asylum and Infirmary met on March 1st, Mr. J. M. Ross presiding. It was intimated that Dr. George A. Johnston, junior assistant at Sunnyside Asylum, had been appointed to fill the vacancy caused by the resignation of Dr. A. H. Cassells, at a salary of £200. The asylum statistics for February were submitted by Dr. J. G. Havelock. They showed that six patients were admitted to the institution during the month, four were discharged, one was transferred, and one had died, leaving 682 on the register at that date, of which six were voluntary patients. Of the 682 patients, 254 were from the county and 76 were from Dundee. The clerk read the infirmary statistics for February. 18 patients were admitted, 14 were discharged cured, one was improved, one was not improved, and three had died, leaving 18 patients in the house at that date.

March 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Belfast District Lunatic Asylum.

AT the usual monthly meeting on March 14th it was reported that there were 1071 (507 males and 564 females) on the asylum register. The public auditor has disallowed the expenditure which had been incurred during the year on days when lunatics had been released from the asylum. This was considered strange, as the cost on such days is generally greater than on ordinary ones and the auditor's predecessor had allowed it. It was decided to write to the Chief Secretary on the matter. A motion to place on record appreciation of the valuable services rendered to the institution by the resident medical staff (based upon Sir G. P. O'Farrell's complimentary report) was lost by the casting vote of the chairman. All spoke highly of the work of the medical staff but some could not vote for such a motion simply on the ground that it was unusual and unprecedented.

Prevention of Tuberculosis.

In connexion with the proceedings preliminary to the erection of a sanatorium in the county of Cork credit is due to the Midleton district council as the one which initiated the movement and organised the formation of a united district. 20 districts comprising the entire county united without a dissentient. This pioneer example is likely to be followed by others in Ireland.

March 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Asylums for those Temporarily Indigent.

To put an end to the overcrowding of the hospitals by chronic patients Dr. Babinski has set on foot a scheme for the construction of institutions which will occupy an intermediate position between a hospital and a casual ward and to which those temporarily ill ("*demi-malades*") may be admitted when they like, on presentation of an admission card which will be given to them after they have undergone a rigorous medical examination. If any crisis arises in their condition they will be cared for by the hospitals physicians but they will not be admitted, save only exceptionally, to the hospitals. After or between their attacks they will find shelter for the night and will be provided with food enough to remove all danger of starvation although not enough to make them anxious to remain permanently in the asylum or to take away their wish to find work. This seems an admirable plan. Those who are really infirm, the "*demi-malades*," and those who can only work intermittently will no longer find themselves confronted with the dilemma of either going into hospital where they cannot look for work or else of starving outside the hospital and the Assistance Publique will no longer waste vast sums of money for nothing. The public knowing that under this scheme any one really infirm will be helped will no longer let itself be exploited as is the case at present and will no longer provide the funds to perpetuate the evil of helping people indiscriminately. Finally, it goes without saying that the sham poor and the malingerers will be rapidly put an end to. Some such institution as that just described is all the more necessary in view of the fact that the Prefect of Police has just made some modifications in the casual ward (*dépôt de mendicité*) at Nanterre. Instead of this institution being confined exclusively as heretofore to vagabonds found on the highway who are taken in and placed under a kind of penal *régime*, the asylum will in future receive those temporarily out of work and homeless who can go in and out freely. The proceeds of their work (when they get any) will go to defray the expenses of the institution.

Appointments.

Dr. Albert Calmette has recently been elected by 40 votes out of 47 a corresponding member of the Academy of Sciences. He is well known as the director of the Pasteur Institute at Lille. He commenced professional life as a medical officer in the colonial service and distinguished himself by carrying out a number of scientific researches which have had practical applications. Another appointment, and one which has attracted more attention in Paris, midwives with a full understanding that they would work at district midwifery for a certain number of years. Miss Gregory then explained in detail her scheme and observed that the National Training School for District Midwives would be commenced first of all by training a few midwives. Dr. C. J. Cullingworth thoroughly endorsed the views expressed and concluded his speech by thanking the Countess of Stamford for occupying the chair.

GENERAL HOSPITAL, BIRMINGHAM.—The 124th report of this institution states that during the year 1903 the number of in-patients treated was 5366, a decrease of 276 as compared with the previous year, but the daily average of patients in the hospital was 289¼, as against 288½ in 1903. Of the in-patients admitted 1128 were children under 12 years of age, of whom 206 were under two years. The out-patients were 64,926, or 2407 more than in the previous year. The number of operations performed was 2137. The amount accruing from subscriptions and extra tickets was £8002, only £152 more than in the previous year. The donations were £402, as compared with £436, and special congregational collections £57, as against £67. £6715 were placed to the credit of the current account as the moiety of legacies received during the year, as compared with £675 in the year 1902. The ordinary expenditure was £24,841 19*s.* 1*d.* and the extraordinary £117 0*s.* 1*d.*, while the sum of £332 1*s.* 7*d.* was transferred to the Jaffray branch account to meet the deficit at that institution, making a total of £25,298 16*s.* 1*d.* The adverse balance, £11,423 16*s.* 9*d.*, brought forward from the year 1902 has been reduced to £7302 18*s.* 0*d.* The board urgently appeals for new and increased subscriptions, for donations, and for bequests, so that the work of the hospital may be continued for the benefit of the sick and suffering in the Midlands.

THE REMOVAL OF KING'S COLLEGE HOSPITAL.—A meeting was held at the Mansion House on March 11th in furtherance of the appeal for funds to enable King's College Hospital to be removed to South London. The Lord Mayor presided and among those present were the Archbishop of Canterbury, the Bishop of Rochester, the Rev. A. C. Headlam, D.D. (Principal of King's College), Dr. David Ferrier, and Mr. W. Watson Cheyne. The Lord Mayor said that owing to the recent great changes in the character of the neighbourhood, coupled with the proximity of Charing Cross Hospital, there was no longer the same necessity as formerly for a large hospital in that locality. Great numbers of people who used to live in Drury lane and other streets adjoining the Strand had now gone elsewhere and on the whole there was little doubt but that the hospital would be more useful in Camberwell than on its present site. In Camberwell there was a considerable population of very poor persons to whom facilities for obtaining advice at a hospital would be a great blessing. Mr. W. F. D. Smith, M.P., said that the removal of the hospital had become imperative on account of the fact that the existing buildings in some respects fell short of modern requirements and extension of them was impossible. Moreover, the formation of a wide thoroughfare from Holborn to the Strand had necessitated the demolition of a great many houses and one result of these improvements would be the reduction of the population of the district by not less than 4000 persons. There were, in fact, at the present moment too many hospitals concentrated in Central London, while, on the other hand, South London was in great need of a general hospital. A sum of £300,000 would be required for the completion of the first portion of the buildings on the new site. It was intended to have a limited competition for plans for a hospital of 600 beds and Mr. Rowland Plumbe, F.R.I.B.A., had consented to act as assessor in the competition. The scheme had the approval of the authorities of the King's Hospital Fund, who had given a substantial donation. The Archbishop of Canterbury, at the conclusion of a sympathetic address, moved "that this meeting cordially approves of the scheme to remove King's College Hospital to South London and pledges itself to do its utmost to insure the success of the movement." Dr. Ferrier said that, as representing the medical staff of the hospital, he desired to refer briefly to a few special aspects of the case. It was only in great hospitals which were also educational institutions that medical practitioners could obtain practical training in the diagnosis and treatment of disease, and King's College Hospital, which had for many years ministered to the sick of a large poverty-stricken district, had also sent out thousands of qualified men to practise their profession in every part of the globe; many important additions to medical knowledge had also been made there. The medical and surgical staff were now unanimously of opinion that removal of the hospital to a more populous district such as Camberwell was advisable in the interests both of the poor and of the medical school. The motion, which was seconded by Mr. C. E. Tritton, M.P., and was also supported by the Bishop of Rochester and Mr. Watson Cheyne, was carried unanimously.

MEDICAL COUNTY COUNCILLORS.—Dr. George A. Cohen has been elected a county councillor on the Middlesex County Council for the Harringay division of Middlesex, and Mr. Horace Rose has been elected to the Bucks County Council for the Eastern division of Aylesbury.

DONATIONS AND BEQUESTS.—The Goldsmiths' Company has made a special grant of £750 to the Royal London Ophthalmic Hospital in response to the committee's centenary appeal.—By the will of Mr. Joseph Jackson of Rosebank, Scotforth, Lancashire, £300 are bequeathed to the Royal Lancaster Infirmary.—Mr. H. W. H. Faulenbach of Enfield, Middlesex, has by his will bequeathed £500 to the German Hospital, Dalston.

SOCIETY OF ARTS.—At a meeting of the Society of Arts, held on March 2nd, Dr. Robert Jones of the London County Asylum at Claybury in Essex read a paper on the Physical and Mental Deterioration of the Lower Classes of the British Population. Many of our readers will be aware that Dr. Jones maintains that this deterioration is on the increase. A copious exposition of his opinions appeared in THE LANCET of August 8th, 1903, p. 366. In the ensuing discussion, however, most of the speakers took a more favourable view of the circumstances. Sir William S. Church, who presided, said that it was universally admitted that public health was better at the end of the nineteenth century than at its beginning and if this belief were proved to be unfounded then the alleged progress and prosperity of the Victorian era must be a myth. Dr. Harry Campbell said that the subnormal physique of urban populations was due principally to the use of soft food which required little or no mastication. Dr. Campbell's views were published at length in several issues of THE LANCET in July and August, 1903. Dr. William Hall held that the evils complained of arose through mothers not suckling their infants. Sir Ralph Knox of the War Office, speaking of the arguments drawn from the recruiting returns, said that there had always been a large proportion of rejections and that a recruit after his first rejection often renewed his application elsewhere, so that his rejection appeared more than once in the returns.

THE PRUDENTIAL ASSURANCE COMPANY.—The directors of this assurance company have recently presented their fifty-fourth annual report which shows that the company is still making headway. The report shows in detail the separate finances of the ordinary branch and the industrial branch. The last-named branch includes all those millions of people who pay 1*d.* or a few pence per week which are collected by the army of agents of this company. The accounts for the year ending Dec. 31st, 1903, contain an item in this respect of £1,588,768 paid as salaries to 15,593 agents for the weekly collection of premiums from 14,287,406 policies in the industrial branch, and it is also interesting to note that in the same branch the medical fees paid are stated to be £55 875 1*s.* 9*d.* For the purposes of readily grasping the magnitude of the business we have added the figures for the two branches together and they show that for the year ending Dec. 31st, 1903, the premiums received amounted to £9,661,410, that the claims made amounted to £3,624,510, that the number of deaths was 217,450, that the policies in force at the end of the year numbered 15,912,487, that the total assets of the company on Dec. 31st, 1903, were valued at £51,217,377, and that the liability to shareholders was only £1,000,000. In this connexion it is interesting to note from the Insurance Blue Book and Guide for 1903-04 that the dividend on the shares, which are of £5 each, for the last financial year was 5 per cent. and that a bonus of 44*s.* per share was paid in 1902 and that the recent average price of the share was £65. It may be interesting to note that the assets of the company are chiefly invested in loans on county council, municipal and other rates, railway, gas, and water stocks, and mortgages on property within the United Kingdom.

Parliamentary Intelligence.

HOUSE OF COMMONS.

WEDNESDAY, MARCH 9TH.

National and Research Scholarships.

which reference is made formed
paid as allowances to students i
decided upon not recently but
Royal exhibitioners £50 a se

scholars 30s a week; and to students in training 21s. a week. The Board was of opinion that it was desirable to equalise these rates and decided that for national scholarships and studentships in training alike the rate should be 25s a week. The new rates were duly announced in 1901 but did not take effect until 1902 and then only in the case of new scholars. The students to whom these awards are made receive also railway fares for one journey to and fro each session between their homes and London and are admitted free to lectures and laboratories of the Royal College of Science. There is no separate class of research scholarships but

reconsidered.

Indian Medical Service.

Sir SEYMOUR KING asked the Secretary of State for India whether he

During such leave the ordinary furlough pay will be given, with lodging allowances of 4s, 6s, and 8s. a day for lieutenants, captains, and field
Medical Corps the
somewhat different.
Army Medical College
ordinary pay. The ex
with the examination
officers of the Royal Navy are required to undergo a post-graduate course of three months

THURSDAY, MARCH 10TH.

Committee on Physical Degeneration.

Sir JOHN GORST asked the Secretary to the Board of Education whether he would state what were the terms of reference to the

medical data for an accurate comparative estimate of the health and physique of the people; (2) to indicate generally the causes of such physical deterioration as does exist in certain classes; and (3) to point out the means by which it can be most effectually diminished.

Tuberculosis Commission.

Mr. FIELD asked the President of the Local Government Board whether he would state if it was the intention of the Tuberculosis Commission to issue an interim report and if so how soon it might be expected.—Mr. LONG answered: I understand that the Commission does not intend to issue an interim report.

Plague in India.

Mr. WEIR asked the Secretary of State for India to state the number of persons who died from plague in Central India and Rajputana respectively during January, 1903, and January, 1904.—Mr. BRODRICK replied: The numbers are: Central India, January, 1903, 92; and January, 1904, 3721. Rajputana, January, 1903, 10; and January, 1904, 716.

Mr. WEIR also asked what percentage of persons inoculated with serum in India subsequently died from plague.—Mr. BRODRICK replied: Calculated on the figures of inoculations and death in the several provinces given by my predecessor in office in reply to a question asked by the honourable Member on June 11th, 1903, the percentage of deaths is 0.24. I have no later information on the subject but the Government of India has lately taken steps to secure a more accurate record for the future.

Amendment of the Pharmacy Act.

Mr. O'MALLEY asked the First Lord of the Treasury whether he

Pharmacy Act which is in preparation.

Bovine Tuberculosis.

On the London County Council (General Powers) Bill Sir E. STRACHEY moved an instruction to the committee to insert provisions to safeguard the interests of the owners of cows suspected to be suffering from tuberculosis of the ud
proposed that before slaughter the
off
of
sho
the Council should pay special damages.—Sir HERBERT MAXWELL, the chairman of the Royal Commission on Tuberculosis of 1895, explained that there was a great difference between generalised tuberculosis and localised tuberculosis, and he suggested that the mover of the motion did not realise that tuberculosis of the udder was one of the rarest forms of

FRIDAY, MARCH 11TH.

The Adulteration of Brandy.

Mr. T. M. HEALY asked the Chancellor of the Exchequer whether

inquiries into the facts and shall be obliged if the honourable Member will defer his question till these inquiries are completed.

MONDAY, MARCH 14TH.

Outbreak of Disease at Finchley.

Dr. FARQUHARSON asked the President of the Local Government Board whether his attention had been called to the report of the medical officer of health of Finchley on a recent outbreak of disease due to milk similar to that which occurred in Woking last autumn and whether he intended to introduce legislation this session with a
the future.—Mr. LONG answered
rred to in the question. I have
slation but I cannot promise to
he present session.

Vaccination Statistics.

Answering Mr. WEIR, Mr. LONG said: According to the information *in statu pupillari* his conduct gave them no cause to revoke their leniency, we cannot think that the Colleges would be right to refuse their diplomas to him. No one is more anxious than we are to keep the ranks of the medical profession from the first day of registration as a medical student purged from all wrong-doers, but we cannot subscribe to the suggestion that a wrong-doer always remains a wrong-doer. The situation to which our correspondent "Jail-bird" has drawn attention can hardly ever occur, but if and when it does we do not believe that the profession as a whole would suffer by the adoption of the merciful view.

UNPLEASANTLY ENERGETIC.

WE have received from Port Adelaide, South Australia, the following card which leaves in our mind the impression that the medical man whose name we have suppressed, while energetic, has no very great opinion of the restrictions that usually regulate the conduct of members of the medical profession:—

Telephone No. ——. CONSULTATION HOURS:
10.30 a.m. to 1.30 p.m.

X——,
St. Vincent Street,
Right hand side of Railway Line, Main Street.

When required to visit Ship kindly Telephone by 9 A.M. if possible.

When sending a member of crew for advice please send order with him.

We are informed that these cards have been distributed to the various shipping offices of Port Adelaide and we have no hesitation in saying that, if such organised touting for business took place in this country, the medical man in question would be considered to have transgressed the laws of the profession against advertising. It has been alleged in these columns more than once that the rules of the General Medical Council, no less than the unwritten laws of the medical profession, have not and cannot have the same force in the colonies as they possess in the mother country. We appreciate that in some places different circumstances may excuse a laxer procedure, but we cannot imagine any excuse for the systematic attempt on the part of a medical man, through the distribution of business cards, to grab any private practice that the ships may bring into the port where he resides. And if X—— does not mean to do that by circulating his cards what is the object of his enterprise?

CARRIER PIGEONS.

IN an article on the breeding and training of the homing, or carrier pigeon the *Scientific American* of March 5th states that arrangements are being already made for a 500-mile pigeon race from Spartanburg in North Carolina to Philadelphia, to be held on July 4th. The greatest "record" for flight is 1603 yards in a minute. Two other passages from the article are as follows: "Clubs devoted to raising and improving the carriers are scattered in every state in the Union and their memberships are all large; but there are tens of thousands of individual breeders who do not belong to any association. Thousands of these breeders enter their home-raised pigeons in the races and sometimes win prizes which the professionals fail to capture. ...... Country physicians have in many instances adopted them as messengers. A physician raises a loft of carriers for the pleasure of it and when he visits a patient four or five miles away he carries with him a basket containing one of his birds. If dangerous symptoms arise in the night or the following day the pigeon is released with a message. Some physicians with long country routes carry half a dozen or more of these pigeons on their rounds and leave one at each place. A daily report of the different cases can thus be obtained by pigeon service at no cost to physician or patient."

THE CHARMING AWAY OF WARTS.

To the Editors of THE LANCET.

SIRS,—The following may afford amusement if not instruction to the readers of THE LANCET. A few days ago a charming young lady friend stopped me and begged me to come to her mother's house and charm away a batch of warts which *disfigured the hands of one of* their maids. I had the greatest difficulty to convince her that I possessed no such power and she was unmistakeably dissatisfied. Her faith in me as a wart charmer arose in this way. About 12 years ago, when this same young lady was a child of 14 years of age, she and her mother when driving beckoned to me from their carriage. They were on the look out for me for my opinion was wanted as to what should be done to a large number of warts on the hands of the child. There were over 20, about 12 or more on one hand, as far as I can remember, and about eight or more on the other. The child was at a sensitive age and keenly felt the disfigurement, for they were all on the back of the hands and they were ugly warts. They were so numerous and so large that I reluctantly declined to treat them. Quite in joke, however, but in order to make up for the evident disappointment, I said that I would charm them away. I took the child's hands in mine, rubbed them gently, and assured her, but with much earnestness, that in a short time they would all disappear. Within a fortnight they were gone and my surprise was as great as the child's delight.

I have always looked upon this as a mere coincidence and have no reason now to consider it in any other light. All authorities, however, agree that warts have some direct relation to the nervous system. They have been known to disappear under mental emotion and many old women have claimed the power of dispersing them. In the above case my earnestness no doubt made a solid impression on the child's mind. Could this have anything to do with their disappearance? I should be glad to know if any of your readers have had similar experience.

I am, Sirs, yours faithfully,
Windermere, March 13th, 1904. ARCHD. HAMILTON, M.D. Edin.

MOTOR-CARS FOR MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—For the benefit of those of your readers desiring to invest in automobiles and who are not fully acquainted with the numerous pitfalls as to make, finish, price, workmanship, durability, and newness or otherwise of engines fitted I recommend to them the services of Mr. G. Wilding, 100, Denbigh-street, who being independent of any vendor firm advises reliably on the above points for a moderate fee and with whose past services I have reason to be satisfied.

I am, Sirs, yours faithfully,
F. W. FORBES ROSS, M.D. Edin., F.R.C.S. Eng., &c.
Gower-street, W.C., March 14th, 1904.

RED NOSE.

M. E. writes: "*Can any reader kindly advise writer as to the best* treatment for red nose? My patient is a lady, aged 35. The nose is generally cold and there are frequently pustules forming on the alæ. The condition appears to be largely vaso-motor, the nose at times being less unsightly than at others. The only other affection is a profuse menstruation once a fortnight."

◆

Ubique.—1. The only justification B could have for taking the case from A's hands was knowledge that A was treating it unscientifically. As a matter of fact, from the statement made to us, A was treating the case perfectl correctly. 2. In accordance with this view A would be right, if he wished to do so, to abstain from professional relations with B, but we think that to do this would be unwise. Such a course weakens the medical profession as a whole and prolongs bad feeling. 3. We think that A is legally right to keep the half fee which has been paid to him as a retainer and probably the court would take this view. Would it not, however, be more dignified to return the money?

R. R.—(1) If the facts were proved to be as stated by our correspondent a county-court judge would, we think, be bound to hold that A employed the medical man to attend his servant and that having done so he was liable to pay him; (2) the fees named are, in our opinion, reasonable in the circumstances; (3) the county court, unless any local legal practitioner can supply any reason to the contrary, is the better court; (4) if the medical man recovers judgment the defendant will presumably be ordered to pay costs. The amount of the costs recoverable depends upon the amount of the judgment and upon what the judge may allow.

Os calcis.—There are several suitable books on the subject published in all the principal languages but Herman's "Diseases of Women" (Cassell and Co., price 25s.) is the book which we recommend in the Students' Number of THE LANCET and it would probably suit our correspondent's purpose.

R. P. is thanked for the prospectus. It has been issued broadcast to the medical profession. We doubt whether the medical man does reside at Sandgate and we consider his action in the matter open to serious professional question.

R. B. asks leave to hazard the suggestion that a writer in the columns of THE LANCET is a hypochondriacal patient endeavouring to obtain a free opinion. R. B. has evidently small appreciation of our acumen.

J. M.—There is no suitable book and it seems to us that to write one would be a very difficult task. Boys should be warned by their male relatives.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 17th, 1904.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Mar. 11	30·35	N.E.	...	82	49	35	36	37	Cloudy
,, 12	30·25	S.E.	...	62	47	34	36	36	Foggy
,, 13	30 01	S.	...	72	48	31	38	42	Cloudy
,, 14	29·67	S.W.	...	69	49	32	39	40	Foggy
,, 15	29·93	N.E.	0 01	81	47	36	36	37	Cloudy
,, 16	30 07	SSW	...	82	49	37	37	40	Hazy
,, 17	29 88	N.E.	...	76	47	34	35	37	Fine

Medical Diary for the ensuing Week.

OPERATIONS.

MO[illegible] P.M.), St. [illegible] 2.30 P.M.), [illegible] (2 P.M.), [illegible] Soho-square [illegible] (4 P.M.), [illegible]), London

TU[illegible] P.M.), St. [illegible] .M.), West- [illegible] y College [illegible] St. Mark's [illegible] lon Throat [illegible] (9.30 A.M.), Royal Ear [illegible] 2.30 P.M.), Throat, Golden square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.).

WEDNESDAY (23rd).—[illegible] College (2 P.M.), Royal Free [illegible] Cross (3 P.M.), St. Thom[illegible] College (2 P.M.), St. Georg[illegible] (2 P.M.), [illegible] Samaritan

[illegible] re [illegible] t. [illegible] t. [illegible] on Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (26th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden [illegible]

[illegible] ale [illegible] he

SOCIETIES

TUESDAY (22nd).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Papers:—[illegible] er: The [illegible] and the [illegible] er; The

WE[illegible] itution, [illegible] Dr. P. [illegible] atment.

[illegible] OCIETY (Library of the Sanitary [illegible] W.).—8 P.M. Lecture:—Dr. H. R.

FRIDAY [illegible] OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. E. W. Goodall: Two Cases of [illegible] Skull for the Relief of Tinnitus.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (21st).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Mr. E. M. Corner: Acute Infective Gangrenous Processes (Necroses) [illegible] ersmith- [illegible] street, [illegible] M. Dr.

TUESDAY (22nd).—ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East).—5 P.M. Dr. F. Taylor: Some Disorders of the Spleen. (Lumleian Lecture.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. R. Jones: The Relationship of Insanity to Inebriety.

MEDICAL GRADUATES' COLLEGE [illegible] street, W.C.).—4 P.M. [illegible] Dr. L. Williams: [illegible]

NATIONAL [illegible] square [illegible]

WEDNESD[illegible] GEONS OF ENGLAND.—5 P.M. Mr. E. M. Corner: Acute Infective Gangrenous Processes [illegible] (Erasmus Wilson Lecture.) [illegible] Hospital, Hammersmith- [illegible] Common Disorders of [illegible] YCLINIC (22, Chenies-street, [illegible] inique. (Surgical.) 5.15 P.M. [illegible] stead road, N.W.)—4 P.M. [illegible] Post Graduate Course.) [illegible] PHYSICIANS OF LONDON [illegible] lor: Some Disorders of the Spleen. (Lumleian Lecture.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.)—5 P.M. Dr. Shuter: Administration of Anæsthetics [illegible] AND [illegible] son: [illegible] Ger [illegible]

[illegible] EASES OF THE SKIN (Leicester square, [illegible] Dockrell: Epithelioma. (Chesterfield Lecture.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.)—4 P.M. Dr. Still: The Use and Abuse of Artificial Foods in Infant Feeding.

N[illegible]

FRI[illegible]

P[illegible]

MEDICAL GRADUA[illegible] (Chenies-street, W.C.).—4 P.M. [illegible]

ROYAL INSTITUTI[illegible] W.).—9 P.M. Prof. De[illegible]

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

Will Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

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During the week marked copies of the following newspapers have been received: *Wellington Journal and Shrewsbury News, Catholic Times, Macclesfield Courier and Herald, Bolton Evening News, Western Daily Press, Evening Leader (Newcastle), Reading Mercury, Herts Advertiser, Times of India, Aberdeen Weekly Free Press, Daily Mail, South Wales Echo, Westminster Gazette, Dublin* [illegible] *Hertfordshire* [illegible] *Echo, Brad-* [illegible] *Windsor and*

Communications, Letters, &c., have been received from—

A.—Mr. W. F. Annand, Lond.; Messrs. Arthur and Co., Lond., Mr. F. Alcan, Paris; Aerators, Ltd., Lond.; Dr. F. W. Alexander, *Lond.; Dr. J. C. Abbott*, Aston Manor.

B.—Dr. Alfred Brown, Ipswich; Dr. Walter Broadbent Brighton; British Vacuum Cleaner Co., Lond.; Dr. Bayon, Wurzburg; Mr. A. C. Bird, Sidmouth; Bristol Royal Infirmary, Secretary of; Mr. W. G. Burcombe, Lincoln British Druggists, Ltd., Lond.; Messrs. Burroughs, Wellcome, and Co., Lond., Messrs. Barclay Perkins, and Co., Lond.; Mr. E Barker, Birmingham; Brin's Oxygen Co, Lond., Mr. G. de V. Belson, Guildford; Mr. A. Barrett, Leeds; Messrs. W. H. Bailey and Son, Lond.; Mr. A. E. Barker, Lond.; Messrs. Brown, Gould and Co., Lond.; Messrs. Bates, Hendy, and Co., Reading; Mr. J. W. Benson, Lond.; Messrs. Bratt, Colbran, and Co., Lond.; Bristol Medico-Chirurgical Society, Hon. Secretary of; Dr. F. G. Bushnell, Plymouth; Dr. R. A. Bickersteth, Liverpool; Dr. Andrew Balfour, Khartoum.

—Cortland Wagon Co., Lond.; Camberwell House, Lond., Secretary of; Central London Throat and Ear Hospital, Dean of; Chorlton Union Clerk of; College of Preceptors, Lond., Secretary of; Mr J. B. Cameron, Lond.; Civil Surgeon, Bannu, India; Dr. J. Clarke, Kellsmeath; Mr. E M. Corner, Lond.; Commercial Union Assurance Co., Manager of; Mr. E. F. Coghlan, Lond.; Messrs. Samson Clark and Co., Lond.; Messrs. J. and A. Churchill, Lond.

—Mr John Dunlop, Seven Kings; Dr. J. W. Duncan, Bir*mingham; Devonshire Hospital*, Buxton, Secretary of; Duryea Co., Coventry; Dr. G. W. B [illegible] Mr. L. A. [illegible] Dr. W. S. [illegible] iden Dads- [illegible] L. Daniel Lond.; Messrs. Down Bros., Lond.

—Essex and Colchester General Hospital, Secretary of; E. J.; Mr. Charles Elkan, Eastbourne.

—Messrs. Fairchild Bros. and Foster, Lond.; F. E. T. E; Dr W. B Ochiltree Ferguson Robin Hood's Bay Mr. T Farrow, Lond.; Messrs. O. Fussle and Co., Zurich.

—Dr. A Gardner, Kirby Moorside; Glasgow Eye Infirmary, Secretary of Messrs. W. and A. Gilbey, Lond; Dr. F. Gróne, Portsmouth, Mr. W. J. Gething, Port Adelaide; Lieutenant-Colonel J B. Gibbons, Howrah; Sir W. Gilbey, Lond.

—Dr. A. Hamilton, Windermere; Hanley &c., Joint Hospital Board, Clerk of; Mr. J Heywood, Manchester; Dr. J Hall, Royton; Messrs. Hudson and Kearns, Lond., Dr. F. Hare, Brisbane; Dr. T. J. Horder, Lond.; Messrs. Hill and Ainsworth, Stoke-on-Trent; Dr. Francis Hawkins, Reading; Dr. *R Hutchison, Lond.*

I.—Inspector-General of Hospitals and Charitable Institutions, Brisbane; Institute of Anatomy, &c, Bucharest.

J.—Mrs. Walter Johnson, Taormina, Italy; Mr. Frank Johnson, Lond.

K.—Dr. Mark J. Knapp, New York; Dr. W. H. E Knaggs, Beckmain, West Africa, King Edward's Hospital Fund for London, Hon. Secretaries of; Dr. L. Kingsford, Brighton; Messrs. R. A. Knight and Co., Lond.

L.—Captain J. C. H. P. Leicester, Calcutta; Mr. E. A. R. Laing, Hong-Kong; Leeds and West Riding Medico-Chirurgical Society; London School of Tropical Medicine, Medical Tutor of; Mr. J. C. Lingford, St. Anne's-on-the-Sea; Messrs. Laxon and Sons, Coventry; Leeds Union, Clerk of; London and Westminster Window Cleaning Association; Messrs. Lea Bros. and Co., Philadelphia, Mr. F. W. Lowndes, Liverpool, *London Opinion*, Editor of; Dr. Arthur Latham Lond.

M.—Dr. W. A. Mackay, Huelva; Mr. E Merck, Darmstadt; Manchester Medical Agency, Secretary of; M. D., Bournemouth; Medical Defence Union, Lond., Secretary of; Messrs C. Mitchell and Co., Lond.; Mrs. M.; Dr. J. W Moir, St. Andrews; Maltine Manufacturing Co., Lond.; Messrs. Maythorn and Son, Biggleswade; Mr. H. H. Mason, West Croydon; His Majesty's Mint, Bombay, Master of; Dr. James MacNidder Hull; Mr. J. Y W MacAlister, Lond.; Dr. H. W G. Macleod, Lond., Mr. S B. Mason, Pontypool.

N.—[illegible] National Association for the Prevention of Consumption and other Forms of Tuberculosis, Secretary *of*; Mr. J. C. *Needes*, Lond.; Mr. H. Needes, Lond.

O.—Dr. J. R. O'Brien, Lowestoft; Dr. C. E. Ormerod, Burgess Hill.

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